Academic Calendar 2024

Updated September 9, 2025

College of the North Atlantic

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School of Industrial Trades and Natural Resources

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School of Sustainable Development

Hydrogen Technician 485
Wind Turbine Technician 490

PRESIDENT'S MESSAGE

Welcome to College of the North Atlantic (CNA)!

Congratulations on making the most important step toward your future – securing a post-secondary education that includes essential skills, knowledge, hands-on training, experiential learning, access to highly qualified expertise and state-of-the-art equipment, and experiences that will make you in demand for today's industry needs.

Whichever program you've chosen at CNA – whether it's online, in person or blended – be assured that it will be the beginning of an exciting journey towards success! We want you to know that you will achieve all of this in an inclusive and diverse learning environment where there is a team of faculty and support staff ready to work with you to develop all the tools you need.

We value the connection we've made with you so far and we can't wait for that to grow into a long-lasting bond as you make the transition from student to graduate to alumni! It will happen quicker than you think!

Thousands of students, just like you, are eager to learn, develop their ideas and talents, and explore new concepts. Some of you are coming to CNA fresh out of high school, or you may be a mature student returning to college after a long absence, or you're interested in upskilling and earning microcredentials, or you're an international student wanting to pursue new opportunities.

Whatever the path is that brought you here, we are so happy to help you reach your dreams and goals.

With creativity, innovative thinking and hard work, a rewarding career to establish your place in a continuously evolving workforce is within your reach.

Let's get ready to start this journey – now!

Elizabeth Kidd
CNA President and CEO

ABOUT THE COLLEGE

College of the North Atlantic (CNA) is Newfoundland and Labrador's public college, with a rich history dating back more than 60 years. One of the largest post-secondary educational and skills training institutions in Atlantic Canada, CNA operates 17 campuses across the province and offers more than 100 full-time diploma, advanced diploma and certificate programs in:

- Academics, Applied Arts and Tourism
- Business and Information Technology
- Engineering Technology
- Health Sciences
- Industrial Trades and Natural Resources
- Sustainable Development

CNA also delivers more than 250 online courses and more than 20 programs through its award-winning online learning service. Exploring beyond traditional approaches to education and training, the College serves individuals of all ages and interests, offering responsive, asynchronous and synchronous learning platforms and individualized, custom-designed contract training programs

With a commitment to accessibility, diversity and life-long learning, CNA offers exciting experiential learning opportunities through cross-cultural exchanges, community development and applied research projects. Each year, approximately 2,500 students graduate and pursue rewarding, creative careers doing what they were trained to do.

Enacted by the House of Assembly, through the College Act, 1996, CNA is headquartered in Stephenville on the island's west coast.

IMPORTANT NOTICE

This Calendar is intended to assist readers in understanding the academic and administrative structure, policies and procedures of College of the North Atlantic ("the College") and to provide information about current course offerings at the College.

Various academic and administrative departments have developed the material contained in this publication. All general information and course references have been checked for accuracy, but some inconsistencies or errors may remain. If you become aware of any, please bring these to the attention of the College Registrar. The College reserves the right to make changes to the information contained in this publication without prior notice.

Students are responsible for familiarizing themselves with the specific information, rules and regulations of the College, as well as the specific requirements of each diploma, certificate or other recognition sought. While advice and counseling are available, it is the responsibility of each student to ensure that the courses selected at registration are appropriate to the requirements of the student's chosen program.

If there is any inconsistency between the general academic regulations and policies as published in this Calendar, and the regulations and policies established by resolution of the Board of Governors or the College's administration, the version established by the Board of Governors or the College's administration will prevail.

By the act of registration, each student agrees to be bound by the policies and regulations of College of the North Atlantic.

College of the North Atlantic disclaims all responsibility and liability for loss or damage suffered or incurred by any student or other party as a result of errors in, interruptions to, or delays or termination of its services, courses, classes or operations, which are caused by events beyond the reasonable control of the College, including force majeure, fire, flood, pandemic, riot, war, strike, lock-out, damage to College property, financial exigency, computer failure or the incompatibility of College computing systems with other systems.

ACCESS TO INFORMATION AND PROTECTION OF PRIVACY (ATIPP) ACT

College of the North Atlantic is committed to the protection of privacy and confidentiality of our students. The College collects, uses, and discloses your personal information in accordance with the *Access to Information and Protection of Privacy Act, 2015 (ATIPP)* and under the authority of the *College Act, 1996.*

Personal Information

Personal information means any identifiable information about you including your name, an identifying number such as your social insurance number or driver's license number, your birth date, your contact information, or your credit card information.

College of the North Atlantic collects and uses only as much of your personal information as is necessary to achieve the purposes for which it was collected, for uses consistent with that purpose, or where authorized by the *ATIPP* or another federal or provincial Act.

Collection

College of the North Atlantic collects your personal information for the purposes of facilitating admission, registration, academic progression, graduation, alumni relations, student services, and other activities related to our programs and courses. The type of personal information we may collect from you includes:

a. Contact information (e.g., name, address, e-mail address, telephone number).
b. Demographic information (e.g., age, gender, industry, occupation).
c. Registration and enrolment information (e.g., educational records, transcripts).
d. Proof of identity information (e.g., signature).
e. Financial information (e.g., social insurance number).
f. Health information (e.g., MCP card number, health insurance).

Use

College of the North Atlantic uses your personal information to deliver our programs and courses and provide services to you. College employees and third parties contracted by the College who need the information in the performance of their assigned duties or services will use your personal information for:

a) Assessing an applicant's suitability for enrolment in our programs and courses.
b) Administering academic awards, scholarships, and financial aid.
c) Delivering programs and courses.
d) Maintaining program accreditation
e) Recording academic progress and achievement.
f) Providing access to our student services such as Counselling and Personal Development Services, Career Employment Services, Accessibility Services, Residence Services, and Library Services.
g) Maintaining student records.
h) Maintaining tuition accounts.
i) Collecting payments.
j) Issuing tax receipts.
k) Administering alumni and development operations.
l) Performing program evaluation and accreditation processes as well as statistical and institutional research.
m) Communicating with students regarding college business.

Disclosure

The College may disclose your personal information to facilitate admissions, registration, academic progression, graduation, alumni relations, student services and other activities related to our programs and courses (such as accreditation). Your information may be disclosed to:

- Student associations who need the information for administering their services.
- Federal and provincial government agencies who need the information for funding, statistical analysis, and planning purposes.
- Accrediting bodies

College of the North Atlantic will only release your personal information to third parties such as parents or funding agencies with your signed consent.
Deidentified information will be used for planning and organizational research purposes.

Contact

If you have any questions about the College's collection, use, and disclosure of your personal information, please consult http://www.cna.nl.ca/About/Your-Privacy.aspx or contact the college's Access and Privacy Coordinator for more information:

Access and Privacy Coordinator
T: (709) 643-7912 E: atipp@cna.nl.ca

PROGRAMS BY CAMPUS

Bay St. George Campus
Advanced Care Paramedicine
Automotive Service Technician
Baking & Pastry Arts
College Transition
Commercial Driver
Community Leadership Development
Cook
Digital Animation
Digital Filmmaking
Hairstylist
Heavy Duty Equipment Technician/ Truck and Transport Mechanic
Heavy Equipment Operator
Mobile Crane Operator
Power Sports Technician
Practical Nursing
Primary Care Paramedicine
Wind Turbine Technician

Bonavista Campus
Personal Care Attendant (PCA)
Plumber

Burin Campus
Comprehensive Arts & Science (CAS) Transfer: College-University
Construction/Industrial Electrician
Personal Care Attendant (PCA)
Practical Nursing
Welder
Welding Engineering Technician
Welding Engineering Technician Co-op

Carbonear Campus
Carpenter
College Transition
Comprehensive Arts & Science (CAS) Transfer: College-University
Construction/Industrial Electrician
Early Childhood Education
Personal Care Attendant (PCA)
Practical Nursing

Clarenville Campus
Carpenter
College Transition
Personal Care Attendant (PCA)
Practical Nursing
Renovation Technician
Steamfitter/Pipefitter

Corner Brook Campus
Accounting
Agriculture Technician Co-op
Civil Engineering Technology Co-op
College Transition
Computer Systems and Networking
Construction/Industrial Electrician
Early Childhood Education
Electronic Systems Engineering Technology Co-op
Environmental Engineering Technology (Co-op)
Environmental Engineering Technology Adv Diploma
Executive Office Management
Fish and Wildlife Technician
Forest Resources Technician
GIS Applications Specialist (Post Diploma)
Hydrogen Technician
Industrial Mechanic (Millwright)
Mining Engineering Technician
Personal Care Attendant (PCA)
Power Engineering Technology
Practical Nursing
Software Development Co-op
Welder

Gander Campus
Aircraft Maintenance Engineering Technician
Aircraft Structural Repair Technician
Automotive Service Technician
College Transition
Early Childhood Education
Hairstylist
Personal Care Attendant (PCA)
Practical Nursing

Grand Falls-Windsor Campus
Accounting and Financial Management
College Transition
Comprehensive Arts & Science (CAS) Transfer: College-University
Executive Office Management
Medical Laboratory Assistant
Mental Health and Addictions
Personal Care Attendant (PCA)
Practical Nursing
Strategic Human Resource Management

Happy Valley-Goose Bay Campus
Carpenter
College Bridging
College Transition
Comprehensive Arts & Science (CAS) Transfer: College-University
Construction/Industrial Electrician
Heavy Duty Equipment Technician/ Truck and Transport Mechanic
Mental Health and Addictions
Personal Care Attendant (PCA)
Powerline Technician
Practical Nursing
Solar PV Installer
Trades Bridging

Labrador West Campus
College Transition
Comprehensive Arts & Science (CAS) Transfer: College-University
Construction/Industrial Electrician
Industrial Mechanic (Millwright)
Welder

Placentia Campus
Early Childhood Education Certificate
Heavy Duty Equipment Technician/ Truck and Transport Mechanic
Heavy Equipment Operator
Industrial Mechanic (Millwright)
Machinist
Personal Care Attendant (PCA)
Welder

Port aux Basques Campus
Carpenter
Early Childhood Education
Non-Destructive Testing Technician
Personal Care Attendant (PCA)
Welder/Metal Fabricator (Fitter)

Prince Philip Drive Campus

Accounting and Financial Management
Advanced Care Paramedicine
Applied Music
Art & Design Essentials
Auto Body and Collision Technician
Automotive Service Technician
Bachelor of Applied Information Technology-Artificial Intelligence and Machine Learning
Bachelor of Applied Information Technology-Systems and Network Cybersecurity
College Transition
Community and Therapeutic Recreation
Computer Systems and Networking
Cook
Culinary Management
Diagnostic Ultrasonography
Early Childhood Education
Emergency Medical Responder to Primary Care Paramedicine
Executive Office Management
Graphic Communications
Graphic Design
Journalism
Legal Administration
Marine Cook
Marketing Management and Analytics
Medical Laboratory Technology
Medical Office Management
Medical Radiography
Personal Care Attendant (PCA)
Pharmacy Technician
Primary Care Paramedicine
Records & Information Management
Respiratory Therapy
Software Development Co-op
Sound Recording & Production
Strategic Human Resource Management
Strategic Leadership and Project Management (International)
Television and Film Creation
Television and Film Post-Production
Television and Film Production Management
Television and Film Technical Production
Textile & Apparel Design
Tourism & Hospitality Management
Tourism & Hospitality Services
Veterinary Technician
Welder

Ridge Road Campus

Architectural Engineering Technology
Chemical Process Engineering Technology Co-op
Civil Engineering Technology Co-op
Computing Systems Engineering Technology Co-op
Electrical Engineering Technology (Power & Controls) Co-op
Electronics Engineering Technology (Biomedical)
Geomatics/Surveying Engineering Technology Co-op
Instrumentation and Controls Engineering Technology
Management Systems Engineering Technology Co-op
Mechanical Engineering Technology
Mechanical Engineering Technology (Manufacturing) Co-op
Petroleum Engineering Technology Co-op
Refrigeration & Air Conditioning Mechanic
Strategic Leadership and Project Management (International)

Seal Cove Campus

Construction/Industrial Electrician
Heating Systems Technician
Instrumentation and Control Technician
Powerline Technician

St. Anthony Campus

Construction/Industrial Electrician
Heavy Equipment Operator
- Dual Site-Bay St. George (9 wks)

Powerline Technician
Practical Nursing

Online Asynchronous

Accounting
Art & Design Essentials
Atlantic Trades Business Seal
Bachelor of Applied Arts-Early Childhood Education
Business Administration
College Transition
Data Analytics
Early Childhood Education Certificate
Early Childhood Education Diploma
Early Childhood Education Administrative Leadership (Adv. Diploma)
Early Childhood Education Advanced Studies in Inclusive Practice (Adv. Diploma)
Executive Office Management
Health and Safety Management
Human Resources
Information Management (Post Diploma)
Marketing
Medical Office Management
Mental Health and Addictions
Project Management
Records & Information Management
Rehabilitation Assistant (OTA & PTA)
Strategic Human Resource Management
Tourism & Hospitality Services
Video Game Art & Design
X-Ray Skills for Medical Laboratory Technologists (Post Diploma)

Online Synchronous

Accounting
College Transition
Early Childhood Education
Enterprise Web Development
Executive Office Management
Medical Office Management
Records & Information Management

HEADQUARTERS ADMINISTRATION LIST

President's Office
Elizabeth Kidd, President & CEO
Geoff Peters, General Counsel & Corporate Secretary

Human Resources
Deidre Dunne, Associate Vice-President – Human Resources

International
Elizabeth Vincent, Associate Vice-President – International

Public Relations
Heidi Staeben-Simmons, Associate Vice-President – Public Affairs
Morgan Pond, Director – Policy & Planning
Roger Hulan, Director – Marketing and Brand Strategy
Wayne Quilty, Director – Partnership, Entrepreneurship & Community Engagement

Finance and Administration
Annette Morey, Vice President – Finance & Administration
David Chow, Director – Information Technology
Rosalind Strickland, Director – Employment Services
Kelly Hanlon, Director – Finance
Sharon McLennon, Director – Workforce Innovation Centre

Campus Operations
Fergus O'Brien, Associate Vice President – Campus Operations
Judy Dobson, Director – Customized & Continuous Learning

Academics
Shirley Woodward, Vice President – Academic & Applied Research
Stephanie King, Academic Planning Controller
Amanda Skanes, Director – Academic Development & Planning
Janelle Skeard, Director – Industry Innovation
Theresa Pittman, Director – Strategic Initiatives
Kyle Massey, Director – Academic Quality Assurance
Jenn Wicks, Director – Teaching and Learning Innovation
Michael Long, Dean – Applied Research & Innovation
Sonny Hegde, Dean – Engineering Technology
Rex Oldford, Associate Dean – Engineering Technology
Brent Howell, Dean – Industrial Trades & Natural Resources
Marty Madore, Associate Dean – Industrial Trades & Natural Resources
Cheryl Dyke, Dean – Health Sciences
TBD, Associate Dean – Health Sciences
Mary Parrott, Associate Dean – Health Sciences
Davida Smith, Dean – Academics, Applied Arts & Tourism
Lori Chaulk, Associate Dean – Academics, Applied Arts & Tourism
TBD, Associate Dean – Academics, Applied Arts & Tourism
Gus Yetman, Associate Dean – Academics, Applied Arts & Tourism
Stephen Warren, Dean – Business & Information Technology
Brenda Lockyer, Associate Dean – Business & Information Technology
Gary Thompson, Dean – Sustainable Development

Student Services
Jeff Martin, Associate Vice President – Student Services-Interim
TBD, Director – Student Experience
Lori Hovey, Director – Student Services & Supports
Lisa Downey, Registrar
Michelle O'Quinn, Associate Registrar – Registration & Records
Sharon Quilty, Associate Registrar – Admissions

CAMPUS ADMINISTRATION

Baie Verte Campus
Susanne Ivey, Campus Director

Bay St. George Campus
Wayne Howlett, Campus Director
Samantha Downey, Campus Manager

Bonavista Campus
Steven Rogers, Campus Manager

Burin Campus
Janice Moulton, Campus Director

Carbonear Campus
Terry Murphy, Campus Director

Clarenville Campus
Maisie Caines, Campus Director

Corner Brook Campus
Tanya Kelly, Senior Campus Director
Vadney Tucker, Campus Manager

Gander Campus
Jennifer Strickland, Campus Director
Timeyin Owojaiye, Campus Director (Aviation)

Grand Falls –Windsor Campus
Susanne Ivey, Campus Director

Happy Valley-Goose Bay Campus
Craig Baker, Senior Campus Director
Petar Krndija, Campus Director

Labrador West Campus
Karen Pottle-Fewer, Campus Director

Placentia Campus
Chris Moss, Campus Manager

Port aux Basques Campus
Jan Peddle, Campus Manager

Prince Philip Drive Campus
Jackie Parsons, Senior Campus Director
Ranjan Patro, Campus Director
Mark Oakley, Campus Director
Ray Fennelly, Campus Manager (Brinton Building)

Ridge Road Campus
Trudy O'Neill, Senior Campus Director

Seal Cove Campus
Sonya Keeping, Campus Director

St. Anthony Campus
Chad Simms, Campus Manager

CAMPUS DIRECTORY

Baie Verte Campus
1 Terra Nova Road
Baie Verte, NL A0K 1B0
tel: (709) 532-8066
fax: (709) 532-4624

Bay St. George Campus
DSB Fowlow Building
432 Massachusetts Drive
P. O. Box 5400
Stephenville, NL A2N 2Z6
tel: (709) 643-7838
fax: (709) 643-7734

Bonavista Campus
301 Confederation Drive
P. O. Box 670
Bonavista, NL A0C 1B0
tel: (709) 468-1700
fax: (709) 468-2004

Burin Campus
105 Main Street
P. O. Box 370
Burin Bay Arm, NL A0E 1G0
tel: (709) 891-5600
fax: (709) 891-2256

Carbonear Campus
4 Pike's Lane
Carbonear, NL A1Y 1A7
tel: (709) 596-6139
fax: (709) 596-2688

Clarenville Campus
69 Pleasant Street
Clarenville, NL A5A 1V9
tel: (709) 466-6901
fax: (709) 466-2771

Corner Brook Campus
141 O'Connell Drive
P. O. Box 822
Corner Brook, NL A2H 6H6
tel: (709) 637-8530
fax: (709) 634-2126

Gander Campus
1 Magee Road
P. O. Box 395
Gander, NL A1V 1W8
tel: (709) 651-4800
fax: (709) 651-4854

Grand Falls-Windsor Campus
5 Cromer Avenue
Grand Falls-Windsor, NL A2A 1X3
tel: (709) 292-5600
fax: (709) 489-4180

Happy Valley-Goose Bay Campus
219 Hamilton River Road
P. O. Box 1720, Station "B"
Happy Valley-Goose Bay, NL A0P 1E0
tel: (709) 896-6300
fax: (709) 896-3733

Labrador West Campus
1600 Nichols-Adam Highway
Labrador City, NL A2V 0B8
tel: (709) 944-5787
fax: (709) 944-5413

Placentia Campus
1 Roosevelt Avenue
P. O. Box 190
Placentia, NL A0B 2Y0
tel: (709) 227-2037
fax: (709) 227-7185

Port aux Basques Campus
59 Grand Bay Road
P. O. Box 760
Port aux Basques, NL A0M 1C0
tel: (709) 695-3343
fax: (709) 695-2963

Prince Philip Drive
1 Prince Philip Drive
P. O. Box 1693
St. John's, NL A1C 5P7
tel: (709) 758-7284
fax: (709) 758-7304

Ridge Road Campus
153 Ridge Road
P. O. Box 1150
St. John's, NL A1C 6L8
tel: (709) 758-7000
fax: (709) 758-7059

Seal Cove Campus
1670 Conception Bay Highway
P. O. Box 19003, Station Seal Cove
Conception Bay South, NL A1X 5C7
tel: (709) 744-2047
fax: (709) 744-3929

St. Anthony Campus
83-93 East Street
P. O. Box 550
St. Anthony, NL A0K 4S0
tel: (709) 454-3559
fax: (709) 454-8808

Online Learning
tel: (709) 466-6961/1-877-465-2250
fax: (709) 466-4640

Program Enquiry College-Wide
toll free: 1-888-982-2268
www.cna.nl.ca
info@cna.nl.ca

ACADEMIC DATES 2024-2025

Fall 2024

July 29 – August 9 (Monday-Friday)
Online Registration for Fall Semester

September 2 (Monday)
College CLOSED – Labor Day

September 3 (Tuesday)
Fall Semester Starts – Welcome Back Campus Orientation

September 4 (Wednesday)
First Day of Course Instruction – Fall Semester

September 10 (Tuesday)
Deadline for submission of Credit Transfer/Exemption/PLAR requests – Fall Semester

September 17 (Tuesday)
Last day to add courses – Fall Semester

September 30 (Monday)
College CLOSED – National Day for Truth and Reconciliation

October 1 (Tuesday)
Fees Due – Fall Semester
Last day to opt out of Health & Dental – Fall Semester

October 14 (Monday)
College CLOSED – Thanksgiving Day

October 29 (Tuesday)
Last day to drop courses without academic prejudice – Fall Semester

November 11 (Monday)
College CLOSED – Remembrance Day

November 25 – December 6 (Monday-Friday)
Online Registration for Winter Semester

December 9 (Monday)
Last Day of Classes for Fall Semester (for courses with final exams)

December 10 - 19 (Tuesday-Thursday)
Exam Period for Fall Semester (includes Flex Day)
The Examination Timetable for the CAS Transfer: College-University program may vary from the above as it is aligned to the MUN Examination Schedule.

December 20 (Friday)
Last day of Fall Semester
Final Grade Submission by Instructors (9:00 am)
Final Grade Posting for Fall Semester (1:00 pm)

December 23 (Monday)
Christmas Break Begin

January 1 (Wednesday)
College CLOSED – New Year's Day

Winter 2025

January 6 (Monday)
Winter Semester Starts – Welcome Back/Orientation/Advising

January 7 (Tuesday)
First Day of Course Instruction – Winter Semester

January 13 (Monday)
Deadline for submission of Credit Transfer/Exemption/PLAR requests – Winter Semester

January 20 (Monday)
Last day to add courses – Winter Semester

February 3 (Monday)
Fees Due – Winter Semester
Last day to opt out of Health & Dental, New Students – Winter Semester

February 6 & 7 (Thursday & Friday)
No Classes for students / PD for employees

March 3 (Monday)
Last day to drop course without academic prejudice – Winter Semester

March 3 – 7 (Monday-Friday)
Reading Break – Winter Semester

March 31 – April 11 (Monday-Friday)
Online Registration for Spring/Intersession

April 17 (Thursday)
Last Day of Classes for Winter Semester (for courses with final exams)

April 18 (Friday)
College CLOSED – Good Friday

April 21 – 30 (Monday-Wednesday)
Exam Period for Winter Semester (includes Flex Day)
The Examination Timetable for the CAS Transfer: College-University program may vary from the above as it is aligned to the MUN Examination Schedule.

May 1 (Thursday)
Final Grade Submission by Instructors (9:00 am)
Final Grade Posting for Winter Semester (1:00 pm)
Last day of Winter Semester

Intersession / Spring 2025

May 5 (Monday)
Trades Intersession Starts – Industrial Trades programs only

May 6 (Tuesday)
First Day of Course Instruction – Trades Intersession

May 12 (Monday)
Intersession/Spring Semester Starts
Last day to add courses – Trades Intersession
Deadline for submission of Credit Transfer/Exemption/PLAR requests – Trades Intersession

May 13 (Tuesday)
First Day of Course Instruction – Intersession/Spring Semester

May 19 (Monday)
College CLOSED – Victoria Day
Deadline for submission of Credit Transfer/Exemption/PLAR requests – Intersession/Spring Semester
Fees Due – Trades Intersession
Last day to drop courses without academic prejudice – Trades Intersession
Last day to opt out of Health & Dental, New Students – Trades Intersession/Intersession/Spring Semester
Last day to add courses – Intersession (Non-Trades programs)

May 26 (Monday)
Fees Due – Intersession
Last day to drop courses without academic prejudice – Intersession
Last day to add courses – Spring Semester

June 9 (Monday)
Fees Due – Spring Semester

June 18 (Wednesday)
Last day of Classes for Intersession (course with final exams)

June 19 (Thursday)
Last Day of Classes for Trades Intersession
Some Industrial Trades programs may end sooner/later than the last day of classes for Intersession as Trades programs must follow the Provincial Plan of Training.

June 19 – 25 (Thursday-Wednesday)
Exam Period for Intersession (Non-Trades programs)
The Examination Timetable for the CAS Transfer: College-University program may vary from the above as it is aligned to the MUN Examination Schedule.

June 23 (Monday)
College CLOSED – June Day

June 27 (Friday)
Last day of Intersession
Final Grade Submission by Instructors (9:00 am) – Intersession
Final Grade Posting for Intersession (1:00 pm)

July 1 (Monday)
College CLOSED – Canada Day

July 7 (Monday)
Last day to drop courses without academic prejudice – Spring Semester

August 14 (Thursday)
Last Day of Classes for Spring Semester (for courses with final exams)

August 15 - 26 (Friday-Tuesday)
Exam Period for Spring Semester (includes Flex Day)

August 27 (Wednesday)
Last day of Spring Semester
Final Grade Submission by Instructors (9:00 am) – Spring Semester
Final Grade Posting for Spring Semester (10:00 am)

******Please note the Academic Dates are subject to change******

REGISTRAR'S OFFICE

The Registrar's Office is responsible for the administration of academic policies and procedures and for an effective system of operations for admissions, registration, enrollment, transfer credit, grades processing, student awards, student fees, student loans, transcripts, graduation and certification. This office is also responsible for the provision of information regarding all College programs and courses.

ADMISSIONS REGULATIONS

As per Admission Policy AC-102, the College will admit applicants who fulfill the admission requirements for credit-based programs and trades entry programs based on available resources. All credit-based programs and trades entry programs will have defined admissions requirements, approved by Academic Council where appropriate.

The College will admit applicants based on either a "First Qualified, First Accepted" admissions process or a Competitive Entry admissions process. For programs with "First Qualified, First Accepted" admissions, the College will have standardized admissions processes to ensure consistency across campuses. For programs with Competitive Entry admissions, the College will have objective procedures that guide the admission process.

Irrespective of the above, the College reserves the right to develop admissions policies, procedures and requirements for designated groups. The College may reserve space for indigenous, international, and out-of-province applicants in any of its regularly funded programs. The College reserves the right to develop policies and regulations in recognition of industry and government partner requirements and the College scholarship requirements.

Applications may be submitted at any time. Students currently in high school must be in their final year of high school at the time of application submission.

Entry into Full-Time Programs

Candidates applying for full-time status must satisfy the following requirements as per Admission Operational Procedure AC-102-PR:

1. Apply on-line or in writing on the approved application form and submit the non-refundable application processing fee.
2. Meet the educational and other requirements for entry into the particular program; minimum of high school graduation diploma or recognized equivalent, or as otherwise specified.
3. In the case of high school students, provide an official copy of high school transcript. In the case of ABE students, provide a Record of Achievement or other equivalent official transcript.
4. Official transcripts or degree certificates issued in languages other than English must be translated into English and submitted to College of the North Atlantic along with the original official document. An official translation is an exact English translation of the academic documents that has been prepared by the issuing institution or a professional translator.
5. Provide required documentation or report for an interview or for testing when requested.
6. Meet physical entrance requirements of the program, where applicable.
7. Irrespective of 1 & 2 above, applicants may apply for admission under Special Admissions or may be considered as a Mature Student (Refer to Mature Student Requirements).

Admission Requirements

Applicants must meet all identified admission requirements of the program (AC-102-PR 1.1).

International applicants are advised to refer to the International Students section of the calendar for additional information regarding application and admission regulations, language requirements, international student fees, and other regulations for international students.

1. High School Graduation
   High school graduation means the successful completion of required credit courses as specified by the applicable Department of the Government of Newfoundland and Labrador, or other equivalent Canadian jurisdiction.

   High School students who complete modified courses with the third digit "6" or alternate courses with a third digit "7" will require further assessment before eligibility is determined. The completion of a modified course may prevent the applicant from being accepted into regular College programs. Applications from such applicants will be referred to the Accessibility Services Coordinator. (Refer to Procedure SS-207-PR).
2. High School Equivalency
   Graduation with the following High School equivalencies will be considered for acceptance into any College program:
   a. Basic Training for Skill Development (BTSD) Level 4 Certificate
   b. Adult Basic Education Certificate (ABE) Level 3 (Level 4 prior to 1991)
   c. General Educational Development (GED) Certificate
   d. General Adult Education Credential (CAEC) Certificate
   e. Grade XI Certificate (Department of Education, Public Exams prior to 1982)

Persons holding certificates as listed in a., b., c., or d. may require further evaluation before being accepted into a program; and upon being accepted, those applicants may be required to complete additional courses before entering the program.

3. College Transition (previously Comprehensive Arts & Science (CAS) Transition)
   To be accepted into regular College programs, College Transition students must meet the admission requirements of their chosen subsequent program as articulated under the relevant program section of the College Calendar.
4. Mature Student Requirements
   Applicants who do not meet the educational prerequisites for programs with "First Qualified, First Accepted" admissions process may be considered for Mature Student admission on an individual basis provided the following conditions are met:
   a. Applicants must be at least 19 years of age at the time of application and out of school for at least one (1) year.
   b. Applicants present an official transcript of grades for the highest educational level attained.
   c. Applicants must engage in CNA's Mature Student Admissions Process.

   Specific academic course prerequisites, in disciplines such as English, Math, Biology, Chemistry, and Physics, or any others specifically identified for admission cannot be waived via the Mature Student process.
   Mature student status does not apply to programs with competitive entry admissions processes.
5. Special Admissions
   Special circumstances may exist whereby applicants who fail to meet all of the criteria for admission may be recommended for acceptance In such cases, the application will be referred to the Committee on Special Admissions.

   The College may choose to designate groups comprised of individuals who face traditional barriers to post-secondary entry. In such cases, applicants who are high school students who do not meet the academic requirements (including having reached the legal school leaving age on the date of commencement of the program) must provide a letter of recommendation from the high school principal or guidance counsellor or any other special admission requirement as established by the College. In such cases, the College will establish a committee to review applications and ensure fairness through transparency in the admission process.

   Applicants with disabilities, who do not meet program admissions requirements, will undergo further review to determine eligibility for admission, as outlined in Procedure SS-207-PR.

   Specific academic course prerequisites as detailed in program admission requirements in the Academic Calendar, in disciplines such as English, Math, Biology, Chemistry, and Physics, or any others specifically identified for admission cannot be waived via the Special Admissions process.
6. Non Program Specific
   Students may enroll in up to two (2) General Studies courses per semester or one (1) course in Intersession, up to a maximum of eight (8) courses over the lifetime of a student. The admission requirement for candidates wishing to apply for a credit course through General Studies is the course prerequisite, if applicable. Admission into General Studies is only available if entry into CAS Transition or another program is not an option as determined by the Registrar or designate. Registration/enrollment in a course does not constitute a commitment to or admission into any College program.
7. Home Schooling Admission Guidelines
   Home schooled applicants who do not possess a High School Graduation Diploma, as specified by the applicable Department of Government of Newfoundland and Labrador, will be reviewed for general admission by the College's Committee on Special Admissions. The applicant may be asked to provide some proof of standardized assessment results and/or complete an assessment instrument used by the College and attain the required scores for the selected program.

Admissions Portfolio Guidelines

Per AC-102-PR, Section 1.2, some programs may require submission of a portfolio (as approved by the relevant School Dean and identified in the Academic Calendar). The guidelines will be outlined in the program details contained in the Academic Calendar, and shall include:

1. Required pieces of applicant's work and documentation.
2. Materials sought.
3. Appropriate format.
4. Whether original work is required.
5. Established evaluation criteria.
6. Return of materials procedures.

The College assumes no responsibility for loss of or damage to portfolios submitted.

Portfolio Screening:
Each program area will identify how portfolios will be screened, with criteria as approved by the School Dean responsible for the program.

Application Process

Further to AC-102-PR, 1.3, the following process will be followed.

1. Submit an application and pay the non-refundable application fee.
2. Applicants cannot have an active application for more than two programs for the same academic year. If more than one program applied for, the primary and secondary choice must be indicated. If an applicant applies for more than two programs the applicant must advise which of the first two programs are to be withdrawn.
3. Forward required official documents (NOTE: certified copy of transcripts must be obtained from the high school or Department of Education; faxed or e-mailed copies directly from these institutions will be accepted). Applications are not complete until all required documentation is received. All required documents must be received within three months of date of application or the application will be withdrawn, except for programs that have posted deadline dates in which instance documents must be submitted by the posted date.

   Applicants enrolled in their final year of high school must provide a certified copy of their Level I & II transcript, and Level III courses they are registered for, at the time of application. Applicants who are accepted will be accepted conditionally pending receipt of final year results.

   For provincial applicants presently in Level III of High School in Newfoundland and Labrador, CNA will obtain a copy of your in-progress and final high school marks, when available, directly from the Department of Education, provided the Provincial High School Student Number is included on the application.
4. For provincial applicants in Newfoundland and Labrador who graduated prior to June 2020 and who provide their MCP number, CNA will obtain a copy of final high school marks directly from the Department of Education.
5. Applicants will be sent an acknowledgement upon receipt of their application. Communications will be via e-mail. Some notifications may be sent via SMS text (where applicants have consented).
6. Programs with "First Qualified, First Accepted" Admission Process:

   Acceptance into these programs will follow the "First Qualified, First Accepted" admission process as outlined in AC-119-PR, subject to the following:
   a. Applications must be correctly completed and must contain all required documentation.
   b. Complete applications will be dated as of the date of receipt of the last document received in order to assess program eligibility.
   c. Applicants must meet all educational and any other requirements;
   d. All required fees must be paid.
7. Admission to programs with a competitive entry admissions process will not be conducted on a "First Qualified, First Accepted" basis, but will be determined by a process in which applicants are ranked using the results of each admissions component to produce an overall candidate score. For more details, please refer to the specific program entry requirements in the Academic Calendar.
8. When accepted, applicants will be asked to confirm electronically their intent to register and will be required to pay a confirmation fee within two weeks of the date of the letter of acceptance.
9. Within three to four business days after a letter of acceptance has been sent, staff will follow up (via telephone for domestic applicants and e-mail for international applicants) to determine if the applicant has received the letter and if they intend to accept the seat. If the applicant indicates they are declining their seat, the staff person will send a message to the e-mail address on file confirming the application will be withdrawn per the telephone conversation (or per the e-mail received, as applicable). The application will then be withdrawn and the seat will be offered to the next eligible applicant.
10. When accepted within two weeks of program start date, applicants will be asked to confirm electronically their intent to register and will be required to pay a confirmation fee within two days of the date of the letter of acceptance.
11. The confirmation fee is non-refundable and cannot be transferred to an alternate program.
12. If an applicant fails to confirm their acceptance within the time specified, their application will be withdrawn and they will be required to re-apply for admission.
13. If an applicant has confirmed a seat in their primary program choice, the application for the secondary program will be withdrawn.
14. If an applicant has confirmed a seat in their secondary program choice, the application for the primary program will remain Applicants can only be confirmed in one seat. If an applicant wishes to change their confirmed seat, the confirmation fee must be paid for the alternate choice.
15. Applicants can only be confirmed in one seat. If an applicant wishes to change their confirmed seat, the confirmation fee must be paid for the alternate choice.
16. Applicants who confirm their seat; in programs with waitlists, and who do not register during the designated dates for online registration, will have their application withdrawn and they will be required to re-apply for admission.
17. Applicants who confirm their seat, complete online registration, and subsequently do not show up, withdraw their acceptance, or discontinue from the program will have to re-apply.
18. Applicants who wish to transfer their application to another campus can do so using the Application Transfer: Campus to Campus form. The application status for an offered seat or confirmed seat is not transferrable to another campus. The eligibility date, if applicable, will be as of the date of the requested transfer of the application.
19. Applicants who wish to transfer their application to another program can do so using the Application Transfer: Program to Program form and must pay the appropriate application fee. The eligibility date, if applicable, will be as of the date of the transfer of the application.

Re-Admission of Students

1. Academically Dismissed Students (AC-102-PR, 1.4)
   a. Applications from academically dismissed students will be received at any time but students will not be accepted to return on a full time basis in the program in which they were academically dismissed from until the appropriate period from the date of dismissal has elapsed.
   Notwithstanding the above, and pending availability of space, students who have been academically dismissed will be permitted to register for one (1) course for credit in the program from which the student is dismissed.
   b. Students who have been academically dismissed from a program on two or more occasions will not be eligible for re-admission to the College in the program in which they were academically dismissed from for a period of two years from the date of dismissal.
   c. Students who are promotion denied (i.e. do not achieve a pass in all courses and a GPA of 2.0 or better) and are not able to continue with their program, must submit an application (and pay the applicable application fee) to return to the College to complete deficiencies. Re-admission will be considered pending seat availability.
   d. Students who are required to withdraw from the College under a. and b. above must apply for re-admission and pay the applicable application fee. Their names will be placed on the existing eligibility list as of the date of re-application.
2. Voluntary Withdrawal
   Students who are in good standing and who voluntarily withdraw due to extenuating circumstances (confirmed by the counsellor or a campus director/manager) will be required to re-apply to return to the program, but the application fee will be waived. To be eligible for re-admission under this instance, the application for re-admission must be submitted within two (2) years of the date of leaving, with the exception of Health Sciences students who must re-apply within one year so as to align with the Awarding Diplomas and Certificates Procedure (AC-104-PR, Section 1.4). Students who left for medical reasons must supply a medical note of clearance before re-admission is granted. These students will retain their original date of eligibility and will be admitted into the first available seat in accordance with Program Eligibility List and Program Waitlist procedures (AC-119-PR).
3. Involuntary Withdrawal
   Students who are withdrawn/suspended by the College will be required to re-apply to return to the program. Subject to any conditions placed at time of withdrawal/suspension, eligibility will be from the date of re-application to the program. These students will be admitted in accordance with Program Eligibility List and Program Waitlist procedures (AC-119-PR).

Student Numbers

1. As per AC-102-PR, 1.5, student numbers will be assigned at the time of first application or first CCL enrollment.
2. Students will use the number assigned to them regardless of the number of times they apply to the College.
3. Student numbers must appear on all documents added to students' academic or financial files.
4. Once student numbers are assigned, they will not be reassigned.
5. If a student has been assigned multiple numbers, the student should contact Student Services. The College will determine which number will be used going forward.

Entry into Regular Programs: Part-Time Student Status

As per AC-102-PR, 2.0, a part-time student is a student who is enrolled in courses but who does not meet the program specific criteria of a full-time student. Students who apply for part-time status in any program must meet all the requirements outlined for full-time status. Some programs may not be able to accommodate part-time enrollment.

Entry into Regular Programs: Concurrent Studies Student Status

As per AC-102-PR, 3.0, students in or about to enter their final year of high school may be admitted into College level credit courses by the Committee on Special Admissions in accordance with the following:

1. Students must hold an academic record with a minimum overall high school average of 80% based on the marks for all courses completed in high school.
2. Students will be accepted on a "First Qualified, First Accepted" basis on the provision that space is available and that the program does not have competitive entry admission process.
3. All fees and deadlines for regularly admitted students will apply.
4. Students applying for admission under this policy will be required to submit:
   - A completed application form;
   - An official high school transcript;
   - A letter from the high school principal or guidance counsellor clearly recommending admission to "Concurrent Studies"; and
   - A letter from the applicant providing rationale to be considered for concurrent studies and requesting enrolment in a specific course.

Permanent Residents, Refugees and Other Canadian Status Students

If the applicant's first language is not English, the College reserves the right to test English proficiency or request official scores on internationally recognized tests of English language proficiency as per Section 5.2 - English Proficiency of the Admissions Procedure (AC-102-PR).

Official transcripts or degree certificates issued in languages other than English must be translated into English and submitted to College of the North Atlantic along with the original official documents. An official translation is an exact English translation of the academic documents that has been prepared by the issuing institution or a professional translator.

Eligibility Lists

Per Procedure AC-119-PR, a program eligibility list is a list of applicants meeting program admission requirements based on the date of completed applications.

1. Placement on Eligibility List
   For programs with "First Qualified, First Accepted" admissions, applicants who meet admissions criteria will be placed on a program eligibility list by time stamp based on the date that the application is complete (i.e. date the last required piece of documentation of application package is received).
   College Transition Subsequent Program applicants will be time stamped based on the date of receipt of the student's application to the program for which they are currently enrolled.
   For Competitive Entry programs, candidates who meet admissions criteria will be placed on a program eligibility list by the rank determined by the competitive entry process. Unsuccessful applicants who are not offered a seat in a competitive entry program in a given academic year will not be maintained on a program eligibility list after the last day to add courses. Should applicants wish to be considered for the next program intake, they will be required to re-apply for the next available program start date.
2. Selection Process: "First Qualified, First Accepted" programs
   Applicants meeting admission criteria for programs with "First Qualified, First Accepted" admissions will be made an offer of admission in the order in which they are placed on program eligibility list (i.e. based on the date of completed application).
3. Program Entry: Programs with "First Qualified, First Accepted" Acceptance
   Qualified applicants are admitted from program eligibility lists and program wait lists as/if space becomes available. It is expected that applicants will be prepared to begin their program any time after the term for which they applied.
   Applicants who are made an offer of admission into a program BEFORE AND UP TO six (6) weeks prior to the scheduled program start date AND who decline their offer will have their application withdrawn and will be required to re-apply for admission.
   Applicants on program eligibility lists or program wait lists who are not offered a seat in an academic year will not be required to re-apply, but will have their applications rolled over to the next intake with applicants retaining their original time stamp date of eligibility until a seat is offered.

1. Deferment of Acceptance
   Deferment rules for applicants offered seats with LESS THAN six (6) weeks' notice.
   Applicants who are notified of admittance into a program LESS THAN six (6) weeks prior to program start and who are unable to accept a seat may request a deferment for the next program in-take. Applicants who defer a seat with LESS THAN six (6) weeks prior to program start will retain current program eligibility/wait list placement.
2. Deferment rules for applicants offered seats in the same program at a different campus
   Applicants who are offered seats in the same program at a different campus and who are unable to accept a seat may request a deferment for the next program in-take.
   Applicants who defer a seat in the same program at a different campus will retain current program eligibility/wait list placement for their original program choice.

Program Wait Lists

Once available seats in a program are filled, remaining eligible applicants will be moved from the program eligibility list and placed on a program wait list by time stamp based on the date that the application was complete (i.e. date that last required piece of documentation of application package is received).

As seats become available, applicants on the program wait list will be offered seats in the order they are placed on the program wait list.

After the last day to add courses (or, in the case of out of sequence programs, two (2) weeks after the first day of classes), applicants on the wait list will be contacted and asked:

1. EITHER: if they wish to keep their application active for the next intake of the program. If applicants wish to keep their application active for the next intake of the program, they will be required to indicate in writing their request to be placed on the program eligibility list for the next available intake of program within a specified time period. Wait listed applicants who wish to remain on the list will be placed on the program eligibility list for the next available intake, and will retain their original application time stamp position.
2. OR: if they wish to withdraw their application. If applicants indicate they want their application withdrawn, or do not respond within the specified deadline, the application will be withdrawn and the applicant will be required to re-apply for admission.

ACADEMIC REGULATIONS

Definitions of Academic Terms

Below are the standard definitions for academic terms.

Academic Year
Academic year is the period from September 1 to August 31 consisting of three distinct 15-week semesters.

Access Programs
Developmental programs that students may enter prior to admission into regular certificate/diploma level programs.

Credit Course
An approved and recognized body of content, knowledge, skills assigned a credit value.

Credit
The weighted value of a course based on the depth and breadth of the learning objectives.

Applied Degree Program
An approved program of study consisting of a prescribed combination of courses that must address:
1. alignment with an applied occupational area of practice.
2. capstone project requirements including an approved oral defense evaluation
3. alignment with the Maritime Degree Level Qualifications Framework for baccalaureate degrees.

Applied Degree Programs will normally:
1. be comprised of a minimum of 120 CU credits, with a minimum of 84 CU credits from an approved area of practice.
2. be prescribed over a minimum of 8 full 15-week semesters of study (or equivalent). The maximum CU credits awarded are as follows:
    - 3 CU credits for a program course regardless of laboratory, shop, study, or other experiential hours.
    - 6 CU credits for a capstone project regardless of duration.
    - 18 CU credits in a standard 15-week semester.
    - 9 CU credits in a compressed (intersession or summer session) semester.
3. require an approved occupational experience.

Diploma Program
An approved program of study consisting of a prescribed combination of courses that must address:
1. occupational skill development;
2. academic or general study;
3. self-interest or personal growth.

Diploma Programs will normally:
1. be prescribed over a minimum of a four-semester period;
2. be comprised of a minimum of 80 credits; and
3. consist of a maximum of seven courses per semester.

Advanced Diploma
An approved program of study consisting of in-depth training for graduates of a diploma program or equivalent.

Advanced Diploma Programs will normally:
1. be prescribed over a minimum of one semester;
2. be comprised of a minimum of 20 credits.

Post Diploma
A diploma issued upon successful completion of a minimum two-semester program that requires either graduation from a recognized two- or three-year post-secondary diploma or degree, or a combination of other post-secondary work and industry experience acceptable to the College as an entrance requirement.

Certificate Program
An approved program of study consisting of a prescribed combination of courses that must address:
1. occupational skill development;
2. academic or general study;
3. self-interest or personal growth.

Certificate Programs will normally:
1. be prescribed over a two-semester period;
2. be comprised of a minimum of 40 credits; and
3. consist of a maximum of seven courses per semester.

Microcredential
A certification of assessed competencies that is additional, alternative, complementary to or a formal component of a formal qualification. A microcredential recognizes the learner's achievement of a set of competencies. The three core features are:
1. They are based on competencies that are in demand by industry and employers.
2. The focus is on demonstrating mastery of competencies.
3. The learner is awarded a digital certification upon successful demonstration of the competencies.

Certificates of Achievement and Certificates of Participation
(For further information on Customized and Continuous Learning Certificates, please refer to Policy No. AC-106 - 5.0 Programs Designated to be Awarded a Certificate of Continuous Learning, and also Procedure AC-120-PR, 1.0)

Certificate of Achievement
A Certificate of Achievement (Program/Course) is awarded upon successful completion of a Continuous Learning program or course for which learning is measured and evaluated.

Certificate of Participation
A Certificate of Participation (Program/Course) is awarded upon completion of any non-formalized Continuous Learning program or course which addresses one or more of the following areas of study: occupational skill development, academic study, general study, and personal interest/growth, and for which specific learning or performance is not measured or evaluated.

Workforce Development
The College may enter partnerships for the purpose of developing and/or delivering courses or programs. Such partnerships will be formally recognized on parchments in one of the following ways:
1. College Parchment - when a course or program is developed by the College, either in partnership with or on behalf of another institution, agency or industry; a College parchment will be issued. This parchment may contain the phrase "designed in partnership with…" as an additional description of the course/program.
2. Joint Parchment - when a course or program is developed and/or delivered in partnership with another educational institution, a joint certificate formally recognizing both institutions may be awarded. This parchment would recognize both institutions and may contain the signatures of duly authorized officers of both institutions.

Full-Time Student
A full-time student is one who is registered for a minimum of four courses or more in course-based programs and in the case of individual programs, a minimum of 18 hours per week.

Part-Time Student
A part-time student is one who is registered for less than four courses in course-based programs and in the case of individualized programs, less than 18 hours per week.

Semester
A 15-week period that includes class/learning time as well as administrative and evaluation time. The academic year is divided into three semesters, the dates of which will be determined on an annual basis.

Intersession I
A period up to eight (8) weeks that includes class/learning time as well as administrative and evaluation time–usually scheduled at the beginning of the Spring Semester.
Intersession II
Normally a period of five to eight (5-8) weeks that includes class/learning time as well as administrative and evaluation time–usually scheduled in the second half of the Spring Semester.

Mature Student
A person who does not meet the entrance requirements for admission into a full-time program, but who is at least 19 years of age at the time of submitting an application, and who has been out of school for at least one year.

Registration Procedures

Date of Registration
Students will register online on the dates and at the times prescribed and publicized by the College. Registration for out-of-sequence programs will be scheduled, and students will be admitted as programs start.

Late Start Date
In extenuating circumstances students may be permitted a delayed start date. Prior approval for a late start date must be provided by the campus administration.

Admission to Classes
Students will not be admitted to a class until they have satisfied the regulations regarding entrance and complied with the General College Regulations.

Course Load
The number of courses constituting a normal semester workload for a student is specified in the outline for each program as published in the College Calendar.

Extended Course Loads
Students who wish to register for extra courses must submit a Request for Extended Course Load form to the campus admissions/student services office for approval by the campus administration or designate.

Repeating Courses
With the permission of the campus administration or designate, students may repeat any course for which a passing grade has previously been awarded. *The original passing grade will remain on the transcript and a second entry will be recorded with the new grade. The highest mark attained will be used in the calculation of the G.P.A.
*Space limitations and other considerations will determine approval.

Independent Study
When required courses are not available in a particular semester, full-time students may submit an Independent Study Contract form to the campus admissions/student services office for approval by the campus administration or designate to register for such courses through independent study. The Independent Study Contract must be submitted to the campus admissions/student services office within 7 calendar days from the semester start date.

Access to courses through independent study may be permitted when resources are available and with the permission of the campus administration or designate and the instructional coordinator (where applicable) in consultation with the faculty. Strategies to ensure adherence to course requirements must be documented in contract format to be signed by the student, the course instructor, the campus administration or designate, and the Instructional Coordinator (where applicable).

Change of Registration

Adding Courses
The last date for adding courses is 14 calendar days from the semester start date (7 calendar days from the semester start date of Intersession) in which that course begins. Restrictions may apply in some programs where pre-requisites and/or safety courses have already occurred within this time frame. When adding courses, additional fees may apply.

In extenuating circumstances, the deadline period may be extended. Students must submit the Change in Course Registration form to the campus admissions/student services office for approval.

Dropping Courses
Courses may be dropped without academic prejudice up 56 calendar days from the semester start date for a regular semester (for Intersession - 14 calendar days after the semester start date). Courses dropped after the dates noted above are recorded as “Dropped/Fail” unless, in extenuating circumstances, the student has received the written permission of the campus administration to drop a course without penalty. Students are required to submit a Change in Course Registration form to the campus admissions/ student services office for approval.

Withdrawing from the College
It is recommended that students who wish to withdraw from the College discuss the situation with the appropriate student services official. The Withdrawal/Status form must be completed and signed by the appropriate faculty/counselor and the campus administration or designate. If a student e-mails from a CNA e-mail for the student, staff will accept this notification in lieu of a signed form.

Involuntary Withdrawal
Students who are withdrawn/suspended by the College will be required to re-apply to return to the program. Subject to any conditions placed at time of withdrawal/suspension, eligibility will be from the date of re-application to the program.

Program Transfer
Students wishing to change their program of studies or campus must apply for the transfer.

Transfer Process for Engineering Technology - First Year

1. Engineering students wishing to change their original program choice MUST request a program transfer and complete the Program Transfer Request, which is available through the campus admissions/student services office.
2. Applicants cannot request a change in program prior to entry into the first year. A request to transfer does not guarantee entry into one's alternate, "new" program choice. Program transfer will be granted only if sufficient space is available.
3. The Program Transfer Request Form must be received at the campus admissions/student services office by February 15th.
4. Transfers are granted based on (a) space availability and (b) the student's weighted average at the end of semester one. In cases where the student has been exempted from courses in the first semester, the mark(s) obtained by the student at another post-secondary institution or high school will be used in calculating the weighted average.

All Other Programs

1. Students wishing to change their program must submit an Application for Admission (pay the application fee) and go through the normal admissions process.
2. Entrance requirements for the new program of study must be met.
3. Date of eligibility will be as of the date the new application (or meeting entrance requirements, if applicable).
4. Applications will not be accepted for programs that have closed applications.

Program Transfer: Campus to Campus

1. Students must discuss their request with the counsellor and receive written approval from campus administration.
2. Applications for campus transfer will be available from the campus admissions/student services office.
3. Date of eligibility will be as of the date of signing the transfer form.
4. As certain programs are offered using different instructional methodology at the various campuses, transfer may be limited to the end of given semesters.
5. Campus admissions/student services staff will contact the campus administration at the receiving campus to determine space availability and appropriate transfer time frame.

Audit Courses

- Students may audit a course, which will permit them to attend without being evaluated for credit, without seeking a grade or credit for the course. Courses available for audit will be at the discretion of the campus administration. There must be a seat available in the program or course (i.e. a student may not audit a course if the capacity of the course is already reached).
- Order of priority for class fill is as follows:
  a. Full-time students in the course's program.
  b. Part-time students in the course's program.
  c. Full-time students in another program.
  d. Part-time students in another program.
  e. Auditing students not currently enrolled.
- Students with an outstanding balance are not permitted to audit courses.
- Audit students must meet course requisites.
- Audit students cannot attend until officially enrolled in the course.
- Students wishing to transfer from audit to credit must do so before the last day to add classes deadline by submitting the Change in Course Registration form.
- Students wishing to transfer from credit to audit must do so before the last day to drop courses without academic prejudice deadline by submitting the Course Audit Application.
- For students not enrolled in a course/ program, the deadline to add an audit course is three calendar days after the last day to add classes (except for programs that have courses taught in block sequence, e.g., Trades).
- Students in Distributed Learning (DL) will not be provided access to online material through D2L until they are officially enrolled in the course.
- Audit students are not required to complete course work, assignments, and exams; however, auditing students are expected to take part in all course activities and maintain satisfactory attendance. The degree of participation in a course for an audit student is at the discretion of the instructor.
- Audit students will not have access to assessments identified in the official course outline.
- No course credits are granted for an audit course. An Audit Grade (AU) appears on student transcripts but it is not included in Grade Point Average (GPA) calculations.

- Audited courses do not count in course load (i.e., towards a student's full-time/part-time status).
- Students must pay all applicable fees associated with the course.
- Audited courses cannot be used to meet pre-requisites to other courses.
- Audited courses cannot be used to meet program entrance requirements.
- Audited courses cannot be used for credit transfer, course challenge, exemption, or Prior Learning Assessment and Recognition (PLAR).
- If a student wishes to withdraw from an audited course, regular course withdrawal deadlines and refund processes apply.
- The grade AU (Audit) is recorded on the student's permanent record when the student has met the attendance/participation requirements specified by the instructor.
- CNA reserves the right to terminate the agreement to audit at any point.
- T2202As are not impacted as audit courses do not affect course load.

Credit Transfer/Exemption/Prior Learning

Transfer of Credit Status (Other than Industrial Trades)
Transfer of credit status is awarded for any course completed at the Marine Institute or at any one of the former Colleges provided the course uses the same course description and course number. When transfer of credit is awarded, the College will accept the passing grade as awarded by the institution and this mark will be used in the calculation of the GPA Students must initiate transfer of credit requests within 7 calendar days of the semester start date.

Industrial Trades Programs
Transfer of credit status is awarded for any course completed at any post-secondary institution that matches the course numbers in the Provincial Plan of Training. Students must initiate transfer of credit requests within 7 calendar days of the semester start date.

Exemption Status (Other than Industrial Trades)
Exemption status is granted for a course from a post-secondary institution if that course has a minimum of 70% equivalency in the course material required. When exemption status is awarded, no mark is reported on the transcript and GPA is not affected. The College will consider exemptions for courses if the student received a passing grade. Students must initiate exemption status requests within 7 calendar days of the semester start date.

Exemption status may be granted for Advanced Placement (AP) and International Baccalaureate (IB) courses. The mark must be equivalent to the required pass mark for the applicable program. When exemption status is awarded, no mark is reported on the transcript and the GPA is not affected.

The College will accept a credit course from a recognized public post- secondary institution as an exemption for an elective even if that course is not offered at the College. For example, a course in Linguistics from MUN would be considered to have equivalent value to any other "elective" and, on request, could be granted exemption as a general elective. In some programs, electives must be chosen from a designated group of courses, in which case a general elective cannot be used as a substitute.

Industrial Trades Programs
Exemption status is granted if the course has a minimum of 70% equivalency in the course material required. When exemption status is awarded, no mark is reported on the transcript. The College will consider exemptions for courses if the student received a passing grade in the course. Students must initiate exemption status requests within 7 calendar days of the semester start date.

The College will accept a course from a recognized post-secondary institution as an exemption if the course can match a minimum of 70% of the objectives in the current Provincial Plan of Training as outlined by the Department of Advanced Education and Skills.

Credit for Prior Learning
The College will give students every opportunity to receive credit for past learning experience through a comprehensive systematic process of evaluation referred to as Prior Learning Assessment and Recognition (PLAR). Students must initiate PLAR requests within 7 calendar days of the semester start date.

Credits awarded for PLAR will be recorded on the transcript as an exemption or as a mark.

There will be no charge for PLAR for students who are enrolled in a College program.

The maximum number of credits that can be awarded through the PLAR process is 75 percent (75%) of the number required to complete the certificate/diploma.

Block Transfer/Advanced Standing
The College will recognize course work completed in other programs/ courses that fulfill the requirements for a designated percentage of the program in which the student is now applying. When students are granted a block transfer, their academic grades will be calculated beginning at the point of entry to the program. Students must initiate block transfer requests within 7 calendar days of the semester start date.

Advanced Standing
All required courses for a semester must be completed to receive advanced standing. Students may receive advanced standing for up to 75% of the content of the program to which they have been admitted on the basis of successful completion of this content in the same or similar programs at another college and as assessed by the College.

Applicants who wish to be considered for advanced standing should submit an application with the following documents:
1. Proof of high school completion;
2. Official transcript(s);
3. Detailed calendar description of the courses claimed for credit.

Students seeking advanced standing will not be excused from any course until written authority has been received from the campus admissions/student services office.

Students seeking advanced standing may not receive credit for courses that were completed more than five (5) years prior to the date of submission. For some programs, students may have to complete a practical demonstration or other assessment of skills prior to receiving credit.

Credit System
Credit Programs (other than Industrial Trades)
A credit is a weighted value of a course based on the depth and breadth of the learning objectives.

For the purpose of assigning credit values, the measurement of learning objectives is usually accomplished by equating the value with the period of time scheduled to deliver the content in the conventional lecture methodology as follows:

Learning objectives scheduled for delivery in a one hour period per week per semester constitutes a one credit value; therefore a course that is scheduled for three hours per week per semester represents a three credit value. However, a recognized laboratory experience is usually measured in the following manner:

2 – 4 hours of lab/week/semester is equivalent to one credit
5 – 7 hours of lab/week/semester is equivalent to two credits
8 – 10 hours of lab/week/semester is equivalent to three credits
11 – 14 hours of lab/week/semester is equivalent to four credits

The actual process in achieving competency in specified learning objectives can be accomplished via a second equally legitimate and pedagogically sound methodology; i.e. individualized and student-centered. In this latter methodology which embraces distance delivery, time is a flexible factor, fixed schedules do not apply and the process is student-driven. This is in contrast to the conventional lecture mode which is teacher-directed with fixed learning times and schedules. The one constant for both modes is the set of learning objectives. Therefore, credit value is assigned by determining the equivalent time required if the learning objectives were delivered in the conventional mode and applying the formula as described under the definition of a credit.

Credit System – Industrial Trades
The credit system is not applicable to programs in the School of Industrial Trades. Courses adhere to the Provincial Apprenticeship Program Structure (Plan of Training).

Grade Point Marking System
Grade Point Marking System – Credit Programs (other than Industrial Trades)
The percentage mark in any course is converted to a grade point according to the following table:

80% and over	4
70%, 75%	3
60%, 65%	2
50%, 55%	1
Below 50%	0

The grade point average is obtained by multiplying the credit value of each course in the program by the grade point obtained in that course. The sum of all the products is then divided by the total number of credits.

When a course is repeated or a supplementary examination is written, the highest mark attained will be used in the calculation of the grade point average.

When students complete more than the minimum number of electives, students are able to select which electives will be used in the calculation of the G.P.A. by making application at the campus admissions office. Without such application for calculation purposes, the required number of electives as recorded chronologically on the transcript will be selected.

Grades for failed courses which have been waived under the "academic warning" policy will not be calculated in the cumulative grade point average.

Grade Point Marking System - Industrial Trades
The Grade Point Marking System is not applicable to programs in the School of Industrial Trades. Courses adhere to the Provincial Apprenticeship Program Structure (Plan of Training).

Academic Status

Clear Standing
Students are in clear standing when they have passed all courses and have attained a grade point average of at least 2.0, except in the following:

1. In Diagnostic Ultrasonography, Medical Laboratory Assistant, Medical Laboratory Technology, Medical Radiography, Rehabilitation Assistant (OTA/PTA), and Respiratory Therapy programs the pass mark is 60%, including a minimum of 60% on the final exam, in core courses.
2. In Industrial Trades programs the pass mark is 70% in the practical component and 70% in the theory component.
3. In Aircraft Maintenance Engineering Technician and Aircraft Structural Repair Technician, the pass mark is 70%.
4. In Primary Care Paramedicine, Emergency Medical Responder to Primary Care Paramedicine, Advanced Care Paramedicine, and Veterinary Technician the pass mark is 70%, including a minimum of 70% on the final exam, in core courses.
5. In Pharmacy Technician the pass mark is 60%, including a minimum of 60% on the final exam, in core courses. An exception to this is RX1220 for which 80% is the minimum pass mark for the course and the minimum pass mark on the final exam.
6. In Practical Nursing the pass mark is 65%.
7. In Personal Care Attendant, the pass mark is 65% including a minimum of 65% on the final exam.

Conditional Status Credit Programs (other than Industrial Trades)
Students are classified as conditional when: they have a cumulative grade point average between 1.00 and 1.99 in any semester, or when they must clear course deficiencies in order to graduate (e.g., students who must successfully complete a failed course through supplementary examinations or repetition).

Students are expected to attempt courses from previous semesters (if available), before registering for any new course, and must consult with a faculty advisor and/or counsellor on or before registration.

A part-time student is conditional, but if the GPA is less than 1.5 the student may be academically dismissed from their program.

Conditional Status Industrial Trades
Students are classified as conditional when they must clear course deficiencies in order to graduate. Students who are required to successfully complete a failed course must follow the regulations as outlined in Industrial Trades Rewrite Policy AC-117 / Procedure AC-117-PR.

Academic Warning
Students will receive an academic warning if their cumulative grade point average is less than 1.0 and/or they have not passed a minimum of 40% of the credits attempted (for Trades- courses attempted) in the semester.

Students, who, for the first time fail to achieve the minimum requirements to progress to the next semester will be given an academic warning and will be permitted to register for the next semester provided:

1. Those students will be referred to a counsellor and will participate in a review of their career/academic goals and will develop learning strategies that will lead to success.
2. In consultation with the academic advisor/counsellor, the student will determine an appropriate course load. The maximum course load will not exceed the normal semester workload for the program.

Students will be permitted to register only for those courses for which prerequisites have been successfully met.

Academic Dismissal
Students who have availed of the "academic warning" or "promotion denied" option and who fail to meet the academic requirements for a second occasion will be academically dismissed.

Applications from academically dismissed students will be received at any time, but students will not be accepted to return on a full-time basis in the program they were academically dismissed from until a period of six months has elapsed.

Students who have been academically dismissed on two or more occasions will not be eligible for re-admission in the program from which they were academically dismissed from a period of two years from the date of dismissal.

Academically Dismissed Students- Eligibility for Part- Time Courses

Pending availability of space, students who have been academically dismissed will be permitted to register for one (1) course for credit in the program from which they were dismissed.

Academically Dismissed Students- Eligibility for Supplementary Examinations

Academically dismissed students will not be eligible to write supplementary examinations.

Promotion Denied (General)
Students who do not achieve a pass in all courses and a G.P.A. of 2.0 or better may not be able to continue with their program but may return to the College to complete deficiencies.

Students who are required to withdraw from the College as a result of promotion denied must apply for re-admission and pay the applicable application fee. Re-admission will be considered pending seat availability.

Subsequent occurrences of promotion denied will result in Academic Dismissal.

Students in the Health Sciences programs will be required to withdraw from their program of study at the point in their program where it is determined that the one (1) additional year (maximum) will not be adequate for them to complete all the requirements of the program. (Refer to AC-102-PR, Section 1.4 for re-admission requirements.)

Promotion – Engineering Technology Programs from First Year
To qualify for the technical intersession at the end of the first two semesters, students must normally have successfully completed all prescribed courses and attained a minimum overall G.P.A. of 2.00. Students who have a G.P.A. between 1.00 and 1.99 at the end of the second and subsequent semesters may, with the permission of the College, be conditionally admitted to the next semester if there is a determination that the students are capable of attaining clear standing by the end of the subsequent semester.

Promotion – Health Sciences
Health Sciences programs include mandatory clinical training rotations. Students must successfully complete all previous courses and have a minimum G.P.A. of 2.00 to be promoted to the clinical training component of their program.

Promotion – Co-op Programs

Successful completion of work term requirements is a prerequisite for graduation. To be eligible for a work term, a student must have "clear standing" for all courses prescribed in the program to the point where the work term occurs; or be able to attain clear standing by writing one supplementary. Since work term arrangements are often made in advance of the commencement of the work term and before current academic assessments are available, eligibility will be based on the most recent transcript for marketing purposes. Students must maintain eligibility in the semester immediately preceding the work term semester.

Examinations and Tests

Dates for mid-term, final, and supplementary examinations will be set in advance. No more than two mid-term and final examinations will be scheduled for a student on any one day.

Student evaluation will be conducted on a continuous basis. The method of evaluation will be recommended in the official course description. Grades submitted to the campus admissions/student services office will be rounded in units of five, rounding up or down will be at the instructor's discretion.
Instructors shall not be permitted to give quizzes worth more than 10% of the total final mark or assign new projects, assignments, etc., in the two (2) week period prior to the start of semester examinations. This regulation does not apply to:

1. Courses with no final semester examination.
2. Laboratory examinations.
3. Self-directed and modular courses.

4. Courses with block teaching.
5. Assignments given prior to this period which are due in the two weeks prior to examinations.
6. Courses offered in Intersession I and II (i.e. up to 8-week period). The time frame for these courses will be one (1) week prior to the start of examinations.

Supplementary Examinations

Supplementary Exams Credit Programs (other than Industrial Trades)

Supplementary examinations provide an opportunity for students to improve their standing in a course in which they have attained a failing grade of 5 or 10 marks below the stated pass mark.

For upgrading purposes, in their last semester of studies, students may be given an opportunity to write a supplementary examination for a course in which they have attained the minimum pass mark or five marks above the minimum pass mark.

The grade attained in a supplementary examination will replace only the grade attained in the final examination for the course in question and will be combined with marks previously attained for term work.

The following conditions must be met in order to qualify for supplementary examinations:

1. Students may be eligible to write one supplementary per semester.
2. Supplementary exams will not apply to any course in which the final exam is worth less than 30%.
3. Supplementary examinations will be scheduled and should be written during the supplementary period following the regular examination period, but shall be no later than one (1) week into the subsequent semester.
4. Students must apply, in writing, for supplementary examinations. The established standard fee per supplementary examination must accompany the application form. Refunds of such fees will only be permitted if permission to write an examination is not granted.
5. If the mark obtained in the supplementary is lower than the original mark obtained on the regular examination, the original mark will be included in calculating the grade point average.
6. When circumstances warrant, supplementary examinations may be written off-campus. The campus admissions/student services office must be contacted for permission and guidelines prior to the examination period. All costs associated with the administration of off-campus supplementary examinations will be borne by the student.
7. Academically dismissed students are not eligible to write supplementary exams.
8. For purposes of transfer of credit, students must be aware that other post-secondary institutions may not accept grades attained through supplementary examinations.
9. Comprehensive Arts and Science (CAS) Transfer: College-University program students who write supplementary examinations are advised to consult with the counsellor at a campus where the Comprehensive Arts and Science (CAS) Transfer: College-University program is offered concerning their transferability of courses to Memorial University.
10. Before writing a supplementary examination in the Comprehensive Arts and Science (CAS) Transfer: College-University Program, a student must be informed in writing of #8. The written communication (i.e., form) must be signed/dated by the student, the instructor of the course and campus administration or designate. Copies should be kept by the instructor and campus administration, and a copy must be placed in the official student file.

DEFERRED EXAMS

Deferred Exams Credit Programs

Students who are prevented by illness, bereavement or other acceptable cause from writing a final examination, where one is scheduled, may apply for permission to write a deferred examination. The deferred examination is the final examination for the individual concerned.

Where possible, deferred exams should be completed by the last day of that semester, or as soon as possible thereafter, but shall be no later than one (1) week into the subsequent semester.

An Application for Deferred Examinations must be submitted to the campus admissions/student services office within two (2) days after the date on which the regular examination was scheduled. The request for a deferred exam will be assessed by the campus administration or designate in consultation with faculty members. Students should note that permission to write deferred examinations is a privilege, not a right, granted solely on the basis of extenuating circumstances.

Incomplete Grades

Incomplete Grades Credit Programs (programs other than Industrial Trades)

Subject to the approval of the campus administration or designate, in extenuating circumstances ,an incomplete grade may be assigned when the mandatory components of the course are not completed. Incomplete grades must be cleared by the end of the third week after the beginning of the subsequent semester. If incomplete grades are not cleared by this date, students will receive a failing grade.

Incomplete Grades - Industrial Trades

The incomplete grades regulation does not apply to Industrial Trades programs.

Reassessment of Grades

Students, who feel that they may not have been accurately assessed on any assignment, examination, term paper, or laboratory or shop exercise should, in the first instance, discuss the matter with the instructor teaching the course. This should be done within three (3) instructional days of the receipt of the assessment. If this does not result in a satisfactory resolution, students may request that the matter be reviewed by the campus administration. If this action is taken, it must be done within five (5) instructional days of receipt of the assessment. Unsatisfactory resolution of the dispute at this stage may enable students to request a review of the grade(s) by the Academic Appeals Committee. Such an appeal should be made within ten (10) days of receipt of the assessment.

Re-Read of Final Examinations

Students may apply to have a final examination paper re-read.

An application for Examination Re-read must be submitted to the campus admissions/student services office within one (1) week following the release of the marks. A re-read fee must be paid at the time of application. If the mark is changed after the re-read the fee is refunded; if the mark is unchanged the fee is forfeited.

The mark obtained in a re-read (even if lower) stands as the official mark in the course and is used in all calculations of the student's academic record.

Re-Writes - Industrial Trades

Students enrolled in Industrial Trades programs (excluding Aircraft Maintenance Engineering Technician and Aircraft Structural Repair Technician) will follow regulations as outlined in the College Industrial Trades Rewrite Policy AC-117 / Procedure AC-117-PR.

A rewrite of a final evaluation provides an opportunity for students to improve their standing in a course in which they have attained a failing grade. The grade attained in the rewrite will be used to determine the final grade.
The number of rewrites allowed is by semester, not by course. Students may be eligible for a maximum of two (2) rewrites during the fall semester, a maximum of two (2) rewrites during the winter semester and a maximum of one (1) rewrite during intersession.

The following condition must be met in order to qualify for a rewrite:

1. Attendance of at least 90%

Because of course pre-requisite requirements, and in the interest of not falling behind in the program, all interventions will take place as soon as possible and a re-write, if required, will be administered within five (5) business days after the date of the original final evaluation.

The mark obtained on the re-write will be used to determine the final grade.

For complete details please refer to the College Industrial Trades Rewrite Policy AC-117 and Procedure AC-117-PR.

Aegrotat Status

Students who, through exceptional circumstances, have been absent from a scheduled final examination, or who have been unable to complete all the required work in a course, may, submit a request to the Registrar's Office for Aegrotat Status. The Registrar's Office shall consult with the campus administration or designate, counselor and instructor to determine if credit can be given for the course, with a grade assigned for the portion of work completed.

Application for Aegrotat Standing, with full details duly authenticated, must be made to the campus admissions/student services office within 7 calendar days after the last day of examinations, indicating each course for which the application is being made.

Co-op Regulations

1. Work term learning is integral to co-operative education, and a co-op diploma will be awarded to students who successfully complete work terms as articulated in their program structure. Work terms provide unique learning experiences in a real work place setting. They are program relevant, full-time, 12 – 16 weeks in duration, and normally remunerated. Scheduling of work terms varies by program; however they alternate between academic semesters. Work term start and finish dates correspond with academic semesters; however specific dates are established with each employer.
2. To be eligible for a work term, a student must have "clear standing" for all courses prescribed in the program to the point where the work term occurs; or be able to attain clear standing by writing one supplementary.
   Since work term arrangements are often made in advance of the commencement of the work term and before current academic assessments are available, eligibility will be based on the most recent transcript for marketing purposes. Students MUST maintain eligibility in the semester immediately preceding the work term semester.
3. The co-op term mark will result from both employer and institutional evaluation. Students must achieve a minimum of 50% in each of the work term performance evaluation and the work term report, and must achieve a combined grade of 60%. The work term mark

will be recorded on the student transcript.
   a. Work term performance is evaluated by the employer and monitored by the College.
   b. The work term report is validated by the employer and graded by faculty/coordinators. A student receiving a 40% or 45% grade on the work term report will be eligible to re-submit the report. The report must be re-submitted no longer than four weeks after receipt of the work term evaluation.
4. Students are encouraged to obtain their own work terms. Such work terms must be confirmed by letter from the employer and approved by the coordinator on or before the first day on which the student commences work.
5. Students are required to sign a waiver giving permission to the College to supply students' resumes and transcripts to potential employers.

Qualifications for a Applied Degree, Diploma, Advanced Diploma, Post Diploma or Certificate

Students must meet the following requirements:
1. Meet all the requirements as prescribed in the program of studies;
2. Obtain a mark of not less than 50% in every course in the program unless otherwise specified (Refer to Academic Status);
3. Attain a minimum grade point average of 2.0;
4. Obtain 25% or more of their credits from the College.

Students, other than Health Sciences students, who do not complete their certificate or diploma program in the prescribed time frame from first day of classes, may complete the program by following the regulations in effect at the time of first registration provided the program is completed in not more than three (3) years beyond the regular date of completion. A student who does not complete a program within these prescribed time limits may be required to complete additional courses and/or repeat certain courses before being deemed eligible to receive the certificate or diploma.

Students who return to complete a diploma in any of the Business/Office programs, Information Technology programs, and/or Engineering Technology programs may not receive credit for courses that were completed more than five (5) years prior to the date of re-admission.

Students enrolled in accredited Health Sciences programs will be permitted a maximum of one (1) additional year to complete their program of studies.

Students who return to Industrial Trades programs will be required to complete all courses that are in the current Plan of Training to be eligible to receive a certificate.

Parchments

Upon the successful completion of a program of studies, students will be awarded one of six parchments:
1. A Certificate in (Program Title)
2. A Diploma in (Program Title)
3. A Post Diploma in (Program Title)
4. An Advanced Diploma in (Program Title)
5. An Applied Degree in (Program Title)
6. A Certificate of Achievement in (Program/Course Title)
7. A Certificate of Participation in (Program/Course Title)

Academic Documentation

Transcripts
1. Official Transcripts may be obtained at any time from any campus admissions/student services office. Requests for transcripts must be made in writing and must contain the student's signature.
   Unofficial transcripts are now available to students as well.
2. A transcript includes the student's academic record to date including academic decisions which may have been taken. Transcripts that are released will include the student's complete academic history.

Transcripts, diplomas, certificates, and access to view grades in self-service, will be withheld from a student who is in possession of College property such as books, equipment or supplies or who owes money to the College.

Grades

Students will be able to view their grades through student self-service after the end of each semester.

Replacement of Parchments (Diplomas or Certificates)

The College may, upon submission of the appropriate form (and fee), re-issue parchments which are lost or stolen or damaged.

1. **Requirements for a parchment to be re-issued**:
   A request for replacement form must be signed and dated by the individual. The appropriate fee must accompany the application.

2. **Details of the re-issued parchment:**
   Parchments shall be re-issued in the format and style of those being used at the time of replacement, and shall indicate the original institution name, original date of issue as well as the date of re-issue.

Student Appeals (Academic)

All registered students of the College have the right to appeal decisions or rulings which affect them and which pertain specifically to academic matters. Please refer to Policy SS-213 / Procedure SS-213-PR for further details.

Student Appeals (Non-Academic)

All students of the College have the right to appeal decisions or rulings that affect them and which pertain specifically to non-academic matters. Please refer to Policy SS-203 / Procedure SS-203-PR for further details.

AWARDS

The College offers opportunities to students in many programs to compete for a variety of achievement awards, scholarships, bursaries, distinction awards, prizes and graduation awards. An Awards Handbook outlining all awards available, as well as the specific criteria, is available on the College website www.cna.nl.ca/awards

Definition of Awards

Achievement Award
Monetary award given in recognition of academic excellence, leadership and community/college involvement.

Scholarship
Monetary award given in recognition of academic excellence.

Bursary
Monetary award given in recognition of academic merit and financial need.

Distinction Award
An award given in recognition of a variety of qualities. Some examples would be but are not limited to: passion for learning, demonstrated initiative, significant contribution to class, good work ethic, positive attitude, willingness to help others and/or a strong desire to succeed.

Prize
Award given in recognition of performance in a particular subject area or task.

Medal
President's Medals of Excellence, Governor General's Academic medals, and other medals presented upon graduation.

Honour Society
Students achieving academic excellence as prescribed by specific criteria will become members of the College of the North Atlantic Honour Society.

Graduated with Honours: Students achieving Honours status as prescribed by specific criteria will have "graduated with honours" on their official transcript.

Academic Excellence
For the purpose of achievement awards and scholarships, academic excellence refers to a candidate who has attained the minimum weighted/overall average of 75% or higher. Note: some programs are based on weighted average and others are based on overall average.

Academic Merit
For the purpose of bursaries and prizes, academic merit refers to a candidate who has attained the minimum weighted/overall average of 60% or higher except in cases where the grading basis is higher for their program. Note: some programs are based on weighted average and others are based on overall average.

Application Process

Application forms for awards administered by the College are available at the campus Student Services office and the College website.

Unless otherwise stated, applications are **not** required in order to be considered for medals, scholarships or prizes.

The deadline for receipt of applications for bursaries and other awards can be obtained at each campus Student Services office and College website but is generally mid-January. Please see application for exact date.

Criteria for Awards

- During a campus or provincial awards selection process no achievement award, scholarship, distinction award, bursary or prize administered by the college, within that process, shall be awarded to a candidate who holds an award of equal or greater value, unless specifically required by the terms of the award.
- To be eligible for any award, a student must be registered as a **full-time** student in a recognized College program.
- To be eligible for renewal of an achievement award, scholarship or bursary the student must maintain full time status in their recognized College program and continue to meet eligibility requirements of the award.

The eligibility criteria for awarding an achievement award or a scholarship:

- Candidates must be in clear academic standing with a minimum weighted/overall average of 75%.
- At least 80% of the credits accumulated at the point of consideration for awards must have been obtained at the College.
- Courses which are not included in the requirements for graduation will not be included in the calculation of the weighted/overall average.
- Candidates must have attained a passing grade in **ALL** courses being considered in establishing weighted/ overall average. Marks obtained in supplementary exams will be considered in the calculation of the weighted/overall average.
- In cases where the student repeats a course, the best earned grade will stand for calculation of the weighted/overall average.

The eligibility criteria for awarding a bursary, distinction award or a prize:

- Candidates must be in clear academic standing and have attained a minimum weighted/overall average of 60%, except in cases where the minimum grading basis is higher. The weighted average will be used except in cases where programs use an overall average.
- At least 80% of the credits accumulated at the point of consideration for awards must have been obtained at the College.
- Courses that are not included in the requirements for graduation will not be included in the calculation of the weighted/overall average.
- Candidates must have attained a passing grade in **ALL** courses being considered in establishing weighted/ overall average. Marks obtained in supplementary exams will be considered in the calculation of the weighted/overall average.
- In cases where the student repeats a course, the best earned grade will stand for calculation of the weighted/overall average.

The eligibility criteria for awarding the Governor General's Medal:

The Governor General's Medal is awarded to one full-time **graduate** who has achieved the highest weighted/overall average at each campus, where applicable. The student must be graduating from a **two** or **three-year diploma level** program.

The eligibility criteria for the President's Medal of Excellence:

The President's Medal of Excellence is awarded to one full-time **graduate** in each program who attains the highest weighted/overall average in his/her program. The student will also receive a certificate. The student must meet all college scholarship criteria. The medal is campus based and is available to both the certificate and diploma level programs.

Eligibility for Honour Society at Graduation

The College recognizes graduates who have attained an overall grade point average (GPA) of 4.0 and attained a minimum mark of 80% in each course of their certificate or diploma level program. Students who achieve this will be recognized during the graduation ceremony with an honour cord.

Eligibility criteria for Dean's Honour Roll:

The College has established Dean's Honour Roll to recognize full-time students in certificate or diploma level programs, where the passing grade of the courses is 50% to 65% who have a grade point average (GPA) of 4.0 and no mark less than 80%.

Documentation

Awards administered by the College shall be recorded on the recipient's academic record.

Transcripts for students who achieve Dean's Honour Roll (honour society status) will state, "Dean's Honour Roll" at the end of each semester that they achieve this.

Students who have achieved Dean's Honour Roll will have their names posted at their campuses and on the campus website at the end of the semester.

Transcripts for students who achieve honour society status at graduation, will state "Dean's Honour Society" on their transcript. They will also receive a letter via their college e-mail which will be generated on Academic School letterhead and signed by the Dean of their respective school and a Honour Cord during graduation.

College Awards Publications/Opt Out Form

Students who do not wish to have personal information (name, photo, video, program of study and community) published by the College or a donor must complete an Awards Publications "opt out" form available for download and printing on the College website at https://www.cna.nl.ca/student-support/ pdfs/STD_FORMS/Awards%20Publication%20Opt%20Out%20Form.pdf, and must be submitted to the Student Services office at their campus.

Outstanding Fees

Award recipients who owe outstanding fees to the College will have their monetary award credited to their account.

Privacy Disclaimer

As part of the Scholarship/Awards process, your personal information (name, photo, video, program of study and community) may be shared with our donor to advise them of how their scholarship monies have been distributed. If you do not wish to have this information shared, please e-mail alumni@cna.nl.ca.

All students who are selected for an award/scholarship/bursary will be required to provide their Social Insurance Number so that a T4A may be issued for income tax purposes.

College of the North Atlantic recommends that students who are receiving funding and/or sponsorship contact their funding/ sponsoring agency for clarification of whether receiving an award may affect their funding/ sponsorship status.

College awards are subject to change or cancellation without prior notice.

For updates to the Student Awards policy and procedures please visit our website at http://www.cna.nl.ca/About/Policies-and-Procedures.aspx

FEES AND CHARGES

1.0 Regulations Governing Payment of Fees & Charges

a. All student fees must be paid by the date specified in each term. The dates are listed in the Academic Dates. Students receiving Student Aid must present their notification of Student Aid form on the first day of classes. These students are permitted to have fees outstanding until receipt of the Student Aid, at which time these students must pay their accounts in full.
b. Students who have not paid all fees within the time limits given in these regulations may have their registration cancelled by the College.
c. Students with outstanding accounts will be ineligible for a subsequent term, will not be awarded a diploma or certificate, access to register, and will not be issued a certificate of standing (transcript), grade report, or access to on-line grades until the outstanding account has been paid in full. It is the student's responsibility to address outstanding balances and to work with their respective campus student services office on inquiries related to their account balance.
d. Should the College cancel a program, all tuition and fees paid will be refunded.
e. Out of sequence students registering or withdrawing within a term will pay a prorated tuition and equipment and materials fee per week.
f. Students taking courses above their normal term load (requires application to extend normal course load per semester) will pay tuition for each additional course taken.
g. Senior Citizens, 60 years and older, are required to pay 50% of confirmation fee and tuition.
h. Students wishing to audit a course will pay 50% of the tuition and 100% of the technology fees (if applicable).

2.0 Fees and Charges

2.1 Fees

a. Application Fee $30.00 (non-refundable except as noted in 3.a)
Applicants must pay a non-refundable fee for each application to the College
b. Confirmation Fee $103.00 (non-refundable)
Student must pay a non-refundable fee on confirmation of acceptance to each program at the College. The fee covers registration and student association fees and is paid annually for the duration of the program.
c. Supplementary Fee (per course) $25.00
d. Re-Read Fee (per evaluation) $25.00
e. NSF Cheques (per cheque) $25.00
f. Replacement I.D. cards (per ID) $15.00
g. Replacement Parchment (per request) $25.00
h. Academic Audit fee (per program) $50.00
i. Resource Camp Fee (per day) $63.00 (covers food & lodging - not tuition)
j. Technology fee (per semester) $79.00
k. Work Term fee (Co-op and Non Co-op) $481.00
l. On the Job (OJT) fees or Work Terms (less than 7 weeks) $65.00 (Per Week)
m. Certifications within program of study:
- First Aid fee $138.00
- Mask Fit fee $39.00

o. Transcript Fee $8.00
p. Day Care fees (contact applicable campus) $10.00 per day per child
q. International students should refer to "International Students" section of calendar for international student fees.

2.2 Full-Time Students

Fees are subject to change. Please refer to the College website for the most up-to-date fees.

Students enrolled in four (4) or more courses:

a. Application fee per program — $30.00 (Non-refundable except as noted in 3.a.)

b. Confirmation fee — $103.00 (Non-refundable)

Student must pay this fee on confirmation of acceptance to each program at the College. The fee covers registration and student association fees and is paid annually for the duration of the program.

c. Tuition

i. Term based programs:

Regular Term (15-weeks):

Academics, Applied Arts &Tourism	$1140.00
Business & Information Technology	$1047.00
Engineering Technology	$1239.00
Health Sciences	$1239.00
Natural Resources & Industrial Trades	$1239.00
Sustainable Development	$1239.00

Intersession (up to 7-weeks):

Academics, Applied Arts & Tourism	$545.00
Business & Information Technology	$499.00
Engineering Technology	$595.00
Health Sciences	$595.00
Natural Resources & Industrial Trades	$595.00
Sustainable Development	$595.00

ii. Trade programs (per week)

Heavy Equipment/Commercial Driver (per week)	$123.00

iii. Applied Degree programs:

Regular Term (15-weeks)

Academics, Applied Arts & Tourism	$2101.00
Business & Information Technology	2008.00

Intersession (up to 7-weeks)

Academics, Applied Arts & Tourism	1001.00
Business & Information Technology	955.00

d. Student Health and Dental Plan Fees are based on an academic year. The Student Health and Dental Plan is applicable to all full time students. Please refer to Student Health/Dental Plan in the Student Services section of the calendar for coverage details and rates.

2.3 Part-Time Student Fees

Students enrolled in three (3) or less courses (including Regular Programs, Day-time General Studies, and Online Learning):

a.	Application fee for program	$30.00
b.	Tuition fee per course	$305.00
c.	Tuition fee per course (Applied Degree)	$610.00
d.	Technology fee-per semester	$79.00

2.4 General Studies Fees

General Studies students who enroll in courses will pay fees per 2.2 and 2.3 plus the applicable Technology fee.

2.5 Continuing Education

Contact local campus for course fees.

2.6 Residence Fees

Students must pay a minimum of two weeks residence fees in advance, or upon arrival in residence. Students intending to move out of residence must give 30 days' notice or pay a penalty of $100.00.

Students are responsible for providing their own bed linens and laundry service.

Meal plans are mandatory.

a. Fees applicable to all campuses

Residence Application fee (This is an annual fee and is non-refundable)	$25.00
Residence Registration fee – Single/Double Residence (This is an annual fee and is non-refundable)	$50.00
Residence Registration fee – Family Residence (This is an annual fee and is non-refundable)	$100.00
Damage Deposit – Family Residence (This is an annual fee and is non-refundable)	$100.00

b. Room Charges

	Single	**Double**
Daily	$30.00	$20.00
Weekly	$120.00	$80.00

Family Residence (Happy Valley Campus/Monthly)

One Bedroom Apartment	$330.00
Two Bedroom Apartment	$401.00
Three Bedroom Apartment	$468.00

c. Meals

Bay St. George Campus

10 meals weekly	$101.00
14 meals weekly	$141.00
19 meals weekly	$192.00

Burin Campus

10 meals weekly	$101.00
14 meals weekly	$141.00

Happy Valley Campus

14 meals weekly	$141.00

3.0 Refunds

a. Application fees are only refundable if the program does not go ahead, and the applicant does not want to transfer the application to another program.

b. Confirmation fees will be refunded only to individuals who were conditionally accepted and upon receipt of final High School or other qualifying marks (e.g. ABE, College Transition) do not meet the academic entrance requirement to the program.

c. Refunds will be made to the same method of payment (e.g. refunded to the same credit card payment was issued from or refunded to bank account when method of payment was bank transfer). International refunds will be made only through PayMyTuition.

d. Tuition

i. **Term based (15-weeks)**
- Day 1 – 28: 100% refund
- Day 29 – 42: Prorated refund
- Day 43 onwards: no refund

ii. **Term based (up to 7 weeks)**
- Day 1 – 14: 100% refund
- Day 15-21: Prorated refund
- Day 22 onwards: no refund

iii. **Out of sequence programs**
A student who graduates or withdraws from the program will be liable for the actual number of weeks in class. Any over-payment will be refunded.

iv. **Trades programs**
A student who graduates or withdraws from the program will be liable for the actual number of weeks in class. Any over-payment will be refunded.

e. **Refunds for Customized and Continuous Learning**

i. Customized training programs of 15 or more weeks duration:
Refer to Section d.i to d.iv.

ii. Customized training programs of 6 to 14 weeks duration:
A student who withdraws/ cancels after one week of the start date of a training program will receive a full refund upon written request. A student who withdraws/cancels after two weeks of the start date of a training program will receive a 50% refund upon written request. No refund will be made after the second week of the program start date.

iii. Customized training programs of 2 to 5 weeks duration:
A student who withdraws/ cancels after one day of a course/program start date will receive a full refund upon written request. A student who withdraws/ cancels by the end of the second day of a course/program start date will receive a 50% refund upon written request. No refund will be made after two days of a course/program start date.

iv. Part-time Continuous Learning (i.e. part-time hours/outside regular delivery hours):
Students must notify Continuous Learning of their intent to withdraw or cancel at least 5 days prior to the start date of a course to be entitled to a full refund. If the student notifies the office with the intent to withdraw or cancel less than 5 days prior to the course start date, the student will receive a 50% refund. A student who registers for a course, does not notify the College of their intent to withdraw, and does not attend any classes, will be deemed a "no show" and will forfeit their tuition fees. In the event the College cancels a course offering, students will receive a full refund. Special circumstances may apply to any of the above conditions, in which case supporting documentation is required.

v. Client Contracts
The refund policy for client contracts is set out in the College's standard Contract Training Agreements.

f. **Textbooks**

Refunds may be given for returned textbooks if the following three conditions are met:

i. Books are unmarked and in saleable condition

ii. Books are returned within the first three weeks after the commencement of classes

iii. Original receipts are presented before a refund is issued.

Students are responsible for initiating their own refunds and should contact the campus admissions/student services office. All refunds will be issued by Headquarters. Any refunds will be applied against outstanding accounts before any monies are returned to the student. If a student terminates or voluntarily withdraws from a program of studies, the refund from student loans will be forwarded to the National Student Loan Service Center.

4.0 Financial Credit

Deadline for payment of specified fees is provided in the Academic Dates. The College may grant credit to students to cover tuition and/or materials fees only (credit is not available to cover books or residence fees). The College may from time to time institute equipment lease/purchase programs for which credit may be granted. Students applying for financial credit must meet with a Student Services representative for assessment of their request. Credit will not be granted to students with outstanding fees from prior semesters.

Financial Contract

If financial credit is recommended, the student must complete a Financial Contract in consultation with a Student Services representative. The Financial Contract will specify what is covered and for what period of time – not to extend beyond the semester within which the contract is completed. The completed Financial Contract must be reviewed and signed by Campus Administration or an approved designate. The student is subject to collection action if the account is not paid.

Students Receiving Student Loans

Students with confirmed student loans are eligible for credit. When the student loan is issued, the amount owing will be deducted by the College as specified in the Financial Contract.

Students Receiving External Funding

Students with documentation confirming external funding will be granted credit and are expected to pay their fees once they are in possession of their funding as agreed to in the Financial Contract.

Students Not Receiving Student Loans or External Funding

Students seeking financial credit who do not meet the above criteria will only be granted financial credit in extenuating circumstances and upon written approved by Campus Administration or designate.

5.0 Financial Appeals

Appeals of a financial assessment should be made in writing to the Director of Finance at P.O. Box 5400, 432 Massachusetts Drive, Stephenville, NL A2N 2Z6.

The appeal should include, but not be limited to, the following information:

- Student number
- Program and campus;
- Rationale as to why the fee(s) should be reversed;
- Documents supporting appeal rationale.

Once this information is received by the Director of Finance, the request will be reviewed with potential inquiries back to you or to the campus for clarification. A meeting will be held with a committee to review the request and a recommendation made to our Vice President, Finance and Administration. A communication regarding the decision will be provided.

Please note the College is collecting your personal information under the authority of the College Act, 1996, for the purpose of processing your appeal. It will be used by College staff in their work to complete the appeal process. The Director of Finance will summarize your appeal for the committee and limit the personal information shared to only that which is necessary. Questions about the collection and use of the information provided in this appeal can also be directed to the Director of Finance at kelly.hanlon@cna.nl.ca.

Receipts are issued for any financial transactions with the College. Students should ensure that they obtain and save these receipts for use in resolving any financial conflicts. In the absence of such documentation, the College financial records shall provide the basis for any decision.

STUDENT SERVICES

Introduction

Student Services is the division of the College that provides services to students to support and guide them in pursuit of their educational goals. Student Services complements and supports the student's academic experiences by establishing a College environment that fosters engagement, persistence, growth and development, and academic success.

Counselling Services

All students have access to a professional Counsellor to support their success and well-being. Counselling is a free and confidential service for all students, which may include personal, academic, career, financial, and mental health assistance. Counsellors may also administer standardized testing to support student recruitment and retention.

Accessibility Services

Students who identify as having a permanent or pervasive disability are encouraged to register with Accessibility Services. The Accessibility Services Team, which includes the Accessibility Services Coordinator and Resource Facilitator, can assist with accommodation planning support, referrals for assessment, tutoring and more. Please refer to Policy/Procedure SS-207 in the Student Services section of Policies and Procedures at http://www.cna.nl.ca/About/Policies-and-Procedures.aspx for further details.

Student Development Services

Student Development Officers (SDO) plan and implement various student engagement initiatives and provide guidance and assistance for student-led initiatives (campus-based and provincial). Student engagement initiatives contribute to positive and meaningful student experiences, build on student spirit, promote attachment to the institution and foster relationships within and outside the institution. These activities include, but are not limited to, orientation, spirit days, graduation ceremonies, scholarship and awards program, signature and special events, recreation/sports, health and wellness, student and graduate employment, social activities, and other extra-curricular activities. The SDO acts as the College liaison between the students and the College administration/staff and is an advisor to the campus CNASU. SDOs may also be involved in coordinating peer tutoring and assisting students with financial aid information. The SDO is also responsible for organizing and conducting recruitment liaison initiatives including participation in career fairs, school visits and trade shows.

Library Services

Campus library services are offered by a staff of library professionals who provide assistance to students wishing to make use of library resources. Every campus library learning commons has a collection of materials intended to support and complement the program curriculum at that particular campus along with a variety of materials for personal development and lifelong learning. Students can access article databases and ebooks online (both on campus and from home) and can borrow materials through intercampus and interlibrary loan, from other College of the North Atlantic libraries and most lending libraries across Canada.

Library tours and individual or group instruction in the use of the library learning commons and its resources may be arranged. Students are encouraged to visit the campus library learning commons to see exactly what is available. You can also visit the Library Services website at: https://www.cna.nl.ca/mycna/academic-support/libraries.aspx.

Academic Advising

Academic advising is an interactive process designed to help students gain the maximum benefit from their College of the North Atlantic experience. It is primarily intended to support students in achieving academic success. Advising entails using both College and community resources to assist students in making informed decisions, directing students to other information sources when necessary, and making appropriate referrals. Each first year student is assigned an Academic Advisor (program instructor) who initially meets with his/her group of advisees to discuss the importance of academic advising and the advising schedule for the semester/ year. The Advisor should meet with each student for a minimum of two formal sessions per semester.

Help Centres/Peer Tutoring

Help Centres, located online through MyCNA, and physically on some campuses, provide a location for students to receive assistance with course work in which they may be experiencing difficulties.

Individual and group tutoring may also be available. The College supports a peer tutoring program whereby students may access peer tutors and group tutorials or earn remuneration as a peer tutor. Please check with the campus Student Development Officer/Counsellor for further details.

Student Governance

College of the North Atlantic supports the activities of the student body provincially through the College of the North Atlantic Student Union (CNASU) and through the CNASU-campus and. Each of these student organizations is governed by Operating Guidelines which can be obtained from the Student Development Officer, Counsellor, CNASU-campus or online at www.cna.nl.ca.

CNASU-campus aims to address the issues of the students locally, provincially, and nationally. In September of each year, elections are held at each campus to elect members of the CNASU-campus, who may be involved in the organization and delivery of various extra-curricular activities on behalf of students:

- Winter Carnival
- Recreational and Athletic Activities
- Social Events and
- Student Newspaper

College of the North Atlantic Student Union (CNASU) provides a provincial forum for representatives from the various CNASU-campus to work cooperatively in advancing the interests of the students they represent. The CNASU promotes awareness and understanding of the needs and issues confronting students and advocates on their behalf. Students are encouraged to become involved with their CNASU-campus and have a voice in the events that influence their educational experience.

Students interested in the CNASU-campus or the College of the North Atlantic Student Union (CNASU) should contact the campus Student Development Officer.

Student Health/Dental Plan

Registered students at the College have access to drug, extended medical, and dental insurance coverage. The plan is **mandatory** unless documents demonstrating coverage under another plan (through employment/spouse/parent) is presented during the Health and Dental enrolment period. If a student does not opt out by the deadline, he/she will automatically be enrolled and his/her student account will be charged accordingly. Please check with the Student Services office for the opt out deadline for particular programs.

Beyond the coverage of Newfoundland and Labrador Medical Coverage Plan (MCP), the student plan will provide insurance for prescription drug costs (including oral contraceptives, anti-depressants, and acne medication), physiotherapy, massage therapy, speech therapy, chiropractic, and podiatry as well as accidental death and dismemberment insurance ($10,000 coverage), and emergency travel insurance to protect students when they are away from school.

The dental coverage includes cleaning, oral exams, scaling, x-rays, fillings, inlays, and root canal therapy with a maximum yearly benefit of $500.

For more information please contact the campus nearest you or visit our website at www.cna.nl.ca.

Please refer to the International Student section of this calendar for information regarding Health Insurance for International Students.

Accident Insurance

Student insurance coverage against accidents while going to and from the College, while in the college or participating in related College activities such as organized games is mandatory. The premium is included in the registration fee.

When an accident happens, minor or otherwise, students should report immediately to their instructor who will take the necessary action.

Student Handbook

The College will provide an on-line Student Handbook annually via the MyCNA webpage. This handbook provides a comprehensive overview of student supports and resources, in addition to important information and useful tips for students. The MyCNA webpage is also a point of entry to your Student Self-Service portal for registration, accessing webmail, and the Brightspace Pulse app. Please review the MyCNA link on the College website to access the on-line Student Handbook.

Student Code of Conduct (Rights and Responsibilities)

College Policy/Procedure SS-201 respects the general rights of students and recognizes that students also have responsibilities. In addition, all members of the CNA community have the right to a healthy and safe environment free from threat and/or the act of physical danger or violence. Please refer to this policy/procedure in the Student Services section of Policies and Procedures at http://www.cna.nl.ca/About/Policies-and-Procedures.aspx for further details.

Harassment Policy

All registered students have the right to pursue their studies and related activities free from personal harassment from College employees, fellow students, and agents of the College or others. Please refer to Policy/Procedure PO-005 in the President's Office section of Policies and Procedures at http://www.cna.nl.ca/About/Policies-and-Procedures.aspx for further details.

Sexual Violence Policy

All CNA community members share a collective responsibility for fostering a respectful college environment, including bystanders who witness acts of sexual violence. CNA, in collaboration with the CNA community, is responsible for fostering an environment that eliminates, where possible, or otherwise minimizes the risk of sexual violence as all CNA community members are entitled to carry out their

duties/studies and related activities in a respectful environment. Please refer to Policy/procedure PO-002 in the President's Office section of Policies and Procedures at http://www.cna.nl.ca/About/Policies-and-Procedures.aspx for further details.

Appeals

All registered students of the College may appeal a decision or ruling that affects them as it pertains to academic matters, matters of student discipline and student rights and responsibilities. Please refer to Policy/Procedure SS-203 and SS-213 in the Student Services section of Policies and Procedures at http://www.cna.nl.ca/About/Policies-and-Procedures.aspx for further details.

Student Aid

Information and assistance regarding student aid and financial options is available to students at each campus. Contact the campus Student Development Officer or Counsellor. In addition to campus-based resources, students can also find information on the main College website.

Chaplaincy Services

Chaplaincy services may be made available to students at the College upon request.

Bookstore

Textbooks for all courses are available either at the College bookstore on each campus or via online ordering .

Childcare Centres

Childcare centres, located on the Corner Brook, Happy Valley-Goose Bay, and Prince Philip Drive Campuses can be utilized for children of students if space is available and set criteria met. These childcare centres are linked to the College's Early Childhood Education programs. Interested students can contact either of these campuses for further information.

Parking

Parking is limited at many campuses and is considered a privilege, not a right. Students, staff and visitors must park in designated parking areas. "No Parking" and "Restricted Parking" areas are designated either by a sign, road markings or both.

STUDENT HOUSING

Off-Campus Housing

The Student Services office at each campus maintains a list of boarding accommodations available. Students attending College of the North Atlantic in St. John's can apply to stay at Memorial University residence by calling 709-737-7590. Students attending College of the North Atlantic in Corner Brook can apply to stay at Grenfell residence by calling 709-637-6266.

College Residences

The College maintains residence facilities at the Bay St. George, Burin and Happy Valley-Goose Bay campuses. Students wishing to apply for residence should contact the campuses listed below to obtain an application and should apply directly to the Residence Office of the appropriate campus.

The Residence Office
Bay St. George Campus
P. O. Box 5400
Stephenville, NL A2N 2Z6
tel: (709) 643-7764

The Residence Office
Burin Campus
P. O. Box 370
Burin Bay Arm, NL A0E 1G0
tel: (709) 891-5618

The Residence Office
Happy Valley-Goose Bay Campus
P. O. Box 1720, Stn. B
Happy Valley-Goose Bay, NL A0P 1E0
tel: (709) 896-6349

Residence space is limited and therefore the College cannot guarantee a room to everyone who applies. All applications are processed on a first-come, first-served basis only after a student has been confirmed in a program at the College. For more information, please contact the campuses above or call 1-888-982-2268.

Online Learning (http://dls.cna.nl.ca)

College of the North Atlantic's Online Learning brings the classroom to you!

Complete college courses and full programs without having to attend a college campus. Our instructors guide you through our curriculum, which carries the same credentials and academic standards as their classroom equivalents.

Our approach to online learning provides students with the opportunity to complete course requirements from any location with reliable Internet access.

Online Asynchronous: Delivered fully online with no scheduled classes, and allows students to learn on their own schedule, in a flexible environment, within a specified time frame. This approach offers a dynamic environment that addresses the needs of different learning styles.

Online Synchronous: Delivered fully online with live, scheduled videoconference classes. The instructor and students engage with the course content and each other at the same time, from different locations. This approach provides students with scheduled classes that can be attended online throughout the day, Monday to Friday.

Information is exchanged between the instructor and the student within the online learning management system (Brightspace by Desire2Learn). Audio, video, web conferencing and virtual classroom tools are also used in some courses. Some courses and programs have live components, and some assessments may be required to be completed on-site (nearest campus or local testing centre), or online (requires a webcam & microphone).

Online program students can avail themselves of supports and services from their nearest CNA campus including Accessibility Services, Library Services, Counselling and Student Development Officers. Visit MyCNA at https://www.cna.nl.ca/MyCna/ for more information.

During the academic year, our Help Desk provides support five days a week with extended hours. We utilize email, online chat, and toll-free telephone services to ensure students and faculty are supported.

Before starting a program, learners should take responsibility for familiarization of the technology, and assure access to a computer that has all the software required to complete courses. The time and planning invested at the beginning will pay dividends with a satisfactory and rewarding learning experience! Visit the Online Learning webpage at http://dls.cna.nl.ca.

Available Programs

Online Learning provides credit courses from all academic schools. For further information about specific programs and courses offered online, please refer to the College of the North Atlantic website, under “What We Offer, Program Guide” at www.cna.nl.ca. Fully online (part-time or full-time) programs include the following:

- Art & Design Essentials Certificate
- Atlantic Trades Business Seal Certificate
- Accounting Diploma
- Business Administration Diploma
- Human Resources Diploma
- Marketing Diploma
- Strategic Human Resource Management Diploma
- College Transition Certificate
- Bachelor of Applied Arts: Early Childhood Education Applied Degree
- Early Childhood Education Certificate
- Early Childhood Education Diploma
- Early Childhood Education Administrative Leadership Advanced Diploma
- Enterprise Web Development
- Information Management Post-Diploma
- Mental Health and Addiction Diploma
- Project Management Post Diploma
- Office Management
    - Executive Office Management Diploma
    - Medical Office Management Diploma
    - Records & Information Management Diploma

- Rehabilitation Assistant (OTA and PTA) Diploma
- Tourism & Hospitality Services Certificate
- Video Game Art & Design Diploma
- X-Ray Skills for MLT Post Diploma

INTERNATIONAL STUDENTS

College of the North Atlantic welcomes students from all parts of the world. International students are attracted by the College's high quality education, reasonable costs, safe and friendly living environment, student support services, and the acceptability and transferability of its certificates and diplomas. College of the North Atlantic places a high value on the contribution that international students make towards the development of intercultural communications and understanding throughout the College and the community.

Application Procedure

1. Submit an application and pay the non-refundable application fee.
2. Applicants cannot have an active application for more than two programs for the same academic year. If more than one program is applied for, the primary and secondary choice must be indicated. If an applicant applies for more than two programs the applicant must advise which of the first two programs are to be withdrawn.
3. Forward required original documents (e.g. official transcripts, proof of English language proficiency, other documents required for admission). Applications are not complete until original documentation is received. All required documents must be received within three months of date of application or the application will be withdrawn, except for programs that have posted deadline dates in which instance documents must be submitted by the posted date. Transcripts issued directly from the originating institution can be e-mailed to the International Student Coordinator. Notarized certified copies will be accepted via e-mail from recognized agents of CNA. Applicants providing original documents must submit them to:

   International Student Coordinator
   Student Services Division
   College of the North Atlantic
   1 Prince Philip Drive
   P. O. Box 1693
   St. John's, NL Canada A1C 5P7

   Applications can be submitted online or application forms can be obtained by visiting the CNA website or by contacting CNA by telephone, fax, e-mail, regular mail (see contact information below), from any Canadian Education Centre office or from any of our recognized agents.

   Tel: +1 709 758-7290
   Fax: +1 709 758-7304
   Email: internationaladmissions@cna.nl.ca
   Web: www.cna.nl.ca

4. Official transcripts or degree certificates issued in languages other than English must be translated into English and submitted to CNA along with the original official documents. An official translation is an exact English translation of academic documents that has been prepared by the issuing institution or a professional translator.
5. Applicants will be sent an acknowledgement upon receipt of their application. Communications will be via e-mail. Some notifications may be sent via SMS text (where applicants have consented to this).
6. The application will be reviewed for eligibility and, if accepted, a **Letter of Acceptance** will be issued to the student. Information regarding fees, enrolment, program of study and length of program will be contained in the Letter of Acceptance.
7. Upon receipt of the Letter of Acceptance, the First Semester Tuition, which includes a deposit fee, is due to CNA within two weeks of the date of the letter of acceptance. The deposit fee is non-refundable.
8. If an applicant fails to confirm their acceptance within the time specified, their application will be withdrawn and they will be required to re-apply for admission.
9. If an applicant has confirmed a seat in their primary program choice, the application for the secondary program choice will be withdrawn.
10. If an applicant has confirmed a seat in their secondary program choice, the application for the primary program choice will remain active.
11. Applicants can only be confirmed in one seat. If an applicant wishes to change their confirmed seat, the confirmation fee must be paid for the alternate choice.
12. Applicants who confirm their seat can request a Provincial Attestation Letter (PAL), if required. All PAL requests must be uploaded to the applicant's self service application file. Once a PAL is completed, it will be issued by the College on behalf of the Provincial Government for the applicant's use in applying for a study permit.
13. Applicants who confirm their seat and who do not register during the designated dates for online registration will have their application withdrawn and they will be required to re-apply for admission.
14. Applicants who confirm their seat, complete online registration, and subsequently withdraw their acceptance, do not show up, or discontinue from the program will have to re-apply.
15. International applicants who plan to study in Canada should take their letter of acceptance to the nearest Canadian Embassy,

High Commission, or Consulate to apply for a **Student Study Permit**. An immigration officer will then provide the applicant with an information package about the documents that are necessary to process a student study permit. Further information about Application to Study in Canada, Study Permits can be found at http://www.cic.gc.ca/english/information/applications/student.asp.

Generally, applicants will need:

a. Documentation verifying personal identification (such as a passport);
b. An original **Letter of Acceptance**;
c. Proof of funds available to cover tuition and living expenses; and
d. Assurance that the student will return to their country of residence.
e. Provincial Attestation Letter (PAL), if required

International applicants who plan to remain in their home country while completing their CNA programs delivered online for the full duration of the program are not required to obtain a Student Study Permit or travel to Canada.

16. Once an applicant has been issued a Student Study Permit from the Canadian Diplomatic Mission, they should advise CNA and make arrangements to travel to Canada to begin their program at CNA.
17. In the event that a student visa is not awarded by the Canadian Embassy, the tuition will be refunded in full except for the non-refundable application fee and deposit fee, which includes the non-refundable and non-transferable confirmation fee.
18. Proof of approval of visa must be forwarded to International Admissions by:
    July 31 for Fall intake,
    December 15 for Winter intake, and
    April 15 for Spring intake (if applicable).
19. Acceptance Deadline
    The deadlines for issuing Letters of Acceptance to international applicants who are not already living in Canada and/or do not already have a visa are:

    June 7 for Fall
    November 5 for Winter (if applicable)
    March 5 for Spring (if applicable)

English Proficiency

As per AC-102-PR, 5.2, all international applicants must meet the College's English language proficiency requirements for acceptance into regular programs.

CNA will accept these recognized tests of English language proficiency:

CAEL	60
TOEFL	paper based 550
TOEFL	Internet based 79
TOEFL	computer based 213 or equivalent
IELTS ACADEMIC	overall band score of 6.0
MELAB	minimum 78
MET	52
DUOLINGO	105-110
PEARSON PTE ACADEMIC	minimum 53

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

If an international applicant has resided and was continuously employed in an English language work environment in a country that is exempt from our English language requirements (as listed on our website for a period of five years or more, the English language proficiency test may be waived. The applicant must provide a resume and a letter from a supervisor confirming the nature of their work was conducted in English.

Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the Academic Calendar.

The School of Health Sciences requires the following minimum English language proficiency scores for applicants whose first language is not English (IELTS Academic Test overall band score of 7.0, Speaking 7.0, Listening 7.5, Reading 6.5 and Writing 7.0).

Academic Prerequisites
As per AC-102-PR, 5.3, admission requirements for each program are set out in the program description. For most programs, the admission requirement is graduation from high school with overall high school average of 60% or better in the Canadian system. Certain programs require achievement in specific subject areas, such as English, Mathematics, Biology, Chemistry or Physics. Applicants from British-oriented educational systems should present the General Certificate in Secondary Education. All applicants should submit the most recent official high school transcript of marks which will be assessed on an individual basis. Those applicants who have completed advanced courses in Mathematics and Sciences may be eligible to receive exemption for those courses.

International Health Insurance Plan
Registered international students of College of the North Atlantic are required to have medical coverage as per our College policy. If a student wishes to opt out of the plan, they must provide proof of coverage of a similar health insurance plan to the International Student Coordinator on or before the first day of classes. Please refer to the Student Health/Dental section of the College Calendar for further details.

Health Insurance: Newfoundland and Labrador's Medical Care Plan
As per AC-102-PR, 5.4, international students undertaking full time post-secondary studies in Newfoundland and Labrador may be eligible for MCP coverage. A detailed explanation of MCP services can be found on the Provincial Government website at http://www.health.gov.nl.ca/health/mcp/international.html.

The Medical Care Plan (MCP) program applies to any foreign individual issued an official study permit by Citizenship and Immigration Canada before entering the country. The individual must be attending a recognized post-secondary educational institution in Newfoundland and Labrador for a period of at least 12 months. Dependents of the student will also be covered under MCP, provided they are living in the province and have relevant documentation to support their application.

In order to receive coverage, international students must apply for and receive a MCP card. The Medical Care Plan (MCP) application form can be found at http://www.health.gov.nl.ca/health/forms/index.html#3. Coverage becomes effective for eligible students and dependents on the later of the date of enrollment in a full time post-secondary program or arrival in the province. Eligible students must present a letter of enrollment from the educational institution at the time of registration. Coverage must be renewed annually at which time a current letter of enrollment must be provided. Coverage terminates upon completion of the study program; termination from the study program; or the date of permanent departure from the province, whichever is earlier. Students must be attending school and residing in the province in order to avail of coverage.

Coverage is available for services listed under the Medical Care Insured Services Regulations and the Hospital Insurance Plan Regulations. Health insurance for other services (i.e. coverage of prescription drugs) may be available for international students with MCP cards to purchase through the College or other health insurance companies. Proof of coverage equivalent to Canadian coverage must be received prior to the start of classes if a student is opting out of the College insurance plan.

Registered students of College of the North Atlantic are covered under an accident insurance plan. This DOES NOT provide routine medical coverage for students.

International students temporarily leaving the province for vacation or other purposes may qualify for out-of-province coverage for up to 182 days in any 365-day period. The residency requirement for international student beneficiaries must be satisfied in each subsequent 365 day period in order to receive future out-of-province coverage. In order to ensure out of province coverage, international students must apply for and receive an Out-of-Province Coverage Certificate prior to leaving the province, for which the application can be found at http://www.health.gov.nl.ca/health/mcp/forms/oop_rqst.pdf.

Proof of Status
International students must provide proof of status (i.e., study permit) in Canada to campus student services staff within 7 days of the semester start. Students who do not provide their study permit by this deadline will be withdrawn from the program. Refund rules will apply.

Student Services
Student Services, in cooperation with the International Office, will assist international students in such areas as: providing local accommodations listings; orientation and general information. The full range of student services as outlined in the Academic Calendar will be made available to international students.

Student Services / On-Campus Facilities
The Student Services division provides personal and academic counseling to all students of the College. Student tutoring and other learning resources are also available. The Student Council organizes various events/activities for students throughout the year.

During the first week of classes, international students will be advised who the 'main point of contact' will be who will provide on-campus

assistance to them. Below is a list of services that may be provided:

- Assistance on Accommodation Search
- Orientation
- Monthly international events

All students at College of the North Atlantic have free access to the internet and a variety of software, accessible through the College's many networked computers.

Fees and Costs

All amounts are in Canadian Dollars and all fees must be paid in Canadian Dollars. Fees are subject to change. Please refer to the College website for the most up-to-date fees.

Regular Academic Studies

Application Fee:

Non-refundable (must accompany application)	CAD $100.00

Tuition Fees:

Term based programs:

Regular Term (15-weeks)

Academics, Applied Arts & Tourism	$4363.00
Business & Information Technology	$4270.00
Engineering Technology	$4462.00
Health Sciences	$4462.00
Natural Resources & Industrial Trades	$4462.00
Sustainable Development	$4462.00

Intersession (up to 7-weeks)

Academics, Applied Arts & Tourism	$2182.00
Business & Information Technology	$2136.00
Engineering Technology	$2232.00
Health Sciences	$2232.00
Natural Resources & Industrial Trades	$2232.00
Sustainable Development	$2232.00

Trades programs (per week)	$299.00
Heavy Equipment (per week)	$339.00

Applied Degree programs:

Regular Term (15-weeks)

Academics, Applied Arts & Tourism	$8547.00
Business & Information Technology	$8454.00

Intersession (up to 7-weeks)

Academics, Applied Arts & Tourism	$4275.00
Business & Information Technology	$4229.00

In general, for most programs one academic year consists of two 15-week semesters and one 7-week semester. For some programs, an academic year consists of three 15-week semesters. See program description in the Academic Calendar for details.

Confirmation Fee: CAD $103.00 (non-refundable)

Students must pay a non-refundable fee on confirmation of acceptance to each program at the College. The fee covers registration and student association fees and is paid annually for the duration of the program.

Deposit fee: Non-refundable fee of $1500 which is included in the First Semester Tuition. The deposit fee includes the non-refundable and non-transferable Confirmation fee

Other Costs (Note: these are estimates of expenses, not exact figures)

Textbooks (per semester)	CAD $ 500.00 – $1500.00
Health Insurance (per year)	CAD $ 500.00 – $550.00

Schedule of Payments

- **Application Fee** ($100.00) must accompany application form
- **Confirmation Fee** ($103.00) due within two (2) weeks of date of Letter of Acceptance

- **First Semester Tuition:** due within two (2) weeks of the date of Letter of Acceptance
- **Deposit Fee:** due within two (2) weeks of date of Letter of Acceptance
- **Tuition:** to be paid by the fee deadline of each subsequent semester
- **Health Insurance** must be purchased before or upon arrival in Canada

Acceptable Method of Payments

Payment for online applications is by credit card only (Visa or Mastercard).

Once an applicant is accepted into a program, payment of confirmation fee, tuition and/or any other fees can be made by credit card through student self-service or through PayMyTuition.

Refunds

The following outlines the international eligibility for tuition refund:

- **Application fee and Confirmation fee are non-refundable**.
- In the event a student has paid tuition fees in advance and he/she is not granted a visa by the Canadian Embassy and cannot attend the College as a result, any tuition paid will be fully refunded. If the student has registered and attended classes prior to this notification, the student will be liable for a pro-rated tuition and equipment and materials fee for the weeks attended
- Please refer to Section 3.0 (i. to iv) in the Fees & Charges section for information regarding refunds. Please note that refunds for international students will be made only through PayMyTuition.

Scholarships

The College does not offer scholarships or bursaries to international students upon admission. Once a student is enrolled at the College, he or she may be eligible to apply for a scholarship or bursary. Eligibility for the College's scholarships and bursaries is usually determined by the student's academic performance.

Living Expenses

An average monthly estimate of living expenses (not exact figure):

Housing:	$900.00 – $1200.00
Meals:	$250.00 – $300.00
Transportation:	$70.00 – $100.00
Total Estimate	$1500.00

Residence

The College maintains residence facilities at the Bay St. George, Burin and Happy Valley-Goose Bay campuses. Fees for room and board at the residences range between $620.00 and $1250.00 per month with meal plans being mandatory. Please refer to Fees & Charges section of the Calendar for rates. Students wishing to apply for residence should apply directly to the Residence Office of the appropriate campus.

Off-Campus Housing

Newfoundland and Labrador also has many off-campus housing options including renting a single room in an apartment or house, rental apartments, rental houses, and boarding houses (which often include meals). There may be apartments within walking distance of the College and a public bus service is available only in the greater St. John’s region and the Corner Brook region. Students who would like to live off-campus can contact the campus International Student Contact for information regarding off-campus housing options. Depending on the type of accommodation and location, the cost of off-campus housing can range from $900.00 - $1200.00 and up each month.

Students attending College of the North Atlantic in St. John’s can apply to stay at Memorial University residence by calling +1-709-737-7590. Students attending College of the North Atlantic in Corner Brook can apply to stay at Grenfell residence by calling +1-709-637-6266.

INTERNATIONAL CONTRACTS

Economic development is strongly linked to the presence of an effective and responsive education system and the establishment of an educated and trained workforce. College of the North Atlantic (CNA) embodies the concept of education-industry interface through the development of partnerships, tailor-made training, technical assistance and consultancies around the world to promote labour market renewal and develop relevant professional and skills training programs.

International Contract Training

College of the North Atlantic develops tailor-made training programs to meet the needs of businesses and organizations worldwide. Customized training can vary in duration from a one-day session to programs of several months. We pride ourselves in responding quickly and accurately to clients' needs.

College of the North Atlantic's instructional and support staff have the expertise to ensure quality programs and services. Training expertise at College of the North Atlantic exists in a wide range of sectors:

- Petroleum/Oil & Gas
- Safety & Construction
- Tourism & Hospitality
- Health Sciences
- Engineering Technology
- Industrial Trades
- TVET reform
- Business
- Information Technology
- Management & Leadership
- Distance Learning Systems
- Natural Resources
- Curriculum Development

International Partnerships

College of the North Atlantic works in partnership with educational institutions in joint delivery of programs, training needs assessment, curriculum and program development, teacher training, and other areas of educational cooperation. CNA has an excellent track record in working with partner institutes and organizations.

International Consultancies and Technical Assistance

The College has extensive experience and proven success in sharing best practices and processes in both the administrative and pedagogical aspects of technical/vocational education. College of the North Atlantic has provided technical support and consultancy services to projects operated by private companies, governments, non-government organizations and development agencies such as the World Bank, the International Development Research Centre, Global Affairs Canada and Colleges and Institutes Canada.

Geographic Experience

The College of the North Atlantic has worked with clients in Libya, Lebanon, Yemen, Qatar, West Bank/Gaza, Jordan, Egypt, Peru, Argentina, Chile, Jamaica, Barbados, the Caribbean, Tanzania, Vietnam, Malaysia, Latvia, Lithuania, Russia, India, Pakistan, Thailand, Guyana, Antigua, China, Kenya and beyond.

For additional information regarding custom-designed training, partnerships, and other international business initiatives contact:

Associate Vice-President, International
College of the North Atlantic
1 Prince Philip Drive
P. O. Box 1693
St. John's, NL
Canada A1C 5P7
tel: +1 709 758-7261
fax: +1 709 758-7222
web: www.cna.nl.ca

PARTNERSHIPS & INNOVATION

The Division of Partnerships & Innovation (PI) encompasses the effective development, management and delivery of local, provincial, and national projects. This line of business is inclusive of community and business partnership development, community and industry workforce training delivery, college philanthropic activities, alumni relations and applied research and innovation. Clients are individual students, industry and community partners, and government departments and agencies.

The Office of Partnerships, Entrepreneurship and Community Engagement (PECE) works in tandem with various college departments to forge strategies and initiatives in partnership with municipalities, Indigenous groups, educational institutions, and entrepreneurial associations to deliver enhanced services to our students, business and communities.

The Office of Applied Research and Innovation (OARI) is CNA's link to innovation support for industry, businesses, the community sector and other key partners throughout Newfoundland and Labrador. The OARI has worked with hundreds of industry and community partners in the province, ranging from early stage start-ups and non-profit organizations to multi-national corporations.

OARI's focus is on collaboration with our partners to explore problems, opportunities and ideas, and to develop innovative solutions. OARI provides a range of services to our partners from problem exploration and scoping, proposal development and team member identification to project administration, human resource funding, report writing and closeout.

The office oversees the administration of externally funded projects, including CNA's **College Innovation Network (CIN),** which links the College's technical and subject matter experts to industry and community partners to support their innovation needs. By leveraging the College's faculty expertise and subject matter experts and extensive labs, shops and equipment, OARI creates innovative applied solutions for businesses in the province and creates unique Work-Integrated Learning (WIL) opportunities for our students across all program areas.

Customized and Continuous Learning (CCL) facilitates life-long learning for its many audiences and partners, including government, communities, industry associations, private businesses, and individuals. CCL delivers credit and non-credit programming, through customized and flexible content, delivery methods and locations.

CCL's team of Business Development Officers and Coordinators proactively identifies gaps in the labour supply for emerging and changing economic sectors and develops and delivers relevant training to link individuals to employment. Active in community growth, and in collaboration with local development associations, CCL brings short-term courses and longer-term programming to rural and Indigenous communities.

Another core function of the office is to provide service to individuals who may have barriers to education and employment. CCL works with the College's five schools of study and government partners who are committed to creating new pathways to education and meaningful employment by developing innovative academic solutions for under-represented groups.

CCL's team responds to specific industry requests by working with businesses to identify and address training and development opportunities for staff, leading to increased staff morale, productivity, and ultimately, a healthier bottom line.

Through its Continuing Education activity, CCL also offers opportunities for personal and professional development, along with a variety of general interest programming. Personal development programming offers opportunities for learners to engage in a selection of training that develops skills and confidence, leading to increased opportunities for new challenges and increased responsibilities in the workplace. Professional development also includes safety, regulatory and sector-specific certifications.

The NL Workforce Innovation Centre (NLWIC), administered by CNA has a provincial mandate to provide a coordinated, central point of access to engage all labour market stakeholders about challenges, opportunities and best practices in workforce development. The Centre's goal is to promote and support the research, testing and sharing of ideas and models of innovation in workforce development that will positively impact employability, employment, and entrepreneurship within the province's labour market and particularly under-represented groups. Funding is provided by the Department of Immigration, Population Growth and Skills under the Canada-Newfoundland and Labrador Labour Market Development Agreement.

CNA's **Alumni and Advancement Office** has a dual mandate to create and nurture partnerships to connect alumni and the college with opportunities.

The office works to create an enduring connected community of graduates while building awareness, pride, opportunities for engagement, and volunteerism.

Through our advancement role we strive to upon the philanthropic pledges of our vast alumni network while working closely with industry and community stakeholders. The result is the creation of benefits to our students through scholarships and awards as well as various other giving programs that carry over to alumni.

CUSTOMIZED AND CONTINUOUS LEARNING

Customized Training – On-Site, On-Campus, Anytime

Customized training is developed and/or delivered to meet the needs of today's workforce. College of the North Atlantic's Customized and Continuous Learning division develops training solutions for business, corporations, governments, individuals and communities from an extensive list of more than 100 full-time diploma and certificate programs and a comprehensive range of over 300 part-time courses. Its services are distributed throughout the province, with a Business Development team available to meet your training needs.

Curriculum is custom designed to meet your specific training goals with a delivery timetable suited to your needs. From a one-day session to programs of several weeks, we deliver anytime, on-site or off-site with the appropriate training infrastructure and resources. Call 1.888.982.2268 or visit https://www.cna.nl.ca/business-and-industry/Corporate-Training.aspx for more information or to speak directly with one of our Customized and Continuous Learning professionals.

Other Services to Help You Succeed

- Custom design curriculum / program development
- Training needs analysis
- Workplace essential skills assessments

Training for Industry Sectors

Organizations in all industry sectors throughout the province need access to training programs so they can remain competitive, recruit and retain employees, diversify, and sustainably develop their long-term potential in Newfoundland and Labrador.

Business & Information Technology

Information technology has significantly changed business models, operations, products and services, and the competitive environment of small and medium-sized businesses in all industry sectors as well as the public and community sectors. In order to remain competitive, employers and employees need access to quality training. CNA provides comprehensive support to the business & information technology sector.

Construction Sector

According to the Construction Sector Council (CSC), our future depends on the construction and manufacturing sectors to build, repair, and maintain our homes and buildings, our roads and bridges, and the oil refineries and other infrastructure that fuel community progress. CNA provides comprehensive support to the construction and manufacturing sectors. Training addresses the needs of a variety of employers – general contractors, builders, construction managers and specialty trade contractors – in new home building and renovation, heavy industrial, institutional and commercial, and civil engineering subsectors.

Energy

New technologies and the changing demands of consumers, government and other stakeholders have significantly transformed the energy sector. Regulations have evolved. Exploration, development and production methods are more advanced. CNA provides comprehensive support to the oil and gas, hydroelectric and renewable energy industries. We are committed to providing the same support to renewable energy including wind and geothermal sources.

Health

Health care providers-business, government, professionals, researchers, and community organizations-along with the clients and communities they serve are challenged to meet or exceed the standards services for institutional health care management, decision making, quality, innovation, program delivery, and accountability set by government's vision that "… all Newfoundlanders and Labradoreans will enjoy optional health." College of the North Atlantic provides comprehensive support to health sector professional staff/technicians and management.

Mining

College of the North Atlantic is committed to providing comprehensive support to the mining sector in both surface and underground mining. Training addresses the unique needs of the sector during the exploration, development, production, processing and distribution stages. CNA's training capabilities include training for occupations related to: prospecting, leadership, management and supervisory development, automation, environment, health and safety certifications, installation, maintenance and repair; construction and extraction; production; and transportation and material moving.

Safety Training

Businesses are required by law to meet the Occupational Health and Safety standards of the workplace. Safety training and certification is essential to ensure a healthy and productive workplace. In order to remain competitive, employers and employees need access to quality training. CNA is committed to providing comprehensive support to all the provinces' sectors with quality safety training. CNA is an approved Workplace-NL provider of Fall Protection, Fall Protection Recertification, Occupational Health and Safety, Traffic Control Person, Powerline Hazards and Confined Space Entry training.

Training for Government
College of the North Atlantic is pleased to provide a range of training courses and programs to provincial, federal, and municipal government departments to support changing technologies, client and service needs and professional development from any of our 17 campuses.

Training for Individuals and Community Organizations
Individuals and community organizations in towns and communities across the province comprise a significant number of student registrations for customized training and continuous learning. These students are seeking to upgrade skills for current employment, explore new careers, and complete a range of programs to compete for jobs in Newfoundland and Labrador's industry and other sectors.

Please refer to the Fees and Charges section of the Calendar for refund information pertaining to Customized and Continuous Learning.

To Inquire About Customized Training, Contact Us

Call Toll Free: 1.888.982.2268
Email: corporatetraining@cna.nl.ca
Website: https://www.cna.nl.ca/business-and-industry/Corporate-Training.aspx

Customized and Continuous Learning Contacts:

Baie Verte Campus
P: 709/532-8066
F: 709/532-4624

Bay St. George Campus
P: 709/643-7838
F: 709/643-7734

Bonavista Campus
P: 709/468-1700
F: 709/468-2004

Burin Campus
P: 709/891-5600
F: 709/891-2256

Carbonear Campus
P: 709/596-6139
F: 709/596-2688

Clarenville Campus
P: 709/466-6988 or 466-6901
F: 709/466-2771

Corner Brook Campus
P: 709/637-8530
F: 709/634-2126

Gander Campus
P: 709/651-4800
F: 709/651-4854

Grand Falls-Windsor Campus
P: 709/292-5600
F: 709/489-4180

Happy Valley-Goose Bay Campus
P: 709/896-6300
F: 709/896-3733

Labrador West Campus
P: 709/944-5787
F: 709/944-5413

Placentia Campus
P: 709/227-2037
F: 709/227-7185

Port aux Basques Campus
P: 709/695-3343
F: 709/695-2963

Prince Philip Drive Campus
P: 709/758-7284
F: 709/758-7304

Ridge Road Campus
P: 709/758-7000
F: 709/758-7059

Seal Cove Campus
P: 709/744-2047
F: 709/744-3929

CONTINUOUS EDUCATION

Professional and Personal Development Opportunities
For those who want to increase their chances of getting a job, upgrade their skills to advance in their present career, maintain their certification, or are interested in pursuing a personal interest, College of the North Atlantic offers a vast array of continuous learning courses and certificate programs in many campus locations throughout the province.

Certificate Programs
Continuous Learning certificate programs are offered on a part-time basis through evening, daytime, online, or a blend of online and face to face instruction. Students enrolling in a certificate program have the convenience of studying part-time while maintaining current employment.

Customized Workforce Development programs
The College is equipped to design and deliver shorter term non-credit programs that are customized to address unique regional training needs and skills shortages for jobs in growing fields.

Leadership, Management and Supervisory Skills Training
Major demographic shifts in population are occurring in our province and in the rest of Canada, resulting in labour shortages, including administration and management positions. We must plan for that shortage now by training our existing workforce in leadership, management and supervisory skills.

Personal Interest Courses
Whether you want to learn a foreign language, or you want to make a gourmet dish, Customized and Continuous Learning offers many personal interest courses to suit your needs.

For a list of course descriptions and schedule information, visit our Customized and Continuous Learning website at https://www.cna.nl.ca/programs-courses/Continuing-Education.aspx and check out a campus near you. If our schedule of courses does not meet your timeframe, we can work with your business to schedule timeslots that are convenient through our customized training options.

Please refer to the Fees and Charges section of the Calendar for refund information pertaining to Customized and Continuous Learning.

To Inquire About Customized and Continuous Learning, Contact Us

Call Toll Free: 1.888.982.2268
Email: corporatetraining@cna.nl.ca
website: www.cna.nl.ca

ALUMNI & ADVANCEMENT

The Alumni & Advancement Office fulfills two core functions. The Advancement arm serves as the philanthropic lead for CNA, managing all giving programs, donations, and partnerships. The Alumni arm stewards, grows, and connects a community of Alumni through engagement opportunities, mentorship, recognition, employment/employer services, service and benefits, and opportunities to give back to CNA. The Office seeks to carry out these functions with continuous activities and initiatives that build awareness, pride, participation, and volunteer involvement.

It's a life-long story... *Students for a short time, Alumni for a lifetime*...

Services and Benefits for Registered Alumni

- Opportunities to stay connected or to re-connect with the College, former teachers, classmates and friends through social media outlets and local events.
- Continuous Learning opportunities.
- Free access to campus libraries.
- Discounts from our select partners such as TD Insurance, SoftMoc
- Career employment services.
- Alumni at Work program.
- Entrepreneurship supports.
- Contests and newsletters.
- Alumni spotlights.
- Mentoring opportunities.
- Graduation services (photography, diploma/certificate frames, flowers and alumni pins).
- CNA giving programs.
- Sessions and webinars.
- Community events.

Benefits for Students

- Student Awards are a key part of our office's activities. By securing corporate and community support, we encourage and support the development of our students.
- We build connections between students and alumni which facilitates career guidance or mentorships opportunities.
- Students can be confident that the relationships they are forming as students will continue beyond graduation.
- We support and facilitate CNA's Pantry Program, Tampon Tuesday, Student Emergency Fund, and Areas of Greatest Need programs.
- Orientation and event support and sponsorship.

For more information please contact:

Alumni and Advancement Office

Ted Cadigan, Manger, Alumni & Advancement - Ted.Cadigan@cna.nl.ca
Evelyn Doyle, Alumni & Advancement Officer - Evelyn.Doyle@cna.nl.ca
Kyla Follett, Alumni Relations Coordinator - Kyla.Follett@cna.nl.ca

Stay Connected!

www.cna.nl.ca/alumni

alumni@cna.nl.ca

Mailing Address:
College of the North Atlantic
1 Prince Philip Drive
P. O. Box 1693
St. John's NL A1C 5P7

Physical Address:
College of the North Atlantic
425 Topsail Road
St. John's NL A1E 5N7

School of Academics, Applied Arts and Tourism

College Bridging

Start Date: September

Credential: Certificate

Program Length: One Year

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Happy Valley-Goose Bay - On Campus Delivery

PROGRAM DESCRIPTION

This program is about clearing the way to new opportunities.

If you are looking to raise your grades or add academic courses to meet the entrance requirements for a college program, we can help. You can also improve your general employability skills and gain a valuable refresher if you've been away from training or the workforce for some time. We can help you transition to future opportunities waiting for you in post-secondary studies or the job market.

In addition to reading comprehension, writing, math and science, we are offering you interesting and valuable subjects such as study skills, time management and critical thinking. These may be strengthened with cultural supports and community participation – we want to help you succeed!

Along with career and computer courses, you will be offered personal development instruction in areas such as health and wellness, nutrition, stress management, healthy relationships, self-determination, and active lifestyle. This combination of academic and personal skills development forms a solid foundation year and a clear pathway for you to enroll in other college programs.

In fact, on completion of the College Bridging certificate, you may receive credit for several courses that are transferable to the College Transition program! These include:

- Computer Applications I
- Career Exploration
- Indigenous History of Newfoundland & Labrador
- Indigenous Arts & Culture

This program can set you on the road to your future success. And we can guide the way.

OBJECTIVES

Upon successful completion of this program graduates will be able to:

1. Apply the necessary academic skills and foundational knowledge to succeed in college-level coursework, including critical thinking, writing, and study skills.
2. Develop self-confidence through positive feedback, support, and encouragement.
3. Adjust to college culture, including norms, expectations, and resources available.
4. Create opportunities for personal growth, including leadership development, goal setting, and self-reflection.
5. Connect with peers, faculty, and staff, building a supportive community that can aid in their academic success.
6. Set and achieve academic and personal goals, ensuring that they are well-prepared for their college experience.
7. Improve fundamental employability skills to enhance employment opportunities.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet the following criteria:

1. High School Graduation, or equivalent; OR
2. Students must be at least 19 years of age at the commencement date of the program, and have a minimum of Grade 9 completion, or equivalent.

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application, and out of school for at least one year may be considered on an individual basis under the Mature Student requirements; for more information regarding Mature Student Requirements please refer to Procedure AC-102-PR Admission.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CM1070	Communications I	5	5	0
MA1115	Mathematics I	4	4	0
SI1015	Earth Sciences	4	3	2
MC1240	Computer Applications I	3	2	2
IA1010	Indigenous History of NLF	3	3	0

Semester 2 (Winter)

Code	Title	Cr	Le	La
CM1220	Communications II	5	5	0
MA1215	Mathematics II	4	4	0
SI1205	Environmental Science	4	3	2
SD1230	Career Exploration	4	4	0
IA1200	Indigenous Arts & Culture	3	3	0
SD1210	Personal Development	3	3	0

College Transition

Start Date: September

Credential: Certificate

Program Length: One Year

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Bay St. George - On Campus delivery
- Carbonear - On Campus delivery
- Clarenville - Blended delivery
- Corner Brook - On Campus delivery
- Gander - Blended delivery
- Grand Falls-Windsor - On Campus delivery
- Happy Valley-Goose Bay - On Campus delivery
- Labrador West - On Campus delivery
- Prince Philip Drive - On Campus delivery
- Online - Asynchronous delivery
- Online - Synchronous delivery

This program was formerly known as Comprehensive Arts & Science (CAS) Transition.

PROGRAM DESCRIPTION

If you are a high school graduate or mature student seeking to upgrade, then our College Transition program is for you. Our flexible delivery options allow you to enroll in courses that are customized for your interests and skill levels and will prepare you for success in the world of higher education. You can select courses in English, math, and science, and choose from social science and electives which can be transferred to other college programs. (NOTE: the range of course offerings may vary among campus locations. Prospective students are advised to check with the campus location they may be attending to confirm available courses and delivery mode).

Through this program, you will strengthen your academic skills, study habits, and strategies to help you succeed in post-secondary programs.

An amazing educational adventure awaits—enroll today!

OBJECTIVES

Upon successful completion of this program graduates will be able to:

1. Demonstrate proficiency in fundamental skills in reading, writing, math, and sciences to meet post-secondary level expectations
2. Apply effective study habits and time management skills to excel in their academic endeavours
3. Apply critical thinking and problem-solving skills, fostering an ability to make informed decisions
4. Utilize technology and digital literary competencies to access, evaluate, and synthesize information effectively in academic contexts
5. Engage in collaborative learning experiences, fostering teamwork and interpersonal skills necessary for success in academic and professional environments
6. Navigate college systems and resources confidently, demonstrating an understanding of the academic and support services available to enhance their educational journey
7. Evaluate and reflect on their academic progress, setting and adjusting goals to promote continuous self-improvement and lifelong learning
8. Prepare for successful transition to higher-level programs by acquiring the necessary academic, career readiness, and life skills

ENTRANCE REQUIREMENTS

1. High School
Provincial High School Graduation Certificate, or equivalent
2. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile)
3. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
4. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

FUTURE OPPORTUNITIES

Completing the College Transition certificate not only provides opportunities for students seeking admission to post-secondary studies, but also provides a pathway for future opportunities. The College Transition program serves as a crucial bridge, equipping students with the necessary skills and knowledge to thrive in post-secondary studies. One key aspect is the potential for students to receive credit for specific courses related to their chosen post-secondary programs. This not only accelerates their academic journey but also provides a solid foundation, enabling them to delve deeper into advanced coursework. The structured support and customized courses in this program ensure that students are well-prepared to meet the challenges of post-secondary education and capitalize on the opportunities that lie ahead. Students who complete the full certificate program may seek to meet admission criteria of Memorial University.

REQUIREMENTS FOR COMPLETION

In order to complete the requirements of the College Transition certificate program, students must attain 40 credits with a minimum Grade Point Average of 2.00. Credits must include completion of Essential English I and II, a minimum of 20 credits from Program Access and/or Student Success courses, and a minimum of 6 credits from Electives or Student Success courses. Students must also meet all qualification requirements for the awarding of a Certificate from the college.

Courses

Semester 1

Code	Title	Cr	Le	La
CM1060	Essential English I	5	5	0

Minimum of 10 Credits from Program Access and/or Student Success courses
Minimum of 3 Credits from Electives or Student Success courses

Semester 2

Code	Title	Cr	Le	La
CM1061	Essential English II	5	5	0

Minimum of 10 Credits from Program Access and/or Student Success courses
Minimum of 3 Credits from Electives or Student Success courses

Note: While it is possible to complete the required 40 credits by doing 5 courses per Fall/Winter Semesters, students who select courses with a credit value of 3 or less may have to complete more than 5 courses per Fall/Winter Semesters to graduate in two semesters. The maximum number of courses a student may complete per Fall/Winter Semesters is 7 and it is highly recommended to stay within 5 courses per Fall/Winter Semester.

Program Access Courses

Code	Title	Cr	Le	La
MA1040	Math Fundamentals I	5	5	0
MA1041	Math Fundamentals II	5	5	0
BL1025	Introductory Biology I	5	4	2
BL1026	Introductory Biology II	5	4	2
CH1035	Introductory Chemistry I	5	4	2
CH1036	Introductory Chemistry II	4	3	2
PH1055	Introductory Physics I	5	4	2
PH1056	Introductory Physics II	4	3	2
CM1180	College English I: Reading Across the College Curriculum	4	4	0
MC1240	Computer Applications I	3	2	2
PS1140	Psychology I	4	4	0
PS1145	Psychology II	4	4	0
SC1110	Intro to Sociology	4	4	0
SC1130	Family Studies	4	4	0
IA1010*	Indigenous History of NL	3	3	0
IA1200*	Indigenous Arts & Culture	3	3	0

**IA1010 Indigenous History of NL and IA1200 Indigenous Arts & Culture may be offered at campus locations where resources are available.*

Electives

Students in the College Transition program may select electives from the academic calendar provided the course is offered and is available to the College Transition student. The student must meet the stated prerequisites/co-requisites of the course, the student's schedule must be able to accommodate the course and the student must meet any other regulations that may apply. Courses over and above the minimum credit requirements in the core program courses may also be counted as electives.

Student Success Courses

Code	Title	Cr	Le	La
SD1570	Effective Learning	3	3	0
SD1580	Critical Thinking across the Curriculum	4	4	0
SD1230	Career Exploration	4	4	0
SD1120	Positive Mindset	3	3	0

Comprehensive Arts and Science (CAS) Transfer: College-University

Start Date: September

Credential: Certificate

Program Length: One Year

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Burin - Blended delivery
- Carbonear - Blended delivery
- Grand Falls-Windsor - Blended delivery
- Happy Valley-Goose Bay - Blended delivery
- Labrador West - Blended delivery

PROGRAM DESCRIPTION

Comprehensive Arts and Science (CAS) Transfer: College-University program provides you with the opportunity to complete courses for which you can gain credit from College of the North Atlantic and Memorial University of Newfoundland. It has been developed through an agreement with Memorial; courses identified in this section are developed in collaboration with Memorial's respective departments. In the areas of curriculum content and testing methodologies, these courses are identical. Students who successfully complete any of our CAS Transfer courses will receive a transfer of credit to the corresponding course at Memorial: your CNA transcript will reflect the numerical grade you receive; however, on a Memorial transcript the course will reflect a transfer credit statement (no numeric grade).

NOTE

i. Please check the course offerings available at the campus you plan to attend.
ii. Please check course prerequisites and co-requisites during advising/confirmation of enrolment. Course prerequisites and co-requisites must be met in order to confirm registration in the course.
iii. Students intending to apply to programs at Memorial that are competitive and selective may be required to complete courses that reflect a numerical grade, i.e. courses that MUST be completed at Memorial only. Please check with specific departments at Memorial regarding their admission eligibility requirements.

These introductory courses are designed for students intending to transfer to university after completion of their first year at College of the North Atlantic.

OBJECTIVES

1. To enhance student access to courses that earn both University and College credits.
2. To provide an opportunity for students to gain University course credit at locations close to their home communities.
3. To allow students to choose career paths with maximum recognition of credit for work completed.

ENTRANCE REQUIREMENTS

1. High School

Provincial High School Graduation with 60% overall average in the following courses (or equivalents):
i. English 3201 or English 3202
ii. Mathematics (2 credits) chosen from
Advanced: 3200
Academic: 3201
And
2 credits chosen from
Advanced: 2200
Academic: 2201

iii. Science (4 credits) two of which must be selected from the following:
Biology 3201
Chemistry 3202
Physics 3204
Earth Systems 3209
The remaining two credits may be selected from 2000 level courses in the above noted subject areas or from Science 1206.
iv. Two credits at the 3000 level in a Social Science or a Modern/Classical Language. This category includes the following subject areas: History, Geography, Religious Studies, French, Spanish, and other Modern/Classical Languages.
v. Electives
Two credits at the 3000 level in elective courses chosen from the subjects above or from additional courses approved by the Department of Education for offering at the 3000 level for certificate purposes.

2. Comprehensive Arts and Science (CAS) Transition

Note: It is important that CAS Transition students who intend to enroll in the CAS Transfer program check course requirements for their intended post-secondary plans. It is strongly recommended that CAS Transition Certificate students complete:
i. Math Fundamentals MA1040 and MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology BL1020 and BL1021
b. Introductory Chemistry CH1030 and CH1031
c. Introductory Physics PH1050 and PH1051

Effective Academic Year 2025 - 2026:

College Transition

Note: It is important that College Transition students who intend to enroll in the CAS Transfer program check course requirements for their intended post-secondary plans. It is strongly recommended that College Transition Certificate students complete:
i. Math Fundamentals MA1040 and MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology BL1025 and BL1026
b. Introductory Chemistry CH1035 and CH1036
c. Introductory Physics PH1055 and PH1056

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses:
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above has been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

REQUIREMENTS TO REGISTER FOR CAS TRANSFER MATHEMATICS COURSES

Students who have completed Math 3200 (Advanced Mathematics) or Math 3201 (Academic Mathematics) in high school and are enrolling in CAS Transfer math courses will need to write the math placement test (MPT) as outlined in the chart below. Students who have completed MA1041 in CAS Transition do not need to write the MPT.
These requirements are effective commencing Fall 2023.

CAS Transfer Courses	**Requirements to Register**
MA1120/1121 (Finite Mathematics)	A grade of 50% or greater in Math 3201 or Math 3200, and at least 50% on the MPT1 **OR** A grade of 50% or greater in MA10412
MA1104 (Pre-Calculus)	A grade of 50% or greater in Math 3201 or Math 3200, and at least 55% on the MPT1 **OR** A grade of 50% or greater in MA10412
MA1130 (Calculus I)	A grade of 50% or greater in Math 3200 and at least 75% on the MPT1 **OR** A grade of 50% or greater in MA1104
MA1131 (Calculus II)	A grade of 50% or greater in MA1130 or an acceptable score on the Calculus Placement Test (CPT)

- Students who score below 40% on the MPT must successfully complete both MA1040[2] and MA1041[2] before being permitted to register for a CAS Transfer mathematics course.
- Students who obtain a mark between 40% and 49% on the MPT must satisfactorily complete MA1041[2] before registering for MA1120 or MA1121.
- Students who obtain a mark between 40% and 54% on the MPT must satisfactorily complete MA1041[2] before registering for MA1104.
- Students who obtain a mark below 74% on the MPT and wish to register for MA1130 must satisfactorily complete MA1104 before registering for MA1130. They must meet the entrance requirements for MA1104.

For a list of locations and times to write the MPT, please visit https://www.mun.ca/math/mathematics-placement-test-mpt/

The MPT (Mathematics Placement Test) is a diagnostic test of basic skills in mathematics consisting of 100 multiple choice questions. It can only be written once, and the use of a calculator is not permitted.

MA1040 and MA1041 are courses in the College's CAS Transition program designed to strengthen students' mathematical knowledge and skills. Students obtain credit in the College system, but the courses are not transferable to MUN.

REQUIREMENTS FOR COMPLETON

In order to complete the requirements of the Comprehensive Arts and Science Transfer: College-University Certificate program, students must complete 10 courses from the CAS Transfer: College-University suite of courses with a minimum Grade Point Average of 2.00.

Note: For purposes of completion of the Certificate, MA1670 Statistics and EP1110 Introduction to Business may also be included in the CAS Transfer: College-University suite of courses. Students must also meet all qualification requirements for the awarding of a Certificate from the college.

Maximum number of CAS Transfer: College-University courses per semester (i.e. Fall; Winter) is five.

Courses

CAS Transfer Courses

Code	Title	Cr	Le	La
BL1175	Principles of Biology I	5	4	3
BL1176	Principles of Biology II	5	4	3
CH1135	Chemistry	6	5	3
CH1140	General Chemistry I	6	5	3
CH1141	General Chemistry II	6	5	3
CM1090	CRW I: Telling Stories	4	4	0
CM1145	CRW II: Rhetoric	4	4	0
CM1191	CRW II: Self and Society	4	4	0
CM1192	CRW II: Imagined Places	4	4	0
EC1140	Introduction to Microeconomics	4	4	0
EC1150	Introduction to Macroeconomics	4	4	0
EL1150	Introduction to Folklore	4	4	0
EL2414	Aboriginals of North America	4	4	0
EL1320	Folklore Studies	4	4	0
EL1360	Introduction to Anthropology	4	4	0
EL1420	Introductory French I	4	4	1
EL1430	Introductory French II	4	4	1
EL1440	Introductory French III	4	4	1
MA1104	Algebra and Trigonometry	5	5	0
MA1120	Finite Mathematics I	5	5	0
MA1121	Finite Mathematics II	5	5	0
MA1130	Calculus I	5	5	0
MA1131	Calculus II	5	5	0
MA2150	Linear Algebra I	4	4	0
PH1120	Introductory Physics I	5	4	3
PH1121	Introductory Physics II	5	4	3
PH1130	General Physics I	5	4	3
PH1131	General Physics II	5	4	3
PS1150	Introduction to Psychology I	4	4	0
PS1151	Introduction to Psychology II	4	4	0
SC1150	Principles of Sociology	4	4	0
SC1160	Sociology of Families	4	4	0
SC1430	Labrador Society and Culture	4	4	0
WM1110	Introduction to Gender Studies	4	4	0

Applied Music

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Amplify your opportunities.

Music can be a powerful force – it can boost motivation, ease anxiety, inspire a mood and empower a generation.

In recent years we have witnessed a remarkable transformation in the music industry; new digital platforms are reshaping the ways artists are connecting with their audiences on a global stage. Accessible technologies such as audio production software, video recording and editing platforms, and digital distribution methods are providing access for everyone to share their talents with the world. As the music industry grows more exciting and complex, there is intense competition for listener and fan attention.

How do you plan to be heard above the rest? We suggest turning up the AMP.

The Applied Music Program (AMP) at CNA provides guided training to give you a competitive edge in fine-tuning your skills and building your brand. Your talent is the foundation, and with our training you'll be able to raise the roof on your career.

Key research shows that the three barriers to artists' success are lack of business training, lack of entrepreneurial skills and gaps in technical understanding of music sector. AMP has what you need to succeed. This thorough exposure to the many exciting aspects of the music business will enable you to realistically assess your prospects for success in this highly competitive industry.

Gain a powerful skill-set, build a professional portfolio and be fully prepared to enter the music industry at a professional level.

Program Highlights:

- Mentorship with faculty who are multi-award-winning musicians, artist managers and audio engineers
- Extensive training in live performance, studio performance, songwriting, music theory and history, music software applications, music and media, and much more
- Essential training in live sound production and stage lighting
- Studies in music business, e-marketing, tourism, public relations and event management
- Cultural career strategies and business planning and entrepreneurialism
- Exposure to associated career options such as booking agents, artist managers, publicists and other integral roles of the industry
- Collaborative projects with other arts programs such as Sound Recording & Production, Journalism and Graphic Design

Did You Know?

- AMP graduates have had their original music featured in major animated films and such international events as the Olympics.
- AMP instructor and graduates are part of the band for the first Canadian Country artist to be showcased on Grammy.com
- AMP graduates have toured Europe, US and across Canada.
- AMP instructors are multi-award-winning experts and remain active and tapped into the music industry.

- Students and graduates have been recognized with a multitude of provincial and regional music awards.
- Students have provided music for large-scale events, conferences and awards shows with various local, regional and national partners across several industries.
- International students enroll in the program and provide exceptional cultural and musical exchange for all students.
- Canada's music marketplace has reached a new major milestone – for the first time, Canadians are streaming more than two billion songs a week.[1]
- The global revenue of the recorded music industry reached over US$23 billion in 2020.[2]

If you have an aptitude for amplitude, you're in the right place.

_____

[1] Music Canada

[2] Recorded music industry - global revenue 2020 | Statista

FUTURE OPPORTUNITIES

Graduates of the Applied Music program will have opportunities for employment as music professionals within a range of areas such as the following: Independent Solo Performers, Independent Group Performers, Independent Recording Artists, Independent Music Studio Educators, Commercial Music School Educators, Arts and Culture Centre Employees, Musical Directors, Pit Orchestra Musicians, Music Industry Association Employees, Artist Managers, Artist Promoters, Film Score Composers, Songwriters, Music Retail Company Employees, Distribution Company Employees, Music Manufacturing Company Employees, Musical Theatre Company Employees, Instrument Design and Manufacturing Company Employees, Tourism Festival/Events Employees and Music Video Producers.

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Demonstrate knowledge and skills in the musical, technical and business aspects of the music industry.
2. Demonstrate refined musical skills by showcasing their artistic works through recordings, media projects and live public performances.
3. Communicate effectively, creatively and with confidence when writing, presenting, performing and speaking.
4. Use the latest music industry technology to create new artistic works, self-promote and engage with industry at a professional level.
5. Collaborate as effective team members in projects with other artistic disciplines.
6. Demonstrate the social and intellectual development required to meet the challenges of the exciting and demanding music industry.
7. Create a career plan for employment in the cultural industries which will include a self-developed professional portfolio.

ENTRANCE REQUIREMENTS

1. High School
Provincial High School Graduation Diploma with a 60% average in eight level 3000 credits or equivalent
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (CAS) Transition Certificate
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

PORTFOLIO

Applicants to the Applied Music program are required to submit a portfolio that outlines their musical experiences and training, if applicable. It should include several contrasting pieces that best demonstrate the applicant's musical talent and ability. The objective of this portfolio is for the applicant to clearly demonstrate a reasonable chance for success in the program. It will be evaluated in the following areas:

- Musical talent and ability
- Organizational skills
- Overall quality of the portfolio submission

The portfolio and musical examples may be submitted in any of the following formats or a combination of these formats:

- Hard copy or electrical portfolio outlining all experience, musical education, etc.
- Musical audition audio files submitted via URL links or via media storage device in either MP3, MP4, Wav or other standard media formats.

View Applicant Portfolio Evaluation Criteria

Courses

Semester 1

Code	Title	Cr	Le	La
CM2100	Workplace Correspondence	3	3	0
HM2521	Events Management	5	4	2
MU1130	Music Theory I	3	3	1
MU1415	Performance I	3	2	2
SN1160	Sound & Microphones	4	4	0
SN2200	Recording I	3	3	0

Semester 2

Code	Title	Cr	Le	La
CM1550	Creative Writing	3	3	0
MU1110	Music & Culture	3	3	0
MU1210	Music Theory II	3	3	1
MU1420	Performance II	3	2	3
SN1170	Music Production Techniques	3	2	2
*Elective		3	3	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
HR1120	Human Relations	4	8	0
SN1410	Stage Lighting	3	4	4
SN3100	Live Sound Production	4	6	4

Intersession hours are actual and will not be adjusted.

Semester 4

Code	Title	Cr	Le	La
CM2200	Oral Communications	2	2	0
HR2121	Public Relations	3	3	0
MU1200	Songs & Songwriting	3	3	0
MU2010	Music of Atlantic Canada	3	3	0
MU2130	Popular Music History	3	3	0
MU2420	Performance III	3	2	3
SN1200	Music Business	3	3	0

Semester 5

Code	Title	Cr	Le	La
CM1521	Writing for the Arts	3	3	0
EP1100	Entrepreneurial Studies	4	3	2
MR2110	Marketing Methods	3	3	0
MU1140	Musicianship & Recording	3	2	2
MU2425	Performance IV	3	2	2
MU2135	Global Music Industry Trends	3	3	0
Elective	minimum credit value of 3	3	3	0

Semester 6 (Intersession)

Code	Title	Cr	Le	La
MU1150	Music in Media	3	4	4
MU1160	Cultural Career Management	3	6	0
MU2015	Online Media Strategies	3	3	1

Intersession hours are actual and will not be adjusted.

Art & Design Essentials

Start Date: September

Credential: Certificate

Program Length: Two Years, Part-Time

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery
- Online - Asynchronous delivery

PROGRAM DESCRIPTION

Woven through its rich and vibrant history, the arts in Newfoundland and Labrador are an integral part of its culture. Performance, media, literary, visual and other arts enrich this province's cultural heritage and contribute significantly to the economy. Studies in art and design promote creativity, flexibility, problem-solving, innovation, critical thinking and other invaluable skills needed in the world today. The Status of the Artist Act recognizes the important contribution professional artists make to the economic and social well-being of our province. Art also contributes to personal well-being. Studies show that art-making and design improve the health and well-being of an individual, and these areas are recognized for their tremendous benefits to individuals and society as a whole.

To remain on the leading edge of offering programs that are current and in demand, College of the North Atlantic is pleased to offer Art & Design Essentials, available both on campus and online through its Distributed Learning Services. Courses in this program will be accessible to students over a two-year period (2021-2022; 2022-2023). Students can choose to complete all 16 courses and receive the post-secondary educational credential of a Certificate in Art & Design Essentials or select courses that are of interest to them. For further information on Distributed Learning Service, please visit dls.cna.nl.ca.

Art & Design Essentials, developed in consultation with industry professions, provides an opportunity to explore a variety of disciplines in the arts. Courses include traditional practices in drawing, two and three-dimensional design, photography, color theory, art history, and the use of contemporary technologies for digital imaging, time-based media and webpage development. The study of portfolios and their design/function will assist with future application processes related to subsequent post-secondary programs, employment, awards, competitions and professional development within the arts.

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Apply design skills using traditional and digital technologies in art.
2. Create a thematic series of artworks demonstrating sustained exploration of concepts and technical processes.
3. Create a portfolio of artwork for application to specialized studies in art, media and design programs at the post-secondary level.
4. Represent themselves and their artwork using effective oral and written communication skills.
5. Utilize portfolio development as a continuous process of personal growth, reflection and self-assessment.
6. Demonstrate knowledge of art history concepts and the development of contemporary art.
7. Demonstrate professional practices that exhibit the entry-level entrepreneurial, innovative and collaborative skill sets that are not only necessary within either an independent or team-based environment but are also required for further study within post-secondary art, media and design programs.
8. Develop effective networking and critical thinking skills necessary for working with professional affiliations within creative industries.

EMPLOYMENT AND OTHER OPPORTUNITIES

The Art & Design Essentials program prepares students for entry-level employment opportunities. For example, the following relates to the employment potential and possible opportunities available for students who complete the program:

Self-Employed Artist: All courses in the program help develop the creative, technical, communication and critical thinking skills required for the production of artwork as a self-employed artist.

Gallery Assistant: Through completing the Portfolio Development I and Portfolio Development II courses, students will develop skills for the evaluation and selection of artists' proposals for exhibition. The Photography course will help students develop skills for the photo documentation of exhibitions in artist-run and commercial galleries.

Freelance Writing: Academic courses such as Writing Fundamentals and Writing for the Arts will help develop writing skills required for review of exhibitions. The Art History courses, Prehistory to Renaissance and Renaissance to 20th Century, will enable students to assess and critique artwork as it relates to contemporary art practices. The E-Portfolio course will develop skills for webpage development and the use of blogs as a platform for writing art reviews.

Assistant for Community Festivals: Community festivals often incorporate an art and cultural component. Writing for the Arts develops skills for writing grant proposals for community-based festivals. Art History courses develop an understanding of the value of contemporary visual culture and the significance of art and craft as cultural artifacts of a community. The E-Portfolio course develops web page design skills for the promotion of community festivals.

Other Opportunities: The program also prepares students for future post-secondary studies in the areas of Arts/Applied Arts, Media and Design.

ENTRANCE REQUIREMENTS

1. High School
Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent.
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (CAS) Transition Certificate.
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%.
4. Mature Student Requirement
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements. For more information regarding the Mature Student Requirements, please refer to Procedure AC-102-PR: Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

2024-2025

Fall

Code	Title	Cr	Le	La
CM1450	Writing Fundamentals	3	3	0
VA1110	Drawing Methods & Media	3	2	2
VA1115	2D Design	2	1	2
VA1400	Colour Theory	3	2	2

Winter

Code	Title	Cr	Le	La
HY1120	Prehistory to Renaissance	3	2	2
PD1120	Portfolio Development I	2	1	2
PY1150	Photography	3	2	2
VA1140	Figure Drawing	3	2	2

Intersession

*course offerings to be determined based on student demand.

2025-2026

Fall

Code	Title	Cr	Le	La
CM1520	Writing for the Arts	3	3	0
PD1125	Portfolio Development II	3	2	3
VA1120	Digital Imaging	3	2	2
VA1170	3D Design	3	2	2

Winter

Code	Title	Cr	Le	La
HY1130	Renaissance to 20th Century	3	2	2
PD1135	Final Portfolio	3	2	2
VA1180	Time-based Media	3	2	2
VA1185	Studio Practice	3	2	3

Intersession

**course offerings to be determined based on student demand.

Bachelor of Applied Arts: Early Childhood Education

Start Date: September

Credential: Applied Degree

Program Length: Four Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Online - Asynchronous delivery

Note:

Applicants who have an Early Childhood Education diploma & ECE Administrative Leadership advanced diploma from CNA or equivalent programs, may apply directly to year 4; applicants who do not must apply to year 1 of Early Childhood Education.

PROGRAM DESCRIPTION

The legacy of learning.

Studies show that children who participate in early learning and child care programs grow to build positive work habits, develop strong social skills and make gains in all areas of learning that benefit them throughout their lives. Early childhood educators contribute to this legacy of learning, as they lead children in activities to stimulate and develop their intellectual, physical, and emotional growth and ensure their security and well-being. Driven by multidisciplinary research-based practices, early childhood educators not only support children's learning and growth, but also the dynamic and diverse needs of families and communities.

This continuously expanding and rapidly developing field plays an integral and essential role in the health and well-being of societies. And quality early learning and child care depends on qualified and resourced early childhood educators.

Building on the established Certificate, Diploma, and Advanced Diploma programs, the Bachelor of Applied Arts: Early Childhood Education can be completed in two semesters for any ECE Advanced Diploma graduates meeting all entrance requirements.

Throughout this applied degree, you will gain practical knowledge and vital hands-on experience in child development, as well as planning, developing, and evaluating responsive early learning and child care programs. As you advance through the degree, you have the opportunity to further deepen your understanding and develop competencies in program and curriculum design, supporting equity and inclusion, relationship-building, mentorship, leadership, and advocacy.
Through a sequence of educational experiences integrating theory and practice, this applied degree is designed to prepare you for work in a variety of early learning and child care programs.

As you build your own skills, you gain the knowledge to empower future generations.

Students may complete this program on a full-time or part-time basis and have a maximum of 12 semesters to complete the program. A Learner Course Plan for course completion is developed with each student, based on an assessment of any previous ECE or related training they may already have, and any PLAR credits received.

Program Highlights

- Complete Year 4 in two semesters as per admissions requirements
- Benefit from a flexible, online program allowing you to complete courses while working in the field
- Engage in reflective practice, while working with children, families and the community
- Focus on policy, ethics, advocacy and social justice

- In depth knowledge of child development from birth to aged 12
- Investment in early education and child care by provinces and territories rose by over $3 billion between 2017 and 2020. Newfoundland and Labrador has almost tripled funding since 2011
- Over the period 2019-2028, the number of job openings (arising from expansion demand and replacement demand) for early childhood educators and assistants are expected to total 81,700

Did you know?

- Canadian economic evaluations have demonstrated that early learning and child care has one of the highest returns on investments, with $2 to $7 returned on every dollar spent.
- Investment in early education and child care by provinces and territories rose by over $3 billion between 2017 and 2020. Newfoundland and Labrador has almost tripled funding since 2011.
- Over the period 2019-2028, the number of job openings (arising from expansion demand and replacement demand) for Early childhood educators and assistants are expected to total 81,700
- Newfoundland and Labrador has increased training requirements and expanded graduate bursary programs.

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Analyze research, standards, and trends related to early learning and development to inform curriculum, program decision-making, and early learning practice.
2. Use pedagogical tools to observe, document, and assess child learning and development, adult-child interactions, and the indoor/outdoor environment
3. Evaluate significant Canadian and Provincial social and public policies as they relate to children, families, early childhood educator practice, the sector, and the broader community.
4. Apply trauma-informed, anti-bias, and culturally relevant practices to developing relationships and environments that foster social justice and equity in early learning.
5. Develop professional relationships with families using family-centered principles that respect family diversity, goals, and values.
6. Demonstrate ethical practice with children, colleagues, and families based on a critical evaluation of individual rights, equity, diversity, and inclusion.
7. Use critical thinking, reflective practice, and problem-solving skills to form professional and collaborative relationships with colleagues, families, and other professionals.
8. Develop advocacy strategies with children, colleagues, families, and the community for quality early learning and care programs and services.
9. Identify qualitative and quantitative research methodologies, steps of the research process, and carry out a research project related to the field of Early Childhood Education.

ENTRANCE REQUIREMENTS

Eligibility for direct admission to Year 4 of the Bachelor of Applied Arts: Early Childhood Education program requires the applicant to meet the following academic criteria:

1. Have already graduated from the Early Childhood Education Diploma program at College of the North Atlantic (or equivalent*) within the last five (5) academic years from date of application or have graduated prior to the last five (5) academic years and hold minimally a current Level II Child Care Services (CCS) Certification through the Association of Early Childhood Educators of Newfoundland and Labrador (AECENL) for infant, preschool and school-age children.

AND

2. Have already graduated from the current Early Childhood Education Administrative Leadership Advanced Diploma program at College of the North Atlantic (or equivalent) within the last five (5) academic years from date of application or have graduated prior to the last five (5) academic years and holds minimally a current Level III Child Care Services (CCS) Certification through the Association of Early Childhood Educators of Newfoundland and

Labrador (AECENL) for infant, preschool and school-age children.

**Graduation from a recognized College or University with a diploma or degree in the area of Early Childhood Education. A combination of other post- secondary and industry experience acceptable to the college as an entrance requirement will be considered on a case-by-case basis.*

International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

To be employed in the field of early childhood education students must be able to lift and move children, materials and equipment (up to 50 pounds) on a consistent basis. As well, physical effort, strength and endurance is required in the supervision and care of children, e.g., maintaining balance, kneeling and bending, pushing and pulling strollers and carts, and moving quickly to assist children in emergency situations.

PRIOR LEARNING ASSESSMENT AND RECOGNITION (PLAR)

Students will be given every opportunity to receive credit for past learning experience (except for EE4010, EE4030 and EE4045) through a comprehensive systematic process of evaluation. Once enrolled and active in the program, students will be permitted to submit PLAR applications for any courses in the program for which they believe they have already acquired the appropriate level of knowledge and skills.

EMPLOYMENT OPPORTUNITIES
Upon successful completion of the program, combined with relevant industry experience, graduates will be prepared for employment in a variety of early learning and child care settings. These could include but are not limited to the following:

- Early Childhood Educator
- Administrator of a regulated Child Care Service
- Instructor of ECE
- Program Consultant
- Inclusion Consultant
- Capacity Consultant
- Family Child Care Home Monitor
- Employee of an ECE Professional Association
- Independent Consultant
- Industry Policy Analysis

CERTIFICATION
Upon completion of the Bachelor of Applied Arts: Early Childhood Education, individuals may apply for a provincial Level IV Child Care Services (CCS) Certification through the Association of Early Childhood Educators of Newfoundland and Labrador (AECENL). For information on certification, please visit Association of Early Childhood Educators of Newfoundland and Labrador (AECENL).

There's a world of possibilities in the Early Childhood Education sector! With a variety of dynamic roles and settings to choose from, you will inspire and nurture young minds during their most formative time, while gaining certification in early-learning environments and growing your career along the way. Learn more about one of Newfoundland and Labrador's most in-demand sectors at https://www.ecehrc.ca/become-an-ece

Semesters 1 to 5 - Refer to Early Childhood Education
Semesters 6 to 7 - Refer to Early Childhood Education Administrative Leadership

Semester 8 (Fall)

Code	Title	CU	Cr	Le	La
EE4005	Play With(in) Nature	3	4	3	2
EE4010	Social Justice in ECE	3	3	3	0
EE4015	Pedagogical Documentation	3	4	3	2
EE4020	Research in Early Childhood Education	3	3	3	0
EE4025	Supporting Well-being and Belonging	3	3	3	0

Semester 9 (Winter)

Code	Title	CU	Cr	Le	La
EE4030	Policy, Ethics, and Advocacy	3	3	3	0
EE4035	Inclusion III	3	3	3	0
EE4040	Indigenous Peoples and Education	3	3	3	0
EE4045	Educator as Researcher	3	3	3	0
EE4050	Multiliteracies in ECE	3	4	3	2

Community and Therapeutic Recreation

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Bay St. George - On Campus delivery

PROGRAM DESCRIPTION

An exercise in living fully

Today we are seeing an increased focus on personal wellness and the compelling recognition that it is paramount to leading full, satisfying and productive lives. This proactive movement is generating an increased demand for trained professionals in community and therapeutic recreation. These leaders create programs that embrace the diversity of communities, emphasize the importance of cultural connections and bring awareness to the benefits of balanced living.

If you are interested in pursuing a rewarding career in community and therapeutic recreation, this program not only delivers engaging coursework for a strong academic foundation, it also provides opportunities for practical experience and field placements in hospitals, rehabilitation centres, nursing homes, long-term care facilities, and community and municipal centres. Through this strategic combination you will develop the leadership, communication and problem-solving skills needed to be successful in this dynamic field.

Discover the importance of physical literacy and recreation, and how they promote independence, self-esteem, and satisfaction in a person's life. Learn to apply the recreation and therapeutic processes of planning, implementation, evaluation, and assessment to empower others and support their leisure and recreation, assisting them in mastering their own fitness, health and wellness goals.

In this career, you will contribute to the enhancement of the quality of life that shapes a community. You will have the opportunity to foster the growth for individuals' social, emotional, and physical well-being that contributes to a thriving society encompassing all ages, genders, cultural needs and abilities. Equipped with this program's exciting coursework, practical experience, and field placements, complemented with several health and wellness certifications, you will be ready to dive into this ocean of opportunity and potential.

Take that leap – apply today!

Program Highlights

- Access to a wide range of recreational pursuits including therapeutic recreation, outdoor recreation, and community-based programming appropriate to the various sectors of the industry
- Practical skill development
- Field placements
- Exposure to health and wellness, therapeutic and community recreation initiatives

Did You Know?

- Research shows that play is beneficial for social and emotional development. It helps children to learn self-control, emotion-regulation, communication, conflict resolution, and much more.[1]
- Taking part in leisure activities as a family is beneficial for children because adults are modeling healthy ways to handle stress and emotions.
- When you feel good physically, you are more likely to feel better emotionally.
- Therapeutic recreation improves an individual's mood and overall wellbeing.
- Regular exercise reduces both anxiety and depression – both conditions improve after nine to 10 weeks of regular aerobic activity.[2]

- Community recreation creates social connections and bonds that lead to strong health and inclusive communities.

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Identify recreational needs for diverse community groups including those with special needs and challenges.
2. Plan and design community and therapeutic recreation programming.
3. Engage in recreational and therapeutic community-based programming.
4. Implement and administer programming in both recreational and therapeutic settings.
5. Manage recreation environments for organizations and community groups.
6. Apply recreation and leisure interventions to help improve physical, social, cognitive and emotional health.

FUTURE OPPORTUNITIES

Upon successful completion of the program, graduates will be prepared for employment in a variety of roles, including, but not limited to:

- Community Events Coordinator
- Community Outreach Worker
- Disability Camp Coordinator
- Facility Supervisor
- Manager of Community Services
- Program Director and Supervisor
- Recreation Assistant
- Recreation Attendant
- Recreation Coordinator
- Recreation Counsellor
- Recreation Program Instructor
- Recreation Therapy Worker
- Recreation Worker
- Seniors Outreach Supervisor
- Seniors Outreach Worker
- Workplace Wellness Coordinator
- Youth Coordinator

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

Provincial High School Graduation Certificate with a minimum 60% overall average in eight level 3000 credits or equivalent

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science Transition Certificate

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements;

for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore, international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

ADDITIONAL ENTRANCE REQUIREMENTS

The **Entrance Requirements - Additional Documentation Package** identifies specific documentation that students are **required** to provide for the Community and Therapeutic Recreation Program. You will receive this package as part of your letter of acceptance and these documents must be completed, signed, and returned prior to online registration.

1. Section A: A clear **Criminal Record Screening Certificate (Certificate of Conduct)** with applications obtainable through the RNC, or a clear **Criminal Record Check** with applications obtainable through the RCMP. A **Vulnerable Sector Check** is also required.

These documents must be dated no more than two months prior to the first scheduled day of classes for the program. Applicants with a criminal offense listed on their Certificate of Conduct may be denied access to field placements and will be unable to complete the program. Please note that after enrollment, additional documentation may be required by organizations for field placements and volunteer activities.

2. Section B: First Aid and Basic Cardiopulmonary Resuscitation Certificate (CPR)

Students must possess a valid First Aid Certificate and basic Cardiopulmonary Resuscitation Certificate (CPR), valid until the end of each semester.

3. Section C: Immunization Record and Immunization-Communicable Diseases Screening Package

Students must complete and submit the Student Pre-Placement Immunizations and Communicable Diseases Screening Package prior to online registration.

Please Note:

i. Copies of the required Criminal Record Screening Certificate (Certificate of Conduct) or the Criminal Record Check, along with the Vulnerable Sector Check, First Aid, CPR, Student Pre-Placement Immunizations and Communicable Diseases Screening Package are to be submitted prior to online registration; otherwise, students will not be able to attend class.

ii. After enrolment, additional documentation may be required by organizations for field placements and volunteer activities.

iii. Due to the physical nature of many of the courses offered throughout the two-year program, students are expected to be in good physical condition and demonstrate the ability to take part in intense physical activities in an indoor and outdoor setting.

Due to the outdoor components in the **RS1255** and **RS1370** courses, students are required to have appropriate equipment and the clothing necessary to successfully complete these courses (e.g. sleeping bag, back pack, rain gear - pants and jacket, winter clothing - jacket/pants/gloves/hat/boots, and other clothing/equipment appropriate for outdoor recreation activities and overnight camping).

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[1] (PDF) Benefits of Play for the Social and Emotional Development of Children in Kindergarten (researchgate.net)
[2] Social & Emotional Benefits of Regular Exercise (healthfully.com)

Courses

Semester 1

Code	Title	Cr	Le	La
RS1100	Intro to Community Recreation	3	3	0
RS1280	Program Planning	2	2	1
RS1451	Intro to Therapeutic Recreation	4	3	2
RS1110	Health & Wellness I	3	3	1
RS1115	Media & Public Relations	3	2	2
FW1710	Field Placement I	5	11 wks 2 hrs/wk	4 wks 35 hrs/wk

Semester 2

Code	Title	Cr	Le	La
RS1210	Intro to Mental Health	3	3	1
RS1215	Culture, Diversity, and Inclusion	3	3	0
PS2340	Organizational Behaviour	4	4	0
RS1260	Health & Wellness II	3	3	0
CM2100	Workplace Correspondence	3	3	0
RS1255	Outdoor Recreation I	2	2	1
FW1711	Field Placement II	5	11 wks 2 hrs/wk	4 wks 35 hrs/wk

Semester 3 (Intersession)

Code	Title	Cr	Le	La
RS1380	Therapeutic Interventions	4	3	4
RS1370	Outdoor Recreation II	3	2	3

Semester 4

Code	Title	Cr	Le	La
RS1240	Recreation Activities	3	2	2
RS1320	Recreation Administration	3	3	1
RS1400	Community Agencies	3	3	0
RS1440	Recreation Facilities	2	2	1
CM2300	Report Writing	2	2	0
HN1200	Human Resource Management	3	3	1
FW2710	Field Placement III	5	11 wks 2 hrs/wk	4 wks 35 hrs/wk

Semester 5

Code	Title	Cr	Le	La
RS1460	Recreation Programming for the Older Adult	3	3	1
RS1520	Risk Management & Legal Liability	3	3	0
RS1530	Principles & Procedures of Therapeutic Recreation	3	3	0
HR1120	Human Relations	4	4	0
MN1410	Special Events Management	4	3	2
FW2711	Field Placement IV	5	11 wks 2 hrs/wk	4 wks 35 hrs/wk

Community Leadership Development

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Bay St. George - On Campus delivery

PROGRAM DESCRIPTION

Empowering communities.

Effective community leaders bring people together. They help create a supportive environment that fosters a sense of belonging and empowerment for individuals to thrive. They engage citizens, strengthen agency and foster community resilience.

Community leadership development involves working with community agencies, non-profit organizations, and both the public and private sectors, along with the people they represent. Effectiveness in community leadership requires specific core competencies such as communication and listening skills, public relations and marketing, cultural intelligence, financial and project management, board governance and ongoing personal and professional development. It means advocating for the needs and rights of community members and helping to build strong, cohesive communities.

With the Community Leadership Development program at CNA, you will explore different leadership styles, best practices and models used when coordinating service delivery, managing projects, and evaluating services while responding to a variety of community needs, including working with diverse populations.

In this exciting two-year diploma program, you will engage in developing individual leadership capacity while exploring and researching social and economic situations in a community. You will explore skill development that includes communication skills, leadership development and problem-solving, with a goal of becoming an agent for change and empowerment.

Be a part of driving positive change – be a community leader.

Program Highlights

- Certifications built into the program for immediate entry-level community leadership development work (Mental Health First Aid, CPI Non-Violent Crisis Intervention, Applied Suicide Intervention Skills Training)
- Covers topics such as family studies, working with an aging population, child and youth justice, disability studies, mental health and addictions
- Participate in on-going group activities and community initiatives, and two field placements with an employer under the direction of a field placement supervisor
- Participate during a non-profit organization's strategic planning **A requirement leading up to the field placement experience includes a current Certificate of Conduct and Vulnerable Sector Check. This is also required for volunteer opportunities within the program and by the field placement employers.*

Did You Know?

- The community is one of the foundations of our modern society (Putnam, 2001). [1]
- Community development is one of the most productive ways to improve the lives and livelihoods of individuals within a community (Syme & Ritterman, 2009).
- The average salary for Community Support Worker is $51,708 per year in Canada. [2]

[1] Journal of Leadership Education, 2017 – Vol. 16, Issue 3, Community Leadership: A Theory-Based Model - Journal of Leadership Education
[2] Glass Door, April 29, 2024, Salary: Community Support Worker in Canada 2024 | Glassdoor

OBJECTIVES
Upon completion of this program, graduates will be able to:

1. Work effectively and professionally with communities to address current needs and issues (e.g. working with diverse populations, child and youth care, seniors and age-friendly communities, immigration, disabilities and inclusion, mental health and well-being, violence, addictions).
2. Demonstrate leadership competencies with innovative approaches to problem-solving, decision-making and managing projects and/or community programs/services.
3. Work effectively with individuals, families, groups and organizations, by having a foundational knowledge of the stages of human development and recognizing the value of social and cultural diversity.
4. Participate during a non-profit organization's strategic planning, board governance, volunteer recruitment and advocacy.
5. Utilize social media and technology for professional purposes, particularly with non-profit community-based organizations and their networking/stakeholder engagement activities.
6. Research, organize, facilitate and manage community projects and initiatives.
7. Demonstrate a capacity to act as change agents to amend conditions within communities.
8. Communicate with proficiency, clarity, accuracy and confidence among groups and stakeholders.
9. Write professional proposals, complete grant applications and fundraise secure funds and sustain existing initiatives and projects.
10. Demonstrate by example the importance of self-care and healthy living while also exploring proactive measures towards mental health, well-being and healthy aging by lifelong learning and collaboration with others.
11. Cultivate community partnerships, build relationships and raise awareness of common issues and goals among partners and stakeholders (e.g. non-profit organizations, government agencies and the private sector).

FUTURE OPPORTUNITIES
Upon successful completion of the program, graduates will be prepared for employment in a variety of roles, including, but not limited to:

- Addiction Services
- Child and Youth Care
- Community Education
- Disability Services
- Family Services
- Mental Health & Wellness
- Residential Support
- Senior Wellness
- Violence Prevention
- Youth Justice

PROGRAM TRANSFERABILITY
Cape Brenton University
1. Graduates who have completed the Community Leadership Development diploma program from CNA will receive up to a maximum of 45 credit hours of transfer towards the 90 credits required for Cape Brenton University's (CBU) 3-year Bachelor of Arts Community Studies (BACS) degree program. Students must meet CBU's entrance criteria and have obtained the CNA's minimum passing grade in all courses to be accepted for advanced standing and direct entry to CBU's BACS Degree Program.
OR
2. Graduates who have completed the Community Leadership Development diploma program from CNA will receive up to a maximum of 60 credit hours of transfer towards the 120 credits required for Cape Brenton University's (CBU) 4-year Bachelor of Arts Community Studies Major/Minor degree program. Students must meet CBU's entrance

criteria and have obtained CNA's minimum passing grade in all courses to be accepted for advanced standing and direct entry to CBU's BACS Degree Program.

Saint Mary's University

Graduates who have completed the Community Leadership Development diploma program from CNA may apply for admission to the Bachelor of Arts program at Saint Mary's University (SMU). CNA students who meet SMU admission requirements and have obtained an overall average of 70% in their courses, may be granted up to 60 hours in a 120-credit hour degree program.

ENTRANCE REQUIREMENTS

1. High School

Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science Transition Certificate

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are at least 19 years of age at the time of application and have been out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

REQUIRED DOCUMENTATION

Certificate of Conduct

A Certificate of Conduct, including a vulnerable sector category, will be required. This Certificate can be obtained from the Royal Newfoundland Constabulary (RNC) or the Royal Canadian Mounted Police (RCMP) and must be dated no more than three months prior to the first scheduled day of classes for the program. Please note that this documentation is required in order to be accepted into the program.

PLEASE NOTE

1. Factors contributing to student success within this program include the following: good writing skills, volunteer work and the enjoyment of helping others.
2. Additional documentation may be required by organizations for field placements and volunteer activities.
3. Students should be aware that additional fees apply for certifications.

Courses

Semester 1

Code	Title	Cr	Le	La
CM1100	Writing Essentials	3	3	1
HR1120	Human Relations	4	4	0
LD1200	Intro to Human Services	4	4	1
LD2100	Community Development	3	3	0
PS1140	Psychology I	4	4	0
SC1110	Intro to Sociology	4	4	0

Semester 2

Code	Title	Cr	Le	La
CM2100	Workplace Correspondence	3	3	0
CY1010	Intro to Mental Health Issues	3	3	0
FW1235	Field Placement Preparation	1	1	0
LD1120	Leadership Theory	3	3	1
LD1210	Media & Public Relations	3	2	2
PS1145	Psychology II	4	4	0
SC1130	Family Studies	4	4	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
FW1445	Field Placement I	5	5 wks (35hrs/wk)	0
LD1300	Professional Certifications I	0	2 wks (24hrs/wk)	0

Intersession hours are actual and will not be adjusted.

Semester 4

Code	Title	Cr	Le	La
LD1121	Leadership Practice	3	2	2
LD2220	Interviewing Skills	3	2	2
LD2250	Diverse Populations	4	4	0
LD2300	Intro to Social Research	3	3	1
PS2200	Developmental Psychology	3	3	0
Community Leadership Development Elective*		3	3	0
Elective	minimum credit value of 3	3	3	0

Semester 5

Code	Title	Cr	Le	La
CJ2110	Canada's Justice System	3	3	0
LD2110	Change Leadership	3	2	2
LD2400	Voluntary Non-Profit Sector	3	3	0
LD2500	Project Management	3	2	2
PS1200	Drugs & Behaviour	3	3	0
SC1240	Healthy Aging	3	3	0
Community Leadership Development Elective		3	3	0

Semester 6 (Intersession)

Code	Title	Cr	Le	La
FW1451	Field Placement II	5	5 wks (35hrs/wk)	0
FW2801	Field Placement Reflection	1	1 wk (20hrs/wk)	0
LD2511	Professional Certifications II	0	1 wk (22hrs/wk)	0

Intersession hours are actual and will not be adjusted.

***Community Leadership Development (CLD) Electives**

Community Leadership Development (CLD) Electives include the following:

Semester 4:
CY1011 Intro to Child & Youth Care
CY1041 Mental Health & Addiction
DB2100 Intro to Disability Studies

Semester 5:
CJ2210 Youth Justice in Canada
DB2110 Disability Studies
PS1240 Understanding Addictions

Please Note: Each CLD elective has a credit value of 3 (3 Le/0 La). One CLD elective is taken in Semester 4 and one in Semester 5. Please check the CLD elective offering/s at the campus you plan to attend and seek academic advice (e.g. course prerequisites) before registration.

General Elective Courses

A list of general elective courses to be offered in the fourth semester will be made available prior to registration. Please check the general elective offering/s at the campus you plan to attend and seek academic advice (e.g. course prerequisites) before registration. Other courses may be chosen provided that:

1. All prerequisites have been met,
2. The course is offered during the semester,
3. The maximum enrolment for the course is not exceeded,
4. The student's schedule can accommodate all scheduled classes for that course.

Digital Animation

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Bay St. George - On Campus Delivery

PROGRAM DESCRIPTION:

Set your career in motion.

Animation brings imagination to life. More than enchanted drawings and toy stories, digital animation has grown into a multibillion-dollar industry. Technological advancements in 3D animation and the wide usage of animated videos in manufacturing, medical, engineering, entertainment and other sectors are driving this rapidly expanding market. That means digital animators are in high demand.

Canada is recognized as a world leader in animation, video game development and visual effects. According to the Canada Media Fund, digital media is a $22 billion industry in Canada that supports more than 120,000 creative jobs, making Canada one of the foremost investment destinations for global digital media companies.

CNA's Digital Animation program provides a pathway to success if you want to be a main player in this exciting industry. With design fundamentals, animation software tools and production techniques, you'll learn to perform your best individually and collaboratively, creating animated films and video productions from concept to completion.

Study with us and build a professional creative portfolio that will get you a job you love.

If you can imagine it, you can create it. And we can help.

Program Highlights

- Learn the fundamentals of drawing, design, digital graphics, and digital painting
- Build worlds through story development, storyboarding, and acting
- Create hand-drawn and rigged 2D animation
- Explore 3D modelling, texturing, rigging, and animation
- Delve into technical aspects including lighting, rendering, and post-processing
- Work as part of a team to develop and create animated capstone projects
- Create a final demo reel and portfolio to accompany your professional resume

Did You Know?

- Canadian-based companies have created animation and effects for many box-office hits and award-nominated feature films such as *Marmaduke (2022)*, *Hotel Transylvania 2 (2015), The Adams Family (2019)*, and popular television series such as Trailer Park Boys: The Animated Series, and DC Superhero Girls.
- The 30 top-grossing films of all time featured high-end visual effects or computer-generated animation.[1]
- Digital animation professionals find work at advertising agencies and video game companies, with movies and television, in digital marketing and more.
- Graduates have showcased their work internationally at events such as the Nickel Film Festival in NL; the National Film Festival for Talented Youth in Seattle, Washington; the Kerry International Film Festival in Ireland; the Upstate NY Horror Film Festival, and the TOFUZI International Festival of Animated Arts in Georgia, among many others.

[1] https://en.wikipedia.org/wiki/List_of_highest-grossing_films

FUTURE OPPORTUNITIES

Upon successful completion of the program, graduates will be prepared for employment in a variety of roles, including, but not limited to:

- 2D/3D Animator
- 2D/3D Artist
- 2D/3D Environment Artist
- 2D/3D Lighting Artist
- 2D/3D Rigging Artist
- 3D Modeler
- Storyboard Artist
- Texture Artist
- Background Artist
- Layout Artist

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Communicate a knowledge of animation tools, techniques, and concepts through each stage of production
2. Work collaboratively in a team environment on an animation production
3. Develop concepts for characters, environments, and props for use in an animation production
4. Design appropriate previsualizations using art and cinematography
5. Apply the production process to create assets for 2D and 3D animation
6. Prepare 2D and 3D assets for rigged animation
7. Produce realistic and stylized 2D and 3D animations
8. Create natural phenomena with the use of 3D simulations and effects
9. Composite animation, simulations, and effects through the post-production process
10. Integrate dialogue, sound effects, and music through the post-production process
11. Create materials to promote an animation project
12. Create a professional portfolio that demonstrates skills and knowledge

ENTRANCE REQUIREMENTS

1. High School

Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science Transition Certificate

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment. If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Note: Basic computer skills along with an ability to draw are important and considered definite assets for success in this program.

Courses

Semester 1

Code	Title	Cr	Le	La
MM1400	2D Digital Graphics	3	2	2
MM1115	3D Animation I	3	2	2
MM1120	Pre-Production I	3	2	2
MM1125	3D Modelling	3	3	0
MM1130	Storytelling in Animation I	3	3	0
VA1131	Drawing Fundamentals	3	2	2
MM1135	2D Animation I			

Semester 2

Code	Title	Cr	Le	La
MM1210	3D Animation II	4	3	2
MM1215	Digital Audio and Video	4	3	2
MM2565	Texture and Paint I	3	2	2
MM1220	2D Animation II	3	2	2
VA1610	Sculpture I	3	2	2
VA2171	Life Drawing	3	2	2

Semester 3 (Intersession)

Code	Title	Cr	Le	La
MM2765	Animation Project I	4	1	10

Intersession hours are actual and will not be adjusted.

Semester 4

Code	Title	Cr	Le	La
CM1450	Writing Fundamentals	3	3	0
MM2110	2D Animation III	3	2	2
MM2115	3D Animation III	3	2	2
MM2120	Pre-Production II	4	3	2
VA2610	Sculpture II	2	1	2
MM2125	Storytelling in Animation II	3	3	0
MM2570	Texture and Paint II	3	3	0

Semester 5

Code	Title	Cr	Le	La
CM2200	Oral Communication	2	2	0
MM2810	3D Post-Production	4	3	2
MM2850	Digital Compositing	4	3	2
MM2215	3D Character Rigging	3	2	2
MM2220	Arts Project Management	3	2	2
MM2255	Studio Practice	2	1	3

Semester 6 (Intersession)

Code	Title	Cr	Le	La
MM2900	Portfolio Development	2	1	2
MM3765	Animation Project II	3	1	5
VA3555	Screening & Peer Critique	2	1	2

Digital Filmmaking

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Bay St. George - On Campus delivery

PROGRAM DESCRIPTION

As a two-year, six-semester program, Digital Filmmaking responds to the increasing demand for filmmakers and technicians in the Canadian filmmaking industry. The primary objective is to prepare students for an exciting career in the filmmaking industry by providing each student with an abundance of fundamental knowledge and skill development in narrative, documentary, music videos, factual entertainment and other genres of filmmaking.

While learning the skills required for visual storytelling, students will also learn the art of filmmaking by actually making films. The program centers on meticulous hands-on training whereby students work with industry standard equipment to learn professional techniques in various aspects of the filmmaking process. Each semester, students will engage in progressive learning as it relates to producing, directing and editing during both individually-based and team-oriented projects.

During both Intersession semesters, first and second-year students, together with their instructors, will work on developing and producing a short film which will then be screened by a public audience. Added to the practical experience Digital Filmmaking students will acquire, students will graduate with a number of certifications necessary to work in the rapidly growing and complex filmmaking industry.

While merging creative and technical aspects of filmmaking, the program will prepare and qualify students for entry-level technical positions associated with filmmaking. Graduates from this program will have a well-rounded knowledge of the filmmaking industry and gain an understanding of the many unique and rewarding career paths available within that industry.

OBJECTIVES

Upon completion of this program, graduates will be able to:

1. Identify the complex components of the provincial, national and international film industry.
2. Demonstrate proper etiquette and safety practices on a film set.
3. Communicate with proficiency, clarity and confidence within a team-based and hierarchical workplace structure.
4. Apply technical proficiency with industry standard equipment (digital cinema cameras, lighting fixtures and grip equipment, field sound recording equipment, picture and sound editing).
5. Practice creative visual storytelling through the art of previsualization, scriptwriting, production scheduling, location filming and editing.
6. Demonstrate an understanding of live television production, webcasting, art direction, post colour and sound production, proposal writing and entrepreneurial practices.
7. Apply team-working and applicable problem-solving skills unique to the film industry.
8. Demonstrate visual, oral and written communication skills to create compelling stories.
9. Identify and seek/renew industry-relevant certifications.
10. Create engaging independent narrative and documentary films.
11. Plan a career path within the filmmaking industry.

FUTURE OPPORTUNITIES

The Filmmaking industry is an exciting, dynamic and complex field with diverse opportunities for employment as film productions and filmmaking activities within the province, nationally, as well as internationally continue to increase. Graduates of the Digital Filmmaking program have opportunities to work at entry-level positions on filmmaking crews which are in demand. They can seek employment in areas such as, but not limited to, a Grip, Lighting Technician, Sound Personnel (Boom Operator), Trainee - Assistant Director, Editor's Assistant or Camera Trainee.

PROGRAM TRANSFERABILITY

Graduates who have completed the two-year Digital Filmmaking diploma program offered by the College of the North Atlantic and who are entering the Bachelor of Fine Arts (Theatre) Technical Theatre Production will be given a total of 59 credits hours toward the 120-credit hour degree. A maximum of 9 additional transfer credits applicable to the degree may be used to meet the degree requirements

ENTRANCE REQUIREMENTS

1. High School
Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science Transition Certificate
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%
4. Mature Student Requirements
Applicants who do not meet the educational prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Please Note:
There are physical requirements (e.g. lifting) in this program as a result of the physical requirements of working in the Digital Filmmaking industry (e.g. individuals must be able to work long hours in different environmental conditions, be comfortable working at heights and be aware of lifting requirements of at least 30 pounds).

Courses

Semester 1

Code	Title	Cr	Le	La
CM1100	Writing Essentials	3	3	1
FV1110	History of Cinema	3	2	2

Code	Title	Cr	Le	La
FV1210	Digital Filmmaking Techniques I	3	2	2
FV1230	Overview of the Film Industry	2	2	0
FV1260	Introduction to Post Production	3	2	2
HY1130	Renaissance to 20th Century	3	2	2
SN2420	Sound for Visual Media	4	3	2

Semester 2

Code	Title	Cr	Le	La
CM1680	Writing for the Screen	3	3	0
CS2500	Project Management	3	3	1
FV1235	Director Studies I	3	2	2
FV1280	Lighting & Grip	3	2	2
FV1285	Picture & Sound Editing	3	2	2
FV2210	Documentary Filmmaking	3	2	3
Elective	Minimum credit value of 3	3	3	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
FV1221	Short Film Production I	4	4	14
FV1290	Digital Filmmaking Techniques II	3	4	4

Intersession hours are actual and will not be adjusted.

Semester 4

Code	Title	Cr	Le	La
CM2200	Oral Communications	2	2	0
FV2000	Art Direction & Production Design	2	1	3
FV2010	Digital Cinematography	2	1	2
FV2020	Live TV & Webcasting	3	2	3
FV2030	Director Studies II	3	2	2
MM1400	2D Digital Graphics	3	2	2
MM1950	Workplace Professionalism	3	3	0

Semester 5

Code	Title	Cr	Le	La
EP2000	Entrepreneurship in Practice	4	3	2
FV2040	Film Industry & Certifications	3	2	2
FV2050	Advanced Documentary	3	2	3
FV2060	Colour Correction/Sound Design	3	2	2
FV2070	Director Studies III	3	2	2
MM2850	Digital Compositing	4	3	2

Semester 6 (Intersession)

Code	Title	Cr	Le	La
FV2080	Short Film Production II	5	5	16
PD1110	Portfolio Development	1	2	2

Intersession hours are actual and will not be adjusted.

Elective Courses:

Elective/s to be offered in the second semester will be made available prior to registration. Other courses may be chosen provided that:

1. All prerequisites have been met,
2. The course is offered during the semester,
3. The maximum enrolment for the course is not exceeded,
4. The student's schedule can accommodate all scheduled classes for that course.

Early Childhood Education

Start Date: September

Credential: Certificate/Diploma

Program Length: One Year/Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Carbonear - On Campus delivery
- Corner Book - On Campus delivery
- Gander - On Campus delivery
- Placentia - On Campus delivery
- Port aux Basques - On Campus delivery
- Prince Philip Drive - On Campus delivery
- Online - Synchronous delivery

PROGRAM DESCRIPTION

Early Childhood Educators (ECEs) have a lasting, positive impact on the development of children, and provide an essential support for families, communities, and society. Early literacy and numeracy, socialization, indoor and outdoor physical activities, and creative experience in art, music, movement, and dramatic play, are some of the areas in which students will acquire knowledge and skills to support and encourage children's development. Students will have the opportunity to apply their learning on field placements, with different age groups, in the College's demonstration child care centres and a variety of child care settings.

The usual work environment for ECEs involves daily indoor and outdoor activity. Being in good health and having, energy, patience, physical stamina, good communication and interpersonal skills are assets that will help students in this profession.

ENTRANCE REQUIREMENTS

1. High School
Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent

2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science Transition Certificate
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate

3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%

4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Eligibility for direct admission to Year 2 of the Early Childhood Education diploma program requires the applicant to meet the following academic criteria:

1. Have already graduated from the current CNA Early Childhood Education Certificate program (or equivalent)
OR
2. Graduated prior to the current CNA Early Childhood Education Certificate program (or equivalent) and holds minimally a current Level I Child Care Services (CCS) Certification through the Association of Early Childhood Educators of Newfoundland and Labrador (AECENL) for preschool and school-age children.

AND

Early Childhood Education (ECE)
Documentation Required:
1. Clear certified criminal records check (issued by RCMP) or clear criminal records screening certificate (issued by RNC)
2. Clear vulnerable sector records check (issued by RCMP/RNC)
3. Record of Immunization or Statement of Immunization

*Please note: The certified criminal records check (issued by RCMP) or clear criminal records screening certificate (issued by RNC), vulnerable sector records check (issued by RCMP/RNC), and the Record of Immunization or Statement of Immunization **must be submitted to the College prior to online registration**. Further information on obtaining ECE program documentation may be found HERE.

The certified criminal records check or criminal records screening certificate and the vulnerable sector records check:
• Must be dated no more than three months prior to the first scheduled day of classes for the program;
• Is valid for a period of three years, unless the student is absent from the program for six months or more.

To be employed in the field of early childhood education and to successfully fulfill field placement requirements, students must be able to lift and move children, materials and equipment (up to 50 pounds) on a consistent basis. As well, physical effort, strength and endurance is required in the supervision and care of children, e.g., maintaining balance, kneeling and bending, pushing and pulling strollers and carts, and moving quickly to assist children in emergency situations.

EARLY CHILDHOOD EDUCATION - DIPLOMA

Students in the two-year Diploma program support children's learning, and their development in all areas: physical, social, emotional, cognitive, and language development. In addition, students learn how to develop, maintain, and evaluate a child care program based on best practices, and support the inclusion of all children, in programming. Students are introduced to the administrative skills necessary to manage a child care service. With relevant work experience, a Diploma graduate will be qualified to become the Administrator of a licensed child care centre.

There is a direct link between the level of education an ECE has and the quality of education and care that is provided to children. The Early Childhood Education Diploma program is an important step on the career ladder (certificate, diploma, degree) to increasing qualifications as an ECE. Diploma graduates are eligible for Level II Child Care Services Certification in infant, preschool and school-age care, working with children ages 0-12.

OBJECTIVES
Upon successful completion of the diploma program, graduates will be able to:
1. Support and promote the overall development of children aged birth to 12 years.
2. Develop and maintain developmentally appropriate programs, and indoor and outdoor environments that reflect best practices.
3. Explain variations in the developmental abilities of children aged birth to 12 years.
4. Maintain caring and responsive relationships with the children in their care.
5. Carry out effective and positive behaviour guidance, and discuss challenging behaviour.

6. Create and implement a philosophy statement, and develop programs and policies based on the philosophy.
7. Support staff in the delivery of programs, policies and guidelines.
8. Set up and maintain an environment that supports diversity and inclusion.
9. Observe, document and evaluate program delivery, child development, and adult/child interactions.
10. Discuss and illustrate the principles of early learning.
11. Demonstrate professional behaviour, reflective practice, and effective relationships with children, families, staff, and the community.
12. Apply provincial child care legislation, standards and policies, and all other applicable legislative and regulatory requirements.

FIELD PLACEMENT

Students complete four field placements during the diploma program, two in year 1 and two in year 2. All students have the opportunity to apply their learning with different age groups in a variety of approved early learning and child care settings. For those students attending the Corner Brook and Prince Phillip Drive campuses, field placements include time spent at the College's onsite demonstration child care centre. **Please Note: Students work with the ECE faculty to determine approved field placement sites.**

Prior to the start of a field placement, students must submit to Student Services a current copy of at least an emergency level (one day) diploma/certificate in first aid and CPR dealing with children. A list of approved first aid training providers can be found on the Workplace NL website.

FUTURE OPPORTUNITIES

Graduates of the diploma program will be prepared for employment with organizations providing early learning & child care, or self-employment in the child care field. With relevant work experience, graduates will be able to develop programs for and/or supervise in child care services in communities throughout the province.

CERTIFICATION

The graduate is awarded a diploma of Applied Arts in Early Childhood Education from the College. This parchment indicates successful completion of two years of post-secondary education, combining theory and practical experience in the care, education, and guidance of children, as well as best practices in developmentally appropriate programming and environments. Completion of this program is one of the steps towards provincial Child Care Services (CCS) Certification granted through the Association of Early Childhood Educators of Newfoundland and Labrador (AECENL). Currently, the Early Childhood Education Diploma is equivalent to Level II CCS Certification for infant, preschool and school-age children.
Please note: Students who successfully complete EE2040 - Family Child Care will also receive a provincial CCS Certification in the family home.

EARLY CHILDHOOD EDUCATION – CERTIFICATE

Students in the one-year certificate program support children's learning, and their development in all areas: physical, social, emotional, cognitive, and language development. The Early Childhood Education Certificate program is the first step in becoming a qualified ECE. Certificate graduates will be eligible for Level I Child Care Services Certification in preschool and school-age care (working with children ages 18 months-12 years). The one-year certificate is also the same as the first year of the Early Childhood Education diploma program.

OBJECTIVES

Upon successful completion of the certificate program, graduates will be able to:
1. Support and promote the overall development of children aged 18 months to 12 years.
2. Develop and maintain developmentally appropriate programs, and indoor and outdoor environments that reflect best practices.
3. Explain variations in the developmental abilities of children aged 18 months to 12 years.
4. Maintain caring and responsive relationships with the children in their care.

5. Carry out effective and positive behaviour guidance, and discuss challenging behaviour.
6. Demonstrate professional behaviour and reflective practice in interactions with children, families and the community.
7. Identify and outline provincial child care legislation, standards and policies.

FIELD PLACEMENT

Students complete two field placements during the certificate program, one in Semester 1 and one in Semester 2. All students have the opportunity to apply their learning with different age groups in a variety of approved early learning and child care settings. For those students attending the Corner Brook and Prince Phillip Drive campuses, field placements include time spent at the College's onsite demonstration child care centre. **Please Note: Students work with the ECE faculty to determine approved field placement sites.**

Prior to the start of a field placement, students must submit to Student Services, a current copy of at least an emergency level (one day) diploma/certificate in first aid and CPR dealing with children. A list of approved first aid training providers can be found on the Workplace NL website.

FUTURE OPPORTUNITIES

Graduates of the certificate program will be prepared for employment with organizations providing early learning & child care, or self-employment in the child care field.

CERTIFICATION

The graduate is awarded a certificate of Applied Arts in Early Childhood Education from the College. This parchment indicates successful completion of one year of post-secondary education, combining theory and practical experience in the care, education, and guidance of children. This program is one of the steps towards provincial Child Care Services (CCS) Certification granted through the Association of Early Childhood Educators of Newfoundland and Labrador (AECENL). Currently, the Early Childhood Education Certificate is equivalent to Level I CCS Certification for preschool and school-age children.

Courses

Semester 1 - Fall

Code	Title	Cr	Le	La
EE1180	Curriculum I	3	3	0
EE1340	Child Development I	2	2	0
EE1290	Positive Behaviour Guidance	4	4	0
EE1420	Creative Experiences I	3	2	2
FH1340	Health & Safety	3	3	0
FW1605	Field Placement I	6	1	5 wks

Five weeks of Field Placement during the semester; Field Placement lecture in the other 10 weeks. Hours of other courses will be adjusted to reflect 10 weeks of the semester.

Semester 2 - Winter

Code	Title	Cr	Le	La
EE1181	Curriculum II	3	3	0
EE1341	Child Development II	3	3	1
EE1360	Observation	2	2	1
EE1421	Creative Experiences II	3	2	2
FH1360	Childhood Nutrition	2	2	0
HR1300	Communications & Human Relations	2	2	0
FW1610	Field Placement II	6	1	5 wks

Five weeks of Field Placement during the semester; Field Placement lecture in the remaining 10 weeks. Hours of other courses will be adjusted to reflect 10 weeks of the semester.

Semester 3 - Intersession

Code	Title	Cr	Le	La
EE2500	School-Age Development & Care	4	4	0
EE1440	Family Studies I	3	3	0
EE1480	Inclusion I	2	2	0

The lecture and lab hours per week are based on a 15-week semester. In Intersession, the lecture and lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4 - Fall

Code	Title	Cr	Le	La
EE2180	Curriculum III	5	4	2
EE2340	Child Development III	4	4	0
CM2300	Report Writing	2	2	0
EE2255	Advanced Behaviour Guidance	3	3	0
EE1870	Community Resources	2	2	0
	OR			
FH1500	Personal Wellness	2	2	0
	OR			
EE2040	Family Child Care	2	2	0
FW2605	Field Placement III	5	1	4 wks

Four weeks of Field Placement during the semester; Field Placement lecture in the other 11 weeks. Hours of other courses will be adjusted to reflect 11 weeks of the semester.

Semester 5 - Winter

Code	Title	Cr	Le	La
EE2260	Introduction to Child Care Administration	3	3	0
EE1441	Family Studies II	3	3	0
EE2350	Professional Practice	2	2	0
EE2470	Infant Development and Care	3	3	1
EE1481	Inclusion II	4	4	0
FW2610	Field Placement IV	5	1	4 wks

Four weeks of Field Placement during the semester; Field Placement lecture in the other 11 weeks. Hours of other courses will be adjusted to reflect 11 weeks of the semester.

ECE Certificate courses are those listed in Semesters 1, 2, and 3 above.

Early Childhood Education - Online Asynchronous

Start Date: September

Credential: Certificate/Diploma

Program Length: Varies

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

Early Childhood Education (ECE) is also available by distance education, online - asynchronous through the College's Office of Distributed Learning (DL). Program descriptions, objectives, graduation requirements and the list of courses may be found on the **Early Childhood Education** full-time program pages.

A Learner Course Plan for ECE course completion is developed with each student, based on an assessment of any previous ECE or related training they may already have, and any PLAR credits received. Learner Course Plans are posted on the Early Childhood Education – Distributed Learning program pages.

Distance students register each semester from a list of course offerings. These offerings, and other important information about ECE by Distance, are posted on the Early Childhood Education – Distributed Learning program pages. Students may enroll on a part-time basis. Students who go beyond the time frame for completion by distance may be required to complete additional or revised courses before being deemed eligible to graduate.

ENTRANCE REQUIREMENTS

All entrance requirements listed on the Early Childhood Education full-time program pages must be met including: both the academic requirements and the ECE program documentation requirements. Further information on obtaining ECE program documentation may be found **HERE**

To participate in courses, students must have an internet-ready computer system. General internet/computer knowledge (e.g. e-mail, ability to save files, install programs, and related applications) would be a valuable asset.

To be employed in the field of early childhood education and to successfully fulfill field placement requirements, students must be able to lift and move children, materials and equipment (up to 50 pounds) on a consistent basis. As well, physical effort, strength and endurance is required in the supervision and care of children, e.g., maintaining balance, kneeling and bending, pushing and pulling strollers and carts, and moving quickly to assist children in emergency situations.

Applicants currently working in a regulated child care service:

Applicants must submit a current copy of the following program documentation:
1. Clear certified criminal records check (issued by RCMP) or clear criminal records screening certificate (issued by RNC)
2. Clear vulnerable sector records check (issued by RCMP/RNC) and
3. Record of Immunization or **Statement of Immunization**

*Please note: The certified criminal records check (issued by RCMP) or clear criminal records screening certificate (issued by RNC), vulnerable sector records check (issued by RCMP/RNC), and the Record of Immunization or Statement of Immunization **must be submitted to the College prior to online registration.**

Prior to the start of a field placement, students must submit to Student Services a current copy of at least an emergency level (one day) diploma/certificate in first aid and CPR dealing with children. A list of approved first aid training providers can be found on the Workplace NL website.

Once admitted into the program, a student who does not enroll in courses for six months or more must re-submit a current copy of all of the above required ECE program documentation.

Applicants not working in a regulated child care service:

Applicants must submit a current copy of the following program documentation which must be dated **no more than three months** prior to the first scheduled day of classes:

1. Clear certified criminal records check (issued by RCMP) or clear criminal records screening certificate (issued by RNC)
2. Clear vulnerable sector records check (issued by RCMP/RNC) and
3. Record of Immunization or **Statement of Immunization**

*Please note: The certified criminal records check (issued by RCMP) or clear criminal records screening certificate (issued by RNC), vulnerable sector records check (issued by RCMP/RNC), and the Record of Immunization or Statement of Immunization **must be submitted to the College prior to online registration**.

Prior to the start of a field placement, students must submit to Student Services a current copy of at least an emergency level (one day) diploma/certificate in first aid and CPR dealing with children. A list of approved first aid training providers can be found on the Workplace NL website.

Once admitted into the program, a student who does not enroll in courses for six months or more must re-submit a current copy of all of the above required ECE program documentation.

Applicants not working in a regulated child care service:

Applicants must submit a current copy of the following program documentation which must be dated no more than three months prior to the first scheduled day of classes:

1. Clear certified criminal records check (issued by RCMP) or clear criminal records screening certificate (issued by RNC)
2. Clear vulnerable sector records check (issued by RCMP/RNC) and
3. Record of Immunization or **Statement of Immunization**

*Please note: The certified criminal records check (issued by RCMP) or clear criminal records screening certificate (issued by RNC), vulnerable sector records check (issued by RCMP/RNC), and the Record of Immunization or Statement of Immunization **must be submitted to the College prior to online registration**.

*Please note: The certified criminal records check (issued by RCMP) or clear criminal records screening certificate (issued by RNC), vulnerable sector records check (issued by RCMP/RNC), and the Record of Immunization or Statement of Immunization **must be submitted to the College prior to online registration**.

Once admitted into the program, a student who does not enroll in courses for six months or more must re-submit a current copy of all of the above required ECE program documentation.

FIELD PLACEMENT

Students in the ECE Online Diploma program are required to complete four Field Placements: FW1600 (5 weeks); FW1601 (5 weeks); FW2600 (4 weeks) and FW2601 (4 weeks). Provincial program standards require that learners must complete a majority of their placements in a regulated child care centre. For the Diploma program, a minimum of 500 hours must be completed in a regulated child care centre, while the remaining hours may be in a regulated family child care home, child care centre, a family child care agency, a kindergarten classroom or a family resource centre.

For those online students currently working in regulated child care (i.e., for a minimum of 12 consecutive months), a minimum of 2 weeks must be completed at a College of the North Atlantic (CNA) demonstration child care centre. An additional week at a CNA demonstration child care centre (for a total of 3 weeks out of the required 18 weeks) will be mandatory for the following:

(i.) students working in regulated child care for less than 12 consecutive months;
(ii.) students not working in regulated child care.

Students in the ECE Online Certificate program are required to complete two Field Placements: FW1600 (5 weeks) and FW1601 (5 weeks). Provincial program standards require that learners must complete a majority of their placements in a regulated child care centre. For the Certificate program, a minimum of 260 hours must be completed in a regulated child care centre, while the remaining hours may be in a regulated family child care home, child care centre, a family child care agency, a kindergarten classroom or a family resource centre.

For those online students currently working in regulated child care (i.e., for a minimum of 12 consecutive months), a minimum of 1 week must be completed at a College of the North Atlantic (CNA) demonstration child care centre. An additional week at a CNA demonstration child care centre (for a total of 2 weeks out of the required 10 weeks) will be mandatory for the following:
(i.) students working in regulated child care for less than 12 consecutive months;
(ii.) students not working in regulated child care.

Students will be assigned a CNA demonstration child care centre based on geographical location. Our centres are located in St. John's, Corner Brook and Happy Valley - Goose Bay. Please note: For new students accepted into the ECE Online Certificate program starting in Academic Year 2020-2021, the ECE Manager will be allocating which field placement course (FW1600 or FW1601) and the dates in which a student will complete the mandatory week(s).

Prior to the start of a field placement, students must submit to Student Services, a current copy of at least an emergency level (one day) diploma/certificate in first aid and CPR dealing with children. A list of approved first aid training providers can be found on the Workplace NL website.

PRIOR LEARNING ASSESSMENT AND RECOGNITION (PLAR)
Students will be given every opportunity to receive credit for past learning experience through a comprehensive systematic process of evaluation. Once enrolled and active in the program, students will be permitted to submit PLAR applications for any courses in the program for which they believe they have already acquired the appropriate level of knowledge and skills, except Field Placements II, III and IV. For further information, please refer to the Early Childhood Education – Distributed Learning program pages.

FUTURE OPPORTUNITIES

Graduates of the Diploma program will be prepared for employment with organizations providing early learning & child care, or self-employment in the child care field. With relevant work experience, they will be able to develop programs for and/or supervise in child care services in communities throughout the province.

Graduates of the Certificate program will be prepared for employment with organizations providing early learning & child care, or self-employment in the child care field in communities throughout the province.

CERTIFICATION

The Diploma program graduate is awarded a Diploma of Applied Arts in Early Childhood Education from the College. This parchment indicates successful completion of two years of post-secondary education, combining theory and practical experience in the care, education, and guidance of children, as well as best practices in developmentally appropriate programming and environments. Completion of this program is one of the steps towards provincial Child Care Services (CCS) Certification through the Association of Early Childhood Educators of Newfoundland and Labrador (AECENL). Currently, the Early Childhood Education Diploma is eligible for Level II CCS Certification for infant, preschool and school-age classifications.

The Certificate program graduate is awarded a Certificate of Applied Arts in Early Childhood Education from the College. This parchment indicates successful completion of one year of post-secondary education, combining theory and practical experience in the care, education, and guidance of children. Completion of this program is one of the steps towards provincial CCS Certification through AECENL. Currently, the Early Childhood Education Certificate is eligible for Level I CCS Certification for preschool and school-age classifications.

LOCATION

Early Childhood Education – Distributed Learning is available province-wide with on-campus Field Placements currently held at the Prince Philip Drive, Corner Brook, and Happy Valley-Goose Bay campuses.

There's a world of possibilities in the Early Childhood Education sector! With a variety of dynamic roles and settings to choose from, you will inspire and nurture young minds during their most formative time, while gaining certification in early-learning environments and growing your career along the way. Learn more about one of Newfoundland and Labrador's most in-demand sectors at https://www.ecehrc.ca/become-an-ece

For the complete listing of courses required for the Diploma and Certificate programs, please see the Early Childhood Education full-time program pages.

Early Childhood Education Administrative Leadership

Start Date: September

Credential: Advanced Diploma

Program Length: One Year

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

The Early Childhood Education (ECE) Administrative Leadership program provides an exciting opportunity for further education and specialized training for early childhood educators, with a focus on increasing knowledge and skills in the area of administrative leadership. Students completing the ECE Administrative Leadership program will gain invaluable knowledge to enhance confidence and support career advancement. This knowledge will be utilized to increase educational qualifications as well as provide an incredible opportunity to advance professional certification within the ECE field. Graduates of the advanced diploma (with an ECE Diploma) are eligible for Level III Child Care Services Certification* from the Association of Early Childhood Educators of Newfoundland and Labrador (AECENL). Throughout this program, students will develop leadership skills, particularly those required of a child care administrator for regulated early learning and child care settings. Courses in this program will spark interest in early childhood educators as specific applications of leadership, mentorship, relationship building, human resources, and reflective practice are included. In addition, students will learn about provincial legislative requirements, as well as current and emerging trends within the field of early childhood education. Similarly, courses in this program will encourage students to be active participants while exposing students to diverse ideas and approaches as they engage in group work and develop skills valued by leaders in the early childhood field; problem-solving, conflict resolution, critical thinking, and time management.

The advanced diploma in ECE Administrative Leadership program is designed for graduates of a recognized ECE diploma program. It builds upon the education and practical experiences of the student, resulting in graduates who will be leaders and mentors in the field of early childhood education.

Students may complete this program on a full-time or part-time basis and have a maximum of 12 semesters to complete the program. A Learner Course Plan for course completion is developed with each student, based on an assessment of any previous ECE or related training they may already have, and any PLAR credits received. The Learner Course Plan specific to this program can be found HERE.

Online students register each semester from a list of course offerings. These offerings, and other important information about the ECE Administrative Leadership program, are posted on the Early Childhood Education Administrative Leadership program pages. *To participate in courses, students must have an internet-ready computer system. General internet/computer knowledge (e.g. e-mail, ability to save files, install programs, and related applications) would be a valuable asset.*

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Effectively administer the day-to-day operations of an early learning and child care program, particularly in the regulated sector.
2. Create informed and professional documents that will assist with quality child care operations.
3. Apply knowledge of provincial legislative documents to ensure safe, high-quality, healthy, and compliant early learning and child care environments.
4. Supervise, mentor, direct, and provide professional support to employees, students, and volunteers within early learning and child care settings.

5. Lead, inspire, and be an informed advocate within the early learning and child care sector.
6. Embrace diversity and build professional relationships with children/families, and their communities as well as other stakeholders.
7. Demonstrate confidence, critical thinking, and reflective practice, as well as ethical and professional behaviour at all times.
8. Maintain currency within the ECE field by actively seeking professional learning resources and opportunities.

ENTRANCE REQUIREMENTS

Eligibility for admission into the Early Childhood Education Administrative Leadership program requires the applicant to meet one of the following criteria:

1. Have graduated from the Early Childhood Education diploma program at College of the North Atlantic;
   OR
2. Have graduated from a recognized post-secondary Early Childhood Education diploma (or equivalent) program (or have a combination of other post-secondary education and industry experience acceptable to the College as an entrance requirement).

International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

PRIOR LEARNING ASSESSMENT AND RECOGNITION (PLAR)

Students will be given every opportunity to receive credit for past learning experience (with the exception of EE3050 and EE3055) through a comprehensive systematic process of evaluation. Once enrolled and active in the program, students will be permitted to submit PLAR applications for any courses in the program for which they believe they have already acquired the appropriate level of knowledge and skills. For further information, please refer to the Early Childhood Education Administrative Leadership program pages.

FUTURE OPPORTUNITIES

Upon successful completion of the program, graduates will be prepared for employment in administrative leadership roles in a variety of early learning and child care settings. These could include but are not limited to the following:

- Child care centres
- Family homes
- Family agencies
- Family resource centres
- Drop-in playgroups
- Head Start programs

CERTIFICATION

Upon completion of this program, individuals may apply for provincial Child Care Services (CCS) Certification through the Association of Early Childhood Educators of Newfoundland and Labrador (AECENL). The Early Childhood Education Administrative Leadership advanced diploma (with an ECE Diploma) is eligible for Level III CCS Certification in classifications the individual already holds. For information on certification, please visit Association of Early Childhood Educators of Newfoundland and Labrador (AECENL).

There's a world of possibilities in the Early Childhood Education sector! With a variety of dynamic roles and settings to choose from, you will inspire and nurture young minds during their most formative time, while gaining certification in early-learning and child care environments and growing your career along the way. Learn more about one of Newfoundland and Labrador's most in-demand sectors at https://www.ecehrc.ca/become-an-ece

Courses

Semester 1 - Fall

Code	Title	Cr	Le	La
EE3010	Leadership	4	4	0
EE3020	Culture & Diversity	4	4	0
EE3030	Governance in ECE	4	4	0
EE3035	Financial Management in ECE	3	3	1
EE3045	Conflict Resolution	3	3	1

Semester 2 - Winter

Code	Title	Cr	Le	La
EE3015	Relationship Building	4	4	0
EE3025	Mentoring in ECE	4	4	0
EE3040	Human Resources in ECE	4	4	0
EE3050	Current & Emerging Trends	4	4	0
EE3055	Reflective Practice in ECE	3	2	2

Early Childhood Education Advanced Studies in Inclusive Practice

Start Date: September

Credential: Advanced Diploma

Program Length: One Year

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

A brighter future through inclusive learning.

Early childhood educators have a lasting, positive effect on the development of children and provide essential support for families, communities, and society.

The Early Childhood Education (ECE) Advanced Studies in Inclusive Practice advanced diploma program is designed to equip current early childhood educators with the specialized knowledge and skills required to provide high-quality early learning and child care to children with diverse abilities and needs.

These studies focus on an inclusive philosophy to ensure that children with physical, intellectual, social, and emotional needs are benefiting from the program they attend. In an inclusive educational setting, it is essential that early childhood educators have the tools to support the unique needs of every child.

You will learn to identify the components of communicational, behavioural, physical, and intellectual diversity and their effects on child development.? You will gain insight to assess a child's progress, adapt curriculum methods accordingly and track developmental milestones. In addition, you will build the skills to communicate effectively with families and other professionals involved in the child's education and care.

This advanced diploma is designed for graduates of CNA's ECE diploma program or a recognized ECE diploma (or equivalent) program.

Students may complete this program on a full-time or part-time basis and have a maximum of 12 semesters to complete the program. A Learner Course Plan for course completion is developed with each student, based on an assessment of any previous ECE or related training they may already have, and any PLAR credits received.

Enroll today to make a difference in the lives of children who require unique supports and provide them with the inclusive and nurturing education they deserve!

Program Highlights

- Apply advanced skills to collaborate with families and other professionals to assist in the identification of diverse abilities and needs in children
- Create enhanced inclusive learning environments that celebrate diversity and include children with additional support needs
- Navigate legal and ethical aspects of inclusive education

Did you know?

- The pandemic has shifted the public understanding of how access to early learning and child care supports children, their families and our economy.
- TD Economics has pointed to a range of studies that have shown that for every dollar spent on early childhood education, the broader economy receives between $1.50 and $2.80 in return. (Department of Finance Canada, , Budget 2021: A Canada-wide Early Learning and Child Care Plan, para 8)
- This advanced diploma is eligible for Level III Child Care Services (CCS) Certification in classifications the individual already holds. For information on certification, please visit Association of Early Childhood Educators of Newfoundland and Labrador (AECENL).

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Create a supportive and inclusive early learning and child care culture that celebrates diversity and fosters positive attitudes towards differences among children
2. Assist children in developing self-advocacy skills and independence, fostering a sense of empowerment and confidence within an inclusive environment
3. Adapt and modify teaching strategies and classroom arrangements to accommodate children with support needs, promoting an inclusive and accessible atmosphere
4. Facilitate positive interactions and social relationships among children of varied abilities
5. Monitor and track the progress of children with diverse needs, utilizing assessment tools to inform and adjust instructional strategies
6. Promote a sense of belonging and community in an early childhood education setting
7. Integrate technology and assistive devices effectively to support children with diverse needs, promoting inclusive learning experiences

ENTRANCE REQUIREMENTS

Eligibility for admission into the Early Childhood Education Advanced Studies in Inclusive Practice program requires the applicant to meet one of the following criteria:

1. Have graduated from the Early Childhood Education diploma program at College of the North Atlantic;
OR
2. Have graduated from a recognized post-secondary Early Childhood Education diploma (or equivalent) program.

International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.
Note: **International Applicants must reside in Canada** due to program alignment with provincial and federal legislation and regulations.

PRIOR LEARNING ASSESSMENT AND RECOGNITION (PLAR)

Once enrolled and active in the program, students will be given every opportunity, through a comprehensive systematic process of evaluation, to receive credit for past learning experience in EE3100 Foundations of Inclusion, EE3105 Working with Diverse Families and EE3110 Adv Health, Safety & Nutrition. These three courses expand on content offered in the diploma program and given the nature of work in an early learning and child care setting, students entering this proposed program in Early Childhood Education Advanced Studies in Inclusive Practice may have a combination of education and experience to warrant a prior learning assessment and recognition opportunity.

Documentation Requirements:

Please note that the following is required and must be submitted to student services to be permitted into FW3200 WIL Practicum:

1. A certified Criminal Records Check (issued by RCMP) or Criminal Records Screening Certificate (issued by RNC) from the jurisdiction where you reside. The certified Criminal Records Check/Criminal Records Screening Certificate must be dated no more than three months prior to the first scheduled day of classes for the semester in which you are completing this course. The certified Criminal Records Check or Criminal Records Screening Certificate is valid for a period of three years from the date of issue.

Please Note: If you are currently working in a regulated child care service, you may submit copies of your current certified Criminal Records Check or Criminal Records Screening Certificate to Student Services
2. A certified Vulnerable Sector Records Check (issued by RCMP or RNC) from the jurisdiction where you reside. The certified Vulnerable Sector Records Check must be dated no more than three months prior to the first scheduled day of classes for the semester in which you are completing this course. The certified Vulnerable Sector Records Check is valid for a period of three years from the date of issue. **Please Note:** If you are currently working in a regulated child care service, you may submit copies of your current certified Vulnerable Sector Records Check to Student Services.
3. You must obtain a record of immunization, obtained from a local Public Health provider in the area where you reside. The record can consist of a photocopy of the immunization card and must have dates of the immunization and the signature of the nurse or physician. Records of immunization that show no updates in immunization in the past ten years are not considered up-to-date and it is strongly recommended that you update your immunizations as recommended by the Public Health Agency of Canada. If you do not have an up-to-date immunization record, unable to locate your immunization record, or you are not immunized, you must complete and submit a College of the North Atlantic (CNA) Statement of Immunization. **Please Note:** The completion of a College of the North Atlantic (CNA) Statement of Immunization also acknowledges awareness that you may be asked to leave a child care service at the request of a public health official in the event of a communicable disease outbreak and may be unable to return for the duration of that outbreak.
4**.** A current copy of at least an emergency level (one day) diploma/certificate in first aid and CPR dealing with children. A list of approved first aid training providers can be found on the Workplace NL website.

Please note that the following is required and must be submitted to student services to be permitted into PR3200 WIL Project:

1. A certified Criminal Records Check (issued by RCMP) or Criminal Records Screening Certificate (issued by RNC) from the jurisdiction where you reside. The certified Criminal Records Check/Criminal Records Screening Certificate must be dated no more than three months prior to the first scheduled day of classes for the semester in which you are completing this course. The certified Criminal Records Check or Criminal Records Screening Certificate is valid for a period of three years from the date of issue. **Please Note:** If you are currently working in a regulated child care service, you may submit copies of your current certified Criminal Records Check or Criminal Records Screening Certificate to Student Services.
2. A certified Vulnerable Sector Records Check (issued by RCMP or RNC) from the jurisdiction where you reside. The certified Vulnerable Sector Records Check must be dated no more than three months prior to the first scheduled day of classes for the semester in which you are completing this course. The certified Vulnerable Sector Records Check is valid for a period of three years from the date of issue. **Please Note:** If you are currently working in a regulated child care service, you may submit copies of your current certified Vulnerable Sector Records Check to Student Services.
3. Additional documentation as required by your approved project site.

FUTURE OPPORTUNITIES

Upon successful completion of the program, graduates will be prepared for employment in in a variety of early learning and child care positions. These could include but are not limited to the following:

- Early Childhood Educator
- Family Home Provider
- Inclusion Support Worker
- Quality Enhancement Consultant
- Teaching and Learning Assistant
- Respite Worker
- Research and Advocacy
- Private Consultant and Trainer
- Inclusion Coordinator

CERTIFICATION

Upon completion of this program, individuals may apply for provincial Child Care Services (CCS) Certification through the Association of Early Childhood Educators of Newfoundland and Labrador (AECENL). The Early Childhood

Education Advanced Studies in Inclusive Practice advanced diploma (with an ECE Diploma) is eligible for Level III CCS Certification in classifications the individual already holds. For information on certification, please visit Association of Early Childhood Educators of Newfoundland and Labrador (AECENL).

There's a world of possibilities in the Early Childhood Education sector! With a variety of dynamic roles and settings to choose from, you will inspire and nurture young minds during their most formative time, while gaining certification in early-learning environments and growing your career along the way. Learn more about one of Newfoundland and Labrador's most in-demand sectors at https://www.ecehrc.ca/become-an-ece

Courses

Semester 1

Code	Title	Cr	Le	La
EE3100	Foundations of Inclusion	3	3	0
EE3105	Working with Diverse Families	3	3	0
EE3110	Adv. Health, Safety & Nutrition	2	2	0
EE3115	Common Support Needs	4	4	0
EE3120	Trauma and Loss	4	4	0

Semester 2

Code	Title	Cr	Le	La
EE3200	Inclusive Program Planning	4	4	0
EE3205	Inclusive Environments	3	3	0
EE3210	Challenging Behaviours	3	3	0
EE3215	Assessment in Early Learning	3	3	0
FW3200	WIL Practicum	5	5	0
OR				
PR3200	WIL Project	5	5	0

Graphic Communications

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

Note:

Alternate Year Intake.

PROGRAM DESCRIPTION

The power of print.

Printing is an ancient practice that has grown into a multi-billion-dollar industry in Canada today. Along with a multitude of digital mediums, the printing of books, magazines, brochures, banners, art, clothing and more keeps graphic communications at the forefront of this fast-paced industry.

Advances in modern technology have revolutionized the business world and companies are constantly diversifying and in search of talented and ambitious graduates. With our modernized equipment and real-world work environment as your learning ground, you'll be in high demand with your training in electronic pre-press and post-press operations and the latest printing and production technologies. You'll become proficient in basic layout and design, screen printing and computer software applications including page layout, image manipulation and computer graphics. For today's workforce, you also need a balance of skills in colour proofing and digital printing. Our program follows national skills standards for the printing and graphic communications industry.

Our equipment is constantly modernized to offer an expanded range of technical skills. Skills such as those acquired using our wide-format inkjet printer for display graphics and applied to various surfaces including vehicles and clothing. Skills required for printing industry standard material such as brochures, magazines, business cards and more, are honed using our Xerox Colour digital press. Our screen printing, embroidery, and dye sublimation machines enable print to be placed onto clothing and introduce a valuable group of skills required for the apparel industry. Our laser engraving machine is used to create rapid prototypes and we also have a vinyl cutter that is used to produce graphics for sign display. This learning ground offers the training for skills that are increasing in demand by the sign industry and hobbyists alike.

If this exciting, creative and hands-on field aligns with your future vision – apply now!

Program Highlights

- Using practical skills to create projects such as banners, tickets, t-shirts and posters that are donated to nonprofit organizations
- Applying print to walls, brick walls, ceilings, glass, vehicle parts
- Collaborative projects with other CNA programs to print and apply graphics that help increase visual appeal

Did you know?

- Graduates are working at exciting careers throughout Canada and around the world.
- Graduates have created props on site for various movie sets.
- Students have won regional, provincial and national awards over the past decade.

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Demonstrate professional and personal competencies required for the printing and graphic industry.
2. Demonstrate clear verbal and written communication skills.
3. Apply a teamwork approach to problem-solving techniques.
4. Demonstrate a hands-on knowledge of electronic pre-press methods and equipment.
5. Operate traditional and digital printing equipment.
6. Demonstrate strong technical skills for computer programs used in the printing and graphic industry.
7. Demonstrate safe operation of bindery and finishing equipment.
8. Operate graphic printing equipment such as: wide-format printer, embroidery machine, screen printing machine, laser cutter & engraver, fine-art printer, dye sublimation printer, and 3D printer.

FUTURE OPPORTUNITIES

Graduates of the program may be employed in many areas of the printing and graphic industry. Some of the entry-level positions include: design & layout agencies, commercial printers, in-plant printers, government agencies, digital copy centres, sign printers, and corporate promotional suppliers.

ENTRANCE REQUIREMENTS

1. High School
Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science Transition Certificate
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Note:
Basic computer literacy skills as well as strong core skills in English and Mathematics are definite assets for this program. These skills are important for success in the program.

Courses

Semester 1

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
GA1140	Vector Graphics	2	2	1
GA1170	Graphics Problem Solving	3	3	0
GA1230	Finishing & Bindery I	3	2	2
GA1420	Digital Page Layout I	3	2	3
GA1625	Print Technology I	5	4	4

Semester 2

Code	Title	Cr	Le	La
GA1220	Color Management	3	3	0
GA1320	Digital Printing I	5	4	2
GA1421	Digital Page Layout II	3	2	3
GA1470	Web Processes	2	2	1
GA2570	Production Workflow	3	2	2
PY1200	Photography I	3	2	3

Semester 3 (Intersession)

Code	Title	Cr	Le	La
GA1740	Textiles Graphics & Imaging I	3	2	2
GA1750	Display Graphics & Assembly I	3	2	2
GA1890	Business Practices	3	3	0

Intersession hours are actual and will not be adjusted.

Semester 4

Code	Title	Cr	Le	La
CM2200	Oral Communications	2	2	0
GA1321	Digital Printing II	5	4	2
GA1520	Image Manipulation I	3	2	2
GA1626	Print Technology II	5	4	4
GA2420	Digital Page Layout III	3	2	3

Semester 5

Code	Title	Cr	Le	La
GA1231	Finishing & Bindery II	3	2	2
GA1751	Display Graphics & Assembly II	3	2	2
GA2320	Digital Printing III	5	4	2
GA2750	Advanced Graphics Imaging	4	2	6
Elective		3	2	2

Semester 6 (Intersession)

Code	Title	Cr	Le	La
FW1180	Field Placement Preparation	1	1 wk (20 hrs/wk)	0
FW2810	Field Placement	4	0 (35 hrs/wk)	4 wks
FW2811	Field Placement Reflection	1	1 wk (20 hrs/wk)	0

Intersession hours are actual and will not be adjusted.

Graphic Communications Electives

Code	Title	Cr	Le	La
EL1530	Fine Art Printing	3	2	2
GA1741	Textiles Graphics & Imaging II	3	2	2

Graphic Design

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Form follows function.

Design is everywhere from the moment we wake up until we close our eyes at night. Not just beautiful art, graphic design has purpose – to communicate a message and engage those who read it and evoke feeling or action. *Great* design tells a story.

Graphic Designers use highly developed technical skills and a mastery of digital technology to capture the imagination through original design in a variety of media from print to screen. They develop solutions for businesses, building corporate branding, designing websites and creating inspiring visuals that send a powerful message. Graphic design has a proven return on investment and has become essential to the success of all business, putting designers in high demand.

Traditionally graphic designers created for print. There is still a great need for design and printing of environmental graphics for retail store interiors, conferences, wayfinding and events, as well as swag, product packaging and much more. But now through digital space, graphic designers are also working in fields like user interface design, online marketing and advertising, motion graphics and more. The opportunities are limitless!

In our state-of-the-art facilities, you'll gain traditional and cutting-edge skills through problem-solving and creative exploration with typography, colour, space and placement. You'll train in digital photography, package design, traditional and digital printing and more, and you'll leave here with a professional portfolio of your work to take out into the world with you.

It's your future by design.

Program Highlights

- Extensive training that combines natural creativity with strategic design techniques
- Experiential, hands-on learning with industry associations and companies
- Collaborative projects with other CNA arts programs such as Sound Recording & Production, Journalism and Applied Music, Textile & Apparel Design, and the suite of Television & Film programs
- High job placement success rate

Did You Know?

- Graduates are working at exciting careers throughout Canada and around the world.
- Students have won dozens of regional, provincial and national awards over the past decade.
- The unique skills of graphic designers have been globally recognized with the term, "design thinking," which applies the thought process designers use for just about any field or discipline.
- A designer's primary concern is ultimately communication.
- It takes two-tenths of a second for people looking at a website for the first time to form an impression.[1]

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[1] What Role Does Design Play In Business Success? (forbes.com)

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Demonstrate strong technical and conceptual design skills for print and screen.
2. Demonstrate hands-on knowledge of, and experience with, industry-standard design and production tools and equipment.
3. Demonstrate the business, communication, teamwork and time-management skills necessary for this industry.
4. Apply an approach to the design process that focuses on creativity while meeting clients' needs.
5. Successfully compete for entry-level employment in the Graphic Design industry.

FUTURE OPPORTUNITIES

Past graduates have a strong record of success in the Graphic Design industry, both within Newfoundland and Labrador and beyond. Graduates can choose from a variety of employment options such as advertising agencies, design companies and in-house art departments, as well as freelance work or self-employment with clients located anywhere in the world.

ENTRANCE REQUIREMENTS

1. High School
Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science Transition Certificate
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Note:
Basic computer skills as well as strong core skills in English and Mathematics are definite assets for this program. These core skills are important for success in the program.

Applicant Portfolio Requirements
All applicants to the Graphic Design program must submit a portfolio as part of the admission requirements. A portfolio is a personal selection of the applicant's work that shows the potential to build on demonstrated skills and aptitudes when in the program.

The applicant portfolio should consist of:

a. A written personal statement explaining your reasons for wanting to be a graphic designer and your interest in the program at College of the North Atlantic. This should be no longer than 500 words or a single typed page.

b. One project, that relates to the College's Graphic Design program, chosen from the following three options:
A magazine ad promoting the program. The ad should focus on at least one positive attribute of the program, and should be produced in colour. The College's website address should be included as well. The size of the ad should be no larger than 20 cm in any dimension.

A poster promoting the Graphic Design program. The poster should focus on one positive message about the program, and should include the program name, the College's name and the College's website address. The size of the poster should be 28 cm x 43 cm (11 x 17 inches).

A logo for the Graphic Design program. The logo should be produced in no more than two (2) colours, not including white. The program title (Graphic Design) and the College's initials (CNA) should be part of the logo. Applicants should ensure that the logo suggests one or more of the positive attributes of the program.

c. A minimum of five (5) personal portfolio pieces, which could include (but are not limited to) drawings and sketches, photographs, paintings, websites, computer-generated images, or motion-based work. It is preferable to submit works in more than one category but it is not required.

Other Requirements

a. Applicants should submit only copies of their work. No originals should be submitted.
b. Do not submit any framed, fragile or 3-dimensional work.
c. If applicants submit digital files, please burn them onto a CD or DVD, and ensure they are readable by a computer other than the one used to burn it. Digital submissions that cannot be opened will not be considered.
d. The applicant's work should be submitted in a case, binder or folio, with measurements not exceeding 61 cm x 92 cm (24 x 36 inches).
e. Work included in the portfolio should be identified on a separate sheet with the title (if any), the completion date and the materials used. A brief explanation of each piece would be welcome.

Courses

Semester 1

Code	Title	Cr	Le	La
CR1535	Web Design I	2	1	2
GA1120	Typography I	2	1	2
GA1170	Graphics Problem Solving	3	3	0
GA1430	Page Composition I	2	1	2
GA1640	Illustration I	3	2	2
PY1200	Photography I	3	2	3
VA1230	Graphic Design I	3	2	3

Semester 2

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
GA1220	Color Management	3	3	0
GA1431	Page Composition II	3	2	2
GA1641	Illustration II	2	1	2
MR1340	Marketing for Graphic Design	3	3	0
PY2200	Photography II	3	2	3
VA1231	Graphic Design II	3	2	3

Semester 3 (Intersession)

Code	Title	Cr	Le	La
GA1121	Typography II	2	2	4
GA1180	Graphic Design History	3	6	0
GA1350	Motion I	3	4	6

Intersession hours are actual and will not be adjusted.

Semester 4

Code	Title	Cr	Le	La
CR1531	Web Design II	2	1	2
GA1351	Motion II	3	2	3
GA1520	Image Manipulation I	3	2	2
GA1880	Business Practices	3	3	0
GA2380	Production for Designers	2	1	2
GA2640	Illustration III	2	1	3
PY1201	Photography III	3	2	2

Semester 5

Code	Title	Cr	Le	La
CM2200	Oral Communications	2	2	0
CR2530	Web Design III	2	2	1
GA2350	Motion III	3	2	3
GA2430	Page Composition III	3	2	2
GA2720	Design Management Identity	3	2	2
VA2800	Package Design	3	2	2
Elective		3	2	2

Semester 6 (Intersession)

Code	Title	Cr	Le	La
FW1180	Field Placement Preparation	1	1 wk 20hrs/wk	0
FW2800	Field Placement	4	0	4 wks 35hrs/wk
FW2801	Field Placement Reflection	1	1 wk 20hrs/wk	0

Intersession hours are actual and will not be adjusted.

Graphic Design Electives

Code	Title	Cr	Le	La
EL1530	Fine Art Printing	3	2	2
GA1521	Image Manipulation II	3	2	2
PY2201	Photography IV	3	2	2

Journalism

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Your story. Your career.

If you are a born storyteller with a strong command of the English language, an insatiable sense of curiosity, a drive to get to the truth and a desire to witness history, you may have the makings of a journalist.

Journalists weave words into stories and capture images that matter. Those words and images become part of history's first draft. Journalists have opportunities to travel, cover exciting events and projects, and meet interesting, diverse people. Journalists can be the voice of a generation.

CNA's Journalism program is a learning ground for the deadline-driven, adaptable and observant. Here, you'll train to deliver the news in a variety of media and gain the skills employers want. You'll learn how to dig for the story, interview people, shoot video and still images, and describe happenings. You'll work on radio, television and web productions. Training both behind and in front of the camera, you'll be immersed in history, politics and current affairs. And you'll master research and context to understand the impact of media on the world today.

This program will prepare you for one of the most fascinating, multifaceted and satisfying careers in the world.

Join the courageous and dedicated people who bring us the world every day!

Program Highlights

- Hands-on training in reporting the news
- Drone journalism and mobile journalism
- Training in broadcast, print, and still and news photography by award-winning instructors
- Industry-standard video and audio equipment
- Radio and video studios
- A new TV studio in the heart of the campus
- An expanded and enhanced newsroom
- Internships with professional news organizations
- Training in how to use social media, analytics and search-engine optimization
- Experience in covering a criminal trial
- Coverage of Indigenous communities
- News photography and broadcast quality-camera skills
- Podcast training and how to attract a following
- Business plan for a Journalism start-up
- Freelance career skills

Did You Know?

- Graduates from our program are working at every major media outlet in Newfoundland and Labrador.
- Students have interned with such outlets and organizations as the Globe and Mail and the United Nations, and they have taken part in student projects in the Middle East.
- A partnership with the Newfoundland Rogues is seeing students staffing the cameras and doing play-by-play for professional basketball games.

- Almost 80 per cent of Canadians get news online. That's one reason we place a lot of emphasis on teaching students how to promote their own journalism via social media.
- In recent years, court rulings and legislation have given journalists more ability to protect their anonymous sources. We teach student journalists these and other important points of law that enhance freedom of expression.
- A kicker is a journalism term for a strong ending to a story. It is also the name of our students' news website.

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Discern newsworthy happenings in their communities and develop them into stories.
2. Tell stories across several platforms – text, video, audio, photography, websites, social media and mobile applications.
3. Perform the writing, research, video, audio and photography skills expected of modern multiplatform journalists.
4. Apply a discipline of verification in seeking and reporting the truth.
5. Provide the context of the news to their audiences.
6. Reflect in their work a deep understanding of the news media, its influence and their own responsibilities as journalists.
7. Reflect in their work a broad understanding of politics, history, economics and current affairs.
8. Apply high ethical standards to their work.
9. Demonstrate a strong understanding of media law in their work.
10. Deliver high-quality journalism on deadline via different platforms within the 24-hour news cycle.
11. Apply strategies to reach and engage a digital audience.
12. Use mobile devices as reporting tools.

FUTURE OPPORTUNITIES

Upon successful completion of the program, graduates will be prepared for employment in a variety of roles including, but not limited to:

- Freelance journalism
- Radio and television stations
- Information services
- Communications departments
- Public relations firms
- Newspapers
- Podcasting

ENTRANCE REQUIREMENTS

1. High School

Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent including a minimum of 65% in level 3000 English

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science Transition Certificate

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1

Code	Title	Cr	Le	La
CM1100	Writing Essentials	3	3	1
JL1110	Introduction to Journalism	4	4	0
JL1130	Audio Journalism	3	2	3
JL1140	Current Affairs	3	3	0
JL1010	Journalism Ethics	3	3	0
PY1330	News Photography I	3	2	2

Semester 2

Code	Title	Cr	Le	La
JL1120	Reporting Essentials	4	4	0
JL1160	Video Journalism	4	4	0
JL1420	Journalism Law	3	3	0
JL1840	Newsroom I	4	2	5
PC1100	Political Science	3	3	0
PY1331	News Photography II	3	2	2

Semester 3 (Intersession)

Code	Title	Cr	Le	La
JL1340	Digital Reach and Engagement	3	2	2
JL1345	Mobile Journalism	2	1	3
JL1355	Podcasting	2	1	3

Semester 4

Code	Title	Cr	Le	La
EP2010	Business of Journalism	4	3	2
JL1170	Broadcast Journalism	3	2	3
JL1250	Covering Indigenous Communities	3	3	0
JL1841	Newsroom II	4	2	5
JL2120	Beat Reporting	4	4	0
Elective		3	2	2

Semester 5

Code	Title	Cr	Le	La
EC1125	Economic Fundamentals	3	3	0
JL1210	Freelance Journalism	3	3	0
JL2210	Advanced Newsroom	4	2	7
JL2215	Internship Preparation	1	1	1
JL2220	Public Relations	3	2	2
Elective		3	2	2

Semester 6 (Intersession)

Code	Title	Cr	Le	La
JL1220	Professional Wellness	0	1 wk 18 hrs/wk	0
FW1210	Journalism Internship	4	0	4 wks 35 hrs/wk

Note: Electives to be offered in semester 4 and 5 will be made available prior to registration.

Mental Health and Addictions

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Grand Falls-Windsor - On Campus delivery
- Happy Valley-Goose Bay - On Campus delivery
- Online - Asynchronous delivery

PROGRAM DESCRIPTION

Helping others is your passion.

Our mental health is important at every stage of life, from childhood and adolescence through to adulthood. It includes our emotional, psychological, and social well-being and affects how we handle stress and make choices. If you are patient, compassionate, and keen to help others and are interested in a career in the mental health and addictions field, this is what you need to know.

The need for trained practitioners in the mental health and addictions field is critical. In this program you will learn how to assess clients' emotional or health-related needs and develop action plans to support those clients. Through in-depth lectures and developing and honing practical skills, you will be prepared to enter the mental health and addictions field.

The Mental Health and Addictions program covers a wide range of topics, such as pharmacology and dependency, addictions, mental health services, interviewing & helping skills, assessment and case management, psychology, health promotion and prevention, recovery skills and prevention, and trauma-informed practices.

In this rewarding career, you will help guide others as they navigate their healing journey.

Program Highlights

- Choose to learn either in-class or via online asynchronous delivery.
- Gain knowledge, skills, and attitudes to address two of Canada's leading health care issues – mental health and addictive behaviours.
- Learn how to examine and address service quality at the practice, program and system levels.
- Learn trauma-informed care practices.
- Develop motivational interviewing skills to support families, individuals and community-level programs that are affected by mental health and addictions issues.
- Advocate for individuals living with mental health issues and addictions, ensuring they are provided with care in a non-judgmental environment.

Did You Know?

- One in five Canadians will experience a mental illness or substance abuse problem during their lifetime.
- Recent polling found that one in three people living in Canada reported moderate to severe mental health symptoms during the pandemic. Financial concerns, pandemic stress, isolation, and struggles with our health-care system are leading concerns among people living with a mental illness.
- Age, gender, 2SLGBTQ+, income, and employment status were the strongest predictors of mental health and substance use concerns. Some 60 per cent of 2SLGBTQ+ youth report moderate-to-severe anxiety symptoms and about 40 per cent report symptoms of depression. Although connecting with statistics can be difficult, it is important that we remember the people behind the numbers.
- Resulting from the 2017 report Towards Recovery: The Mental Health and Addictions Action Plan for Newfoundland and Labrador, a new 240,000 square foot, 6-story, 102-bed adult mental health and addictions

facility is under construction, which will replace the existing Waterford Hospital
- In 2022 the NL government launched the Our Path of Resilience action plan and committed $2.5 million for mental health and addictions services and facilities, with an additional $4.5 million over the next four years.

[1] https://ontario.cmha.ca/wp-content/uploads/2008/11/mental_health_promotion_in_ontario_2008.pdf

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Advocate for those seeking mental health services or support.
2. Promote mental health and addictions awareness in communities and diverse populations.
3. Practice professionalism and ethical decision-making.
4. Enhance resiliency with knowledge of addictions and wellness.
5. Respond to urgent mental health and addictions matters.
6. Identify community services and supports for the needs and issues of individuals and groups.
7. Implement effective approaches to problem solving and decision making.
8. Work effectively with individuals, families, groups, interprofessional teams and organizations.
9. Recognize the value of human and cultural diversity.
10. Communicate with proficiency, clarity, accuracy, and confidence among clients and groups.
11. Promote self-care, wellness and healthy living.

FUTURE OPPORTUNITIES

Upon successful completion of the program, graduates will be prepared for employment in a variety of roles including, but not limited to:
- Addictions Worker
- Community Health Worker
- Crisis Intervention Worker
- Emergency Shelter Worker
- Mental Health Crisis Intervener
- Mental Health Support Worker
- Peer Supporter
- Shelter Support Worker
- Supportive Housing Worker
- Youth Outreach Worker

CERTIFICATIONS

Throughout the program, students will acquire the following industry certifications:
- Applied Suicide Intervention Skills (ASIST)
- CPI Nonviolent Crisis Intervention
- Mental Health First Aid
- Standard First Aid

ENTRANCE REQUIREMENTS
Eligibility for admission requires the applicant to meet one of the following academic criteria:
1. High School
Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science Transition Certificate
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or

Degree and Technical Profile) with an average pass mark of 60%

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

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If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

AND

Please note that the following is required in order to be permitted into the program:

- Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check). Students with an unclear Certificate of Conduct are advised to speak with program faculty at the beginning of the program. This Certificate can be obtained from the Royal Newfoundland Constabulary (RNC) or the Royal Canadian Mounted Police (RCMP).
- Students will need to complete a Student Pre-Placement Immunizations and Communicable Diseases Screening with their Health Care Provider. Completing the immunization record will require physician's visits, blood tests, and a TB screening test; detailed instructions are included on the Student Pre-Placement Immunizations and Communicable Diseases Screening. The student is responsible for ensuring that all medical requirements are fulfilled, and the screening form complete before submission. Certain vaccinations require a series of immunizations over a period; therefore, it is essential to start the process as early as possible. The student is also responsible for all associated costs (vaccinations, laboratory testing, physician fees, certificate of conduct fees, etc.).

Courses

Semester 1

Code	Title	Cr	Le	La
AD1100	Cultural Competence	3	3	1
AD1105	Ethics & Professionalism	4	4	0
AD1110	Human Service Relationships	3	3	0
AD1115	Mental Health Fundamentals	4	4	0
CM2200	Oral Communications	2	2	0
PS1140	Psychology I	4	4	0

Semester 2

Code	Title	Cr	Le	La
AD1205	Interviewing & Helping Skills I	4	3	2
AD1210	Introduction to Addictions	4	4	0
AD1215	Pharmacology & Dependency	3	3	0
PS1145	Psychology II	4	4	0
AD1220	Self-Care & Wellness	3	3	1
AD1125	Trauma-Informed Practice	3	3	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
FW1330	Field Placement I	4	0	6 wks

Semester 4

Code	Title	Cr	Le	La
AD2100	Assessment & Case Management	3	3	1
AD2105	Human Development	4	4	0
AD2110	Interviewing & Helpful Skills II	4	3	2
CM2300	Report Writing	2	2	0
AD2115	Working with Families	3	3	1
Elective		3	3	0

Semester 5

Code	Title	Cr	Le	La
AD2200	Treatment & Recovery	3	3	1
AD2205	Health Promotion	4	4	0
SD1120	Positive Mindset	3	3	0
AD2210	Working with Groups	3	3	1
CM2100	Workplace Correspondence	3	3	0
Elective		3	3	0

Semester 6 (Intersession)

Code	Title	Cr	Le	La
FW2320	Field Placement II	4	0	6 wks

Sound Recording and Production

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Channel a world of sound.

Sound resonates through every aspect of our lives – at home and at work, in the streets and in our cars, on our media devices and with each other. It can make us dance, smile, cry and remember. So many human experiences that stimulate us have a sonic aspect that enhances the drama and emotion of that event. In some situations, sound cues can literally save a life.

The Sound Recording & Production (SRP) program at CNA offers you the skills to harness and capture those waves of sound that dance around us (musical and otherwise). With us, you learn how to shape and transform audio signals with mixing consoles and use audio production software (DAWs) and processing tools to weave beautiful sonic tapestries. We teach you to explore the various environments and delivery methods for telling a story across a variety of live and virtual media (music, web, TV/video, broadcast, animations, gaming, live sound production and more).

Whether you want to work at the world's top recording studios and broadcast facilities or tour with successful artists, the SRP program will help you master the mix of skills you need to start on that journey. If you simply want to learn these tools and techniques to improve your own projects, or if you want to run your own business, we'll provide the training and sound advice for success!

Program Highlights:

- Mentorship with faculty who are multi-award-winning musicians, artist managers and audio engineers.
- Extensive practical training in studio recording, live sound reinforcement, digital audio workstations, processing tools, mixing, mastering, sound for visual media and much more.
- Essential training in stage lighting, electronics, and acoustics.
- Studies in music business, entrepreneurialism, and career management.
- Engagement with industry experts and professional organizations.
- Collaborative projects with other arts programs such as Applied Music, Video Game Art & Design, Journalism, Digital Animation and Digital Video Production, among others.
- Collaborative projects with community businesses, non-profits, and individuals, providing real-world, hands-on experience.
- A plethora of up-to-date hardware and software to ensure you can use modern tools upon program completion.

Did You Know?

- SRP graduates have toured the globe with international touring acts.
- SRP instructors are industry experts who remain active and tapped into the music and recording industry.
- Students and graduates have been recognized with a multitude of provincial and regional music awards.
- SRP students have provided sound for many live events, conferences and awards shows with various local, regional, and national partners, including the ECMA and JUNO awards.
- Canada's recording and music marketplace has reached a new major milestone – for the first time, Canadians are streaming more than two billion songs a week.[1]
- The global revenue of the recorded music industry reached over US$23 billion in 2020.[2]

Don't delay, apply today!

_____

[1] Music Canada

[2] Recorded music industry - global revenue 2020 | Statista

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Explain the concept of sound, including its generation, transmission and effects, and apply that knowledge to select appropriate tools for its capture in a myriad of situations.
2. Analyze sound and lighting equipment requirements for live sound events, prep and connect all required equipment and use the equipment successfully in running the event from a technical perspective.
3. Intelligently speak the language of music when interacting with musicians in live sound and recording environments.
4. Demonstrate proficiency in Digital Audio Workstation applications, including editing and signal processing.
5. Apply logic and deductive reasoning to fix problems.
6. Demonstrate proficiency in analog signal processing required by clients in any field of music, video production, video game design, feature film and live sound industries.
7. Demonstrate safe working practices in lighting and various sound production environments.
8. Use entrepreneurial and personal finance skills to help establish recording studios and live sound companies, and run these operations successfully.
9. Negotiate standard working contracts.
10. Demonstrate competencies in writing technical documents.

FUTURE OPPORTUNITIES

Graduates of the Sound Recording & Production program can find work as the following in their appropriate venues: Production Mixer, Boom Operator, Production Sound Assistant, Sound Transfer Operator, Dialogue Editor, Sound Effects Editor, Music Editor, Assistant Sound Editor, ADR/Sound Effects Mixer, Music Mixer, Re-recording Mixer (Film Mixer), Sound Designer, Front of House Mixer, Monitor Mixer, System Technician, Mixing Engineer, Mastering Engineer, Tracking Engineer, Music Producer, Foley Artist and On-Air Production (Radio).

ENTRANCE REQUIREMENTS

1. High School
Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent including:
i. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)

2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science Transition Certificate with the following courses:
Math Fundamentals MA1040 and MA1041
Effective Academic Year 2025 - 2026:

College Transition
College Transition Certificate with the following courses:
Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) including the following courses:
Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C

4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Please Note:

1) Students who do not meet the entrance requirements as a result of their Mathematics courses and grades should explore options that may be available to them through the College Transition – Mathematics courses.

2) Within the program, particularly for MM2340, as well as for moving forward in this career, students will need a pair of professional, closed back headphones with a 1/4" connector.

Courses

Semester 1

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
ET1120	Electronics for Audio	3	3	1
MA1100	Mathematics	5	4	2
MU1130	Music Theory I	3	3	1
SN1160	Sound & Microphones	4	4	0
SN2200	Recording I	3	3	0

Semester 2

Code	Title	Cr	Le	La
CM1401	Technical Report Writing II	3	3	0
MM2340	Digital Audio Workstations	3	2	2
SN1170	Music Production Techniques	3	2	2
SN2140	Acoustics & Studio Design	3	2	2
SN2201	Recording II	4	3	2
Elective	Minimum credit value of 3	3	3	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
SN1180	Exploring Your Industry	3	6	0
SN1410	Stage Lighting	3	4	4
SN3100	Live Sound Production	4	6	4

Intersession hours are actual and will not be adjusted.

Semester 4

Code	Title	Cr	Le	La
CP1923	Computer Hardware & Troubleshooting	4	3	3
EP1100	Entrepreneurial Studies	4	3	2
SN1200	Music Business	3	3	0
SN2110	Mixing & Mastering	3	2	2
SN2120	Sound in Practice I	3	2	2
SN2420	Sound for Visual Media	4	3	2

Semester 5

Code	Title	Cr	Le	La
HR1120	Human Relations	4	4	0
MU2110	Instruments	3	3	0
SN1190	Electronic Music Production	3	3	0
SN2130	Career Management	3	3	1
SN2150	Sound in Practice II	3	2	4
Elective	Minimum credit value of 3	3	3	0

Note:

Electives to be offered in each semester will be made available prior to registration. Other courses may be chosen provided that:
1. All prerequisites have been met,
2. The course is offered during the semester,
3. The maximum enrolment of the course is not exceeded,
4. The student's schedule can accommodate all scheduled classes for that course.

Television and Film Creation

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

From your dreams to the screen

With major film production companies like Warner Bros., Miramax, and Disney flocking to Newfoundland and Labrador (NL) for their major motion picture filming, your dreams of movie making can become reality right here at home. The province's wildly successful television shows, such as Hudson & Rex and Son of a Critch, have opened the doors for more home-grown productions.

There will be a call for many more trained professionals in the field. This new program is for emerging directors, writers, actors, and producers to learn their trade alongside experts in the field as instructors and mentors. Known as the "above the line" roles in television and film production, these are the visionaries who bring a story to life.

Touching on each of these diverse and connected roles, you'll have a chance to explore where your talents lie, while getting to know the ins and outs of pre-production, production, and post-production, both behind and in front of the camera.

You'll be immersed in the collaborative environment with the "below the line" crew, working together to make a production successful. You'll acquire the necessary skills for effective screenwriting and development, telling a story cinematically, and applying the aspects of production to television and film projects.

All the world's a stage… and you're on!

Program Highlights

- Professional mentorship opportunities in all program areas
- Team meetings, workshops, and seminars with Producers, Directors, Writers, and Actors
- Contact with professional Directors and Artistic Directors
- Experiential work scenarios and opportunities in all areas of the program
- Use of various methodologies for program delivery
- Capstone project to encompass holistic assessment including year one and two of the program

Did You Know?

- Canada is known as Hollywood North and is home to many large studio films and TV productions.
- In 2021, a cast and crew of approximately 150, including many local film workers, technicians, and artists, worked on the Walt Disney live-action adventure-fantasy, *Peter Pan & Wendy*, which was filmed on the Bonavista Peninsula.
- The filming of television show *Frontier* in NL (from 2016-2018) starring Jason Momoa, generated an economic output of more than $63 million, and created 539 full-time equivalent positions in NL. It also later led to Momoa's major motion picture, *Aquaman*, being partially filmed in NL.
- Canadian content (television and film) production volume reached an all-time high in 2019-2020 of $9.3 billion and demand for content continues to rise.
- The industry in Newfoundland and Labrador is growing rapidly, as national and international production companies are seeking out exotic locations that add to production value.

- Canadian television and film productions account for $5 billion in revenue, and employ more than 244,500 people on a full-time basis.
- The Newfoundland and Labrador Film Development Corporation was created in 1997 with a mandate to grow and develop the provincial film and television industry, and has since generated over $570 million in total production activity and more than 8,000 full time equivalent jobs.

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Communicate effectively as part of a production crew
2. Work cooperatively with other professionals, such as technical production crews, designers, directors, and stage management
3. Write scripts and stories for production
4. Break down a script for development, production, and post-production
5. Apply acting skills such as voice, speech, and movement to television and film productions
6. Clearly express, through a director's notebook, narratives and visual ideas to key crew members including the writers, actors, designers, and cinematographers
7. Referencing production documentation, confirm production requirements for scenes
8. Communicate approved changes to cast and crew according to production requirements
9. Maintain a recording system for all information relating to production schedule

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students will acquire the following industry certifications throughout the program:

- WHMIS
- Mental Health First Aid
- Occupational Health and Safety (OHS)
- Standard First Aid & CPR

*Students should be aware that additional fees may apply to external certifications.

FUTURE OPPORTUNITIES

This program focuses upon nurturing creative voices and visions. Upon successful completion of the program, graduates will have a portfolio of work which will be an essential tool in the advancement of their career. Graduates will be prepared for employment in the television and film industry in a variety of roles, including, but not limited to:

- Background performer
- Stand In
- Actor
- Casting Assistant
- Casting Associate
- Background Performer Casting Associate
- Background Performer Casting Assistant
- Script Supervisor
- Assistant Script Coordinator
- Script Coordinator
- Assistant Story Editor
- Production Assistant
- Director's Assistant
- Producer's Assistant
- Content Creator

ENTRANCE REQUIREMENTS
Eligibility for admission to the Television and Film Creation program requires the applicant to meet one of the following academic criteria:

1. High School
Provincial High School Graduation Diploma with a 60% average in eight level 3000 credits or equivalent
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (CAS) Transition Certificate
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore, international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Applicant Portfolio Requirements

All applicants to the Television and Film Technical Production Certificate Program, the Television and Film Production Management Certificate Program, the Television and Film Post Production Certificate Program, and the Film and Television Creation Diploma Program must submit a **visual portfolio** and a **written statement** as part of the admission requirements.

A **visual portfolio** is a personal selection of the applicant's work that shows the potential to build on demonstrated skills and aptitudes when in the program.

A **written statement** is an opportunity for applicants to introduce themselves and communicate their interest, aptitude, relevant experience, and understanding of the program to which they are applying.

You will be notified how to submit your visual portfolio and written statement from the Register's Office upon processing of your application.

The Visual Portfolio

The visual portfolio should consist of:

A sample of relevant work that relates to the stream to which you are applying in the College's Film and TV programs. The work sample may be one selection chosen from the following four options:
1. a short film
2. an excerpt of a short film

3. a selection of excerpts comprising a reel
4. a selection of 24 photographs

   In the case of the first three options, your work sample should not exceed three (3) minutes' maximum and not be less than sixty (60) seconds minimum. It should be submitted in one of the following file formats:
   - MP4
   - MOV
   - MKV
   - QuickTime
   - Mpeg
   - PDF

   In the case of the fourth option, please use:
   - JPEG
   - Tiff

You will include a signed and witnessed declaration that you are the author of your submitted work. In the case where there are collaborators, you will state your role and likewise include a signed and witnessed declaration that the credit you are claiming is yours.

How to submit your Visual Portfolio

Video Link
The preferred methodology is to provide our Admissions team with a video link to your portfolio. This can be achieved at vimeo.com, youtube.com, google docs, or any video sharing platform of your choice.

This link should be included at the end of your Written Statement.

If you are unable to provide a link, please contact Admissions and we will provide you with further direction.

Photos Link
The preferred methodology is to provide our Admissions team with a photo link to your portfolio. This can be achieved at google docs, one drive, or any video sharing platform of your choice.

This link should be included at the end of your Written Statement.

If you are unable to provide a link, please contact Admissions and we will provide you with further direction.

The Written Statement
It is not necessary to have prior experience in film and TV to be suitable candidate for this program. With that in mind, please write a statement between 250 and 500 words in your own voice giving us a brief introduction to yourself and your interests.

Outline your current goals within the film and tv industry. This is an opportunity for you to present your unique life experience and personality as well as your value to the program. It is not a business letter. The document must be submitted as a PDF. View the Application Portfolio Rubric for this program

Courses

Semester 1

Code	Title	Cr	Le	La
TF1135	Acting for TV & Film Fundamentals	4	3	2
TF1040	Directing the Documentary	4	3	2
TF1010	TV & Film Industry Foundations	4	3	2
CM1450	Writing Fundamentals	3	3	0
TF1015	TV & Film Analysis	3	3	0
CP2115	Computer Applications	3	2	2

Semester 2

Code	Title	Cr	Le	La
TF1020	Screenwriting Fundamentals	4	3	2
TF1210	Acting on Camera I	4	3	3
TF1215	Directing I	4	3	2
TF2140	Production Scheduling	4	3	2
CM1115	Communications for TV & Film	3	3	0

Semester 3 Intersession I

Code	Title	Cr	Le	La
TF1310	Film Project - TV & Film Creation	6	3	10

Semester 4

Code	Title	Cr	Le	La
TF2240	Business of TV & Film	4	3	2
TF2135	Scripts I	4	3	2
TF1025	Post-Production Process	3	3	1
TF3010	Career Development	3	3	0
TF2230	Directing II	4	3	2
TF2130	Acting on Camera II	4	3	3

Semester 5

Code	Title	Cr	Le	La
TF2225	TV & Film Finance & Budget	4	3	2
TF2145	Scripts II	4	3	2
TF2235	Directing III	4	3	2
TF1230	TV Writing & Story Editing	4	3	2
TF1220	Acting on Camera III	4	3	2

Semester 6 Intersession II

Code	Title	Cr	Le	La
TF3120	Capstone Project - TV & Film Creation	6	3	10

Television and Film Post-Production

Start Date: September

Credential: Certificate

Program Length: One Year

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

That's a wrap!

When you hear those words from the director, now it's time for the final phase of movie magic: post-production. Creative editing of footage at this stage propels the story and engages the audience. These finishing touches can include various elements of visual modifications and enhancement of the audio experience through foley sound and music. Doors slamming, glass breaking, and spine-tingling, suspenseful music that keeps us on the edge of our seats – that's post-production alchemy.

For film and television, this is where a story completes its journey from script to screen. Skillful editing creates a compelling, cohesive multisensory experience and brings the story to life. Without post-production, there is no finished product.

This exciting program is your full access pass to the post-production world of film and television. Through in-depth instruction and project-based delivery, you'll have the opportunity to apply and practice sound and picture editing, colour grading, compositing and effects, sound design and mixing, and sound effects creation.

Teamwork is essential for this work, and you'll have a chance to build on that through collaboration with our other departments in film/television production. You will be immersed in the production chain and apply techniques to fully realize a professional quality film edit.

Your future, in frame.

Program Highlights

- The opportunity to learn across multiple post-production skills then specialize in one
- The most current program in its field designed and delivered by industry experts
- Opportunities to collaborate across programs in a television and film project
- Program focuses on the practical application ensuring you have job-ready skills
- Equipment mimics what you will be using in the real-world
- Students will participate in realistic studio and outside shoots

Did You Know?

- Canada is known as Hollywood North and is home to many large studio films and TV productions.
- In 2021, a cast and crew of approximately 150, including many local film workers, technicians, and artists, worked on the Walt Disney live-action adventure-fantasy, *Peter Pan & Wendy*, which was filmed on the Bonavista Peninsula.
- The filming of television show *Frontier* in NL (from 2016-2018) starring Jason Momoa, generated an economic output of more than $63 million, and created 539 full-time equivalent positions in NL. It also later led to Momoa's major motion picture, *Aquaman,* being partially filmed in NL.
- Canadian content (film and television) production volume reached an all-time high in 2019-2020 of $9.3 billion and demand for content continues to rise.
- The industry in Newfoundland and Labrador is growing rapidly, as national and international production

companies are seeking out exotic locations that add to production value.
- Canadian TV and film productions account for $5 billion in revenue and employ more than 244,500 people on a full-time basis.
- The Newfoundland and Labrador Film Development Corporation was created in 1997 with a mandate to grow and develop the provincial film and television industry and has since generated over $570 million in total production activity and more than 8,000 full time equivalent jobs.

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Communicate a knowledge of post-production for television and film productions
2. Work collaboratively in a team environment on a post-production project
3. Manage post-production teams while facilitating a project to ensure successful completion
4. Prepare dailies for review and discussion
5. Edit picture and sound using industry standard techniques and processes
6. Create titles and credits
7. Design sound for a post-production project
8. Edit audio for a post-production project
9. Create sound effects for a post-production project
10. Finalize a picture and sound edit according to industry standards

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students will acquire the following industry certifications throughout the program:

- WHMIS
- Mental Health First Aid Training
- Standard First Aid & CPR
- Occupational Health & Safety Committee

*Students should be aware that additional fees may apply to external certifications.

FUTURE OPPORTUNITIES

Upon successful completion of the program, graduates will be prepared for employment in a variety of entry level positions in Post-Production in television and film, including, but not limited to:

- Assistant ADR Technician
- Assistant Colour Correction
- Assistant Dialogue Editor
- Assistant Editor
- Assistant Foley Artist
- Assistant Mixer
- Assistant Sound Designer
- Assistant Sound Editor
- Assistant Sound Effects Editor
- Digital Imaging Technician

ENTRANCE REQUIREMENTS

Eligibility for admission to the Television and Film Post-Production program requires the applicant to meet one of the following academic criteria:

1. High School

Provincial High School Graduation Diploma with a 60% average in eight level 3000 credits or equivalent

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (CAS) Transition Certificate

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate

3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%

4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore, international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Applicant Requirement

Written Statement
It is not necessary to have prior experience in film and TV to be suitable candidate for this program. With that in mind, please write a statement between 250 and 500 words in your own voice giving us a brief introduction to yourself and your interests.

Outline your current goals within the film and tv industry. This is an opportunity for you to present your unique life experience and personality as well as your value to the program. It is not a business letter. The document must be submitted as a PDF. View the Written Statement Rubric for this program

Courses

Semester 1

Code	Title	Cr	Le	La
TF1025	Post-Production Process	3	3	1
TF2150	Post-Production Audio	4	3	2
TF1140	Picture Editing I	4	3	2
TF2160	Compositing & Effects	3	2	2
CM1115	Communications for TV & Film	3	3	0
TF1015	TV & Film Analysis	3	3	0

Semester 2

Code	Title	Cr	Le	La
TF2010	Post-Production Supervision	3	3	1
TF2155	Dialogue Editing & Recording	4	3	2
TF2245	Picture Editing II	4	3	2
TF1145	Colour Grading	4	3	2
TF2250	Sound Effects & Foley	3	2	2
TF2255	Audio Mixing for TV & Film	3	2	2

Semester 3 - Intersession

Code	Title	Cr	Le	La
TF3220	Capstone Project	6	3	10

Television and Film Production Management

Start Date: September

Credential: Certificate

Program Length: One Year

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus Delivery

PROGRAM DESCRIPTION

Expect the unexpected

There's not much behind the scenes that the production team doesn't manage, and with the whirlwind of activity on a film or television production – whether on set or on location – you can never be quite sure what may come your way. You could be filming on a windy beach, working with an animal wrangler and furry star, or rewriting the day's schedule after your talent has been delayed.

The television and film production management team is vital to the success of the project. This type of management requires skilled individuals to help ensure all the moving pieces are in the right place at the right time and the production gets made on budget and on schedule.

The script is your guide as you plan pre-production tasks such as developing schedules and budget. The production team keeps everyone connected and serves as the liaison between local authorities, director, and crew. During filming, the production unit generally splits its time between the production office and the set. They ensure all permits are in place for each respective location, that all safety ordinances are being followed, and that transportation, accommodations, and suppliers are in place. They make sure that everything comes together, and they know who to call if it doesn't.

If you are fascinated by the workings of live production, have exceptional organizational, communication and planning skills, and have a desire for new challenges every day, this program is your training ground. You'll be introduced to the process of coordinating a film or television series, and use resources innovatively to develop budgets, shooting schedules, locations criteria, and the day-to-day business of a production. You'll work collaboratively with all departments and have opportunities to explore each role within a production unit team.

That's your call.

Program Highlights

- The most current program in its field designed and delivered by industry experts using real-world processes, procedures, and resources
- The opportunity to be introduced to a broad range of production office roles and then specialize in one
- Collaboration across programs in television and film projects
- Focuses on the practical application ensuring you have job-ready skills
- Offers opportunities to participate in the production and management side of realistic studio and outside shoots
- Completion of a field placement with industry

Did You Know?

- Canada is home to many large studio films and TV productions.
- In 2021, a cast and crew of approximately 150 - including many local film workers, technicians, and artists - worked on the Walt Disney live-action adventure-fantasy film *Peter Pan & Wendy*, located on the Bonavista Peninsula.

- The filming of television show *Frontier* in NL (from 2016-2018) starring Jason Momoa, generated an economic output of more than $63 million, and created 539 full-time equivalent positions in NL. It also later led to Momoa's major motion picture, *Aquaman,* being partially filmed in NL.
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- The industry in Newfoundland and Labrador is growing rapidly, as national and international production companies are seeking out exotic locations that add to production value.
- Canadian TV and film productions account for $5 billion in revenue and employ more than 244,500 people on a full-time basis.
- The Newfoundland and Labrador Film Development Corporation was created in 1997 with a mandate to grow and develop the provincial film and television industry and has since generated over $570 million in total production activity and more than 8,000 full time equivalent jobs.

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Communicate collaboratively in a team
2. Design appropriate occupational health and safety checks
3. Demonstrate skills required for pre-production, production, and post-production of television and film projects
4. Break down a script according to the various needs of key departments
5. Create industry-standard documents, such as schedules, budgets, cash flow projections and cost reports that are required for production, funders, and financiers
6. Source locations, equipment, and resources
7. Implement projects in compliance with applicable laws, statutory obligations, regulations, and industry principles and practices
8. Meet financial, technical and organizational targets, and deadlines of projects

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students will acquire the following industry certifications throughout the program:

- WHMIS
- Mental Health First Aid Training
- Standard First Aid & CPR
- Occupational Health & Safety Committee

*Students should be aware that additional fees may apply to external certifications.

FUTURE OPPORTUNITIES

Upon successful completion of the program, graduates will be prepared for employment in television and film in a variety of roles, including, but not limited to:

- 2nd Assistant Director
- 2nd Script Supervisor
- 3rd Assistant Director
- Assistant Locations Manager
- Assistant Production Coordinator (APC)
- Assistant Production Manager (APM)
- Assistant Unit Manager
- Key Office Production Assistant
- Locations Scout
- Office Production Assistant
- Production Assistant
- Production Secretary
- Script Supervisor
- Trainee Assistant director (TAD)

ENTRANCE REQUIREMENTS

Eligibility for admission to the Television and Film Production Management program requires the applicant to meet one of the following academic criteria:

1. High School
Provincial High School Graduation Diploma with a 60% average in eight level 3000 credits or equivalent
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (CAS) Transition Certificate
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore, international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Applicant Requirement

Written Statement
It is not necessary to have prior experience in film and TV to be suitable candidate for this program. With that in mind, please write a statement between 250 and 500 words in your own voice giving us a brief introduction to yourself and your interests.
Outline your current goals within the film and tv industry. This is an opportunity for you to present your unique life experience and personality as well as your value to the program. It is not a business letter. The document must be submitted as a PDF. View the Written Statement Rubric for this program

Courses

Semester 1

Code	Title	Cr	Le	La
TF1010	TV & Film Industry Foundations	4	3	2
TF2240	Business of TV & Film	4	3	2
TF1130	Script Supervision	3	2	3
CM1115	Communications for TV & Film	3	3	0
CP2115	Computer Applications	3	2	2
TF1015	TV & Film Analysis	3	3	0

Semester 2

Code	Title	Cr	Le	La
OF1101	Operational Management	4	3	2
TF2260	Managing On-Set Production	4	3	2
TF2330	Production Office Management	4	3	2
TF2225	TV & Film Finance & Budget	4	3	2
TF2140	Production Scheduling	4	3	2

Semester 3

Code	Title	Cr	Le	La
TF3125	Film Project - Production Management	6	3	10
TF3130	Field Placement Preparation	0	0	2 wks
TF3225	Field Placement	0	0	6 wks

Note: TF3125 Film Project - Production Management and TF3130 Field Placement Preparation will be completed in the first nine (9) weeks of the semester. TF3225 Field Placement will take place during the last six (6) weeks of the semester.

Television and Film Technical Production

Start Date: September

Credential: Certificate

Program Length: One Year

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Lights... Camera... Action!

This is the call for everyone on set to spring into action. In live production, there are as many moving parts (or more!) happening behind the camera as in front of it. Without lighting, grip, camera, and set decoration, a film, video, or television production simply won't see the light of day.

The technical production crew works like a well-oiled machine behind the scenes to ensure seamless takes that bring the director's vision to life. Masters of integration, these technicians can often fill a number of roles on a live set, bringing together their knowledge of several disciplines to make good decisions that contribute to a project's success.

Our Television and Film Technical Production Certificate will help you gain that knowledge, as you learn the technical aspects of television and film, including camera operation, lighting, rigging, props, set decoration, and sound work. This is a hands-on program designed to provide you with the knowledge, skills and attitudes needed to effectively perform in this exciting industry.

Newfoundland and Labrador's pristine and rugged landscape has made the province a sought-after location in the television and film industry, attracting productions big and small. Currently, the province has a reputation of producing high quality productions with a dedicated work force. National and international productions such as *Hudson & Rex, Son of a Critch, Astrid and Lily Save the World, Frontier, Aquaman,* and *Peter Pan & Wendy* have put the spotlight on our province, establishing that we have the capability and capacity to fully embrace and advance this industry.

After first completing a common semester, you will have the opportunity to specialize in one of the technical areas. During the Spring semester, you'll participate in a cross-discipline film project, and a six-week field placement.

Technical production crews can work on any kind of live production project such as feature films, wildlife documentaries, sporting events or even game shows! Those who pursue this career path are able to fuse their creativity with expert technical skills to make sure what we see and hear on the screen is as colorful, lavish and powerful as possible.

Along with this certificate, all you'll need is the aptitude to make quick decisions and the ability to move between tasks in dynamic, fast-paced environments.

You'll also need a comfortable pair of shoes.

Program Highlights

- The most current program in its field designed and delivered by industry experts using real-world equipment and technology
- The opportunity to be introduced to a broad range of technical roles and then specialize in one
- Collaboration across programs in television and film projects
- Focuses on the practical application for job-ready skills
- Access to state-of-the-art equipment, tools and facilities

- Participate in realistic studio and outside shoots
- Completion of a field placement with industry

Did You Know?
- Canada is known as Hollywood North and is home to many large studio films and TV productions.
- In 2021, a cast and crew of approximately 150, including many local film workers, technicians, and artists, worked on the Walt Disney live-action adventure-fantasy, *Peter Pan & Wendy*, which was filmed on the Bonavista Peninsula.
- The filming of television show *Frontier* in NL (from 2016-2018) starring Jason Momoa, generated an economic output of more than $63 million, and created 539 full-time equivalent positions in NL. It also later led to Momoa's major motion picture, *Aquaman,* being partially filmed in NL.
- Canadian content (film and television) production volume reached an all-time high in 2019-2020 of $9.3 billion and demand for content continues to rise.
- The industry in Newfoundland and Labrador is growing rapidly, as national and international production companies are seeking out exotic locations that add to production value.
- Canadian TV and film productions account for $5 billion in revenue and employ more than 244,500 people on a full-time basis.
- The Newfoundland and Labrador Film Development Corporation was created in 1997 with a mandate to grow and develop the provincial film and television industry and has since generated over $570 million in total production activity and more than 8,000 full time equivalent jobs.

OBJECTIVES

Upon successful completion of this program, graduates will be able to:
1. Communicate effectively as part of a technical production team
2. Model safe practices while operating tools and equipment
3. Utilize appropriate methods and materials to perform tasks within their technical disciplines
4. Collaborate with members of a production team to enable the creative expression of diverse ideas and concepts
5. Demonstrate proper protocols and acceptable conduct on a set
6. Break down a script according to the various needs of key departments
7. Interpret call sheets and other industry specific documentation
8. Adhere to legal principles, government legislation and regulations, copyright and contract requirements and professional and industry codes of conduct
9. Establish professional networking and business relationships in the television and film community

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students will acquire the following industry certifications throughout the program:
- WHMIS
- Mental Health First Aid Training
- Fall Protection Training (16 hrs)
- Aerial Work Platform Training (8 hrs)
- Standard First Aid & CPR
- Occupational Health & Safety Committee

*Students should be aware that additional fees may apply to external certifications.

FUTURE OPPORTUNITIES

Upon successful completion of the program, graduates will be prepared for employment in television and film in a variety of roles, including, but not limited to:

Lighting & Grip
- Daily Grip / Electric
- Rigging Grip / Rigging Electric
- Best Grip / Best Electric
- Dolly Grip
- Concert and conference Rigging

Set Design

- Production Assistant
- Props buyer
- Assistant Props
- Assistant Props maker
- On set Props
- Set Decoration buyer
- Set decorators
- On set dresser
- Set construction
- Scenic painter
- Assistant Greensperson

Camera

- Camera trainee
- 2nd Assistant Camera
- 1st Assistant Camera
- Video Assistant Operator
- Data Management Technician
- Digital Imaging Technician
- Camera Operator

ENTRANCE REQUIREMENTS

Eligibility for admission to the Television and Film Technical Production program requires the applicant to meet one of the following five academic criteria:

1. High School

Provincial High School Graduation Diploma with a 60% average in eight level 3000 credits or equivalent

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (CAS) Transition Certificate

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore, international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Applicant Requirement

Written Statement
It is not necessary to have prior experience in film and TV to be suitable candidate for this program. With that in mind, please write a statement between 250 and 500 words in your own voice giving us a brief introduction to yourself and your interests.

Outline your current goals within the film and tv industry. This is an opportunity for you to present your unique life experience and personality as well as your value to the program. It is not a business letter. The document must be submitted as a PDF. View the Written Statement Rubric for this program

Courses

Semester 1

Code	Title	Cr	Le	La
TF1010	TV & Film Industry Foundations	4	3	2
TF1015	TV & Film Analysis	3	3	0
CP2115	Computer Applications	3	2	2
TF1110	Intro to Camera, Lighting & Grip	3	2	3
TF1115	Intro to Sound & Sound Recording	3	3	1
TF1030	Film Design & the Art Dept	4	3	2

Semester 2

Code	Title	Cr	Le	La
CM1115	Communications for TV and Film	3	3	0

Students select one (1) of the following three (3) pathways in addition to CM1115 Communications for TV and Film.

Pathway Camera

Code	Title	Cr	Le	La
TF2110	Location Sound Recording	3	2	3
TF2115	Camera I	4	3	3
TF2210	Camera II	4	3	3
TF2310	Camera III	4	3	3

Pathway Grip and Lighting

Code	Title	Cr	Le	La
TF1035	Intro to Rigging and Special Effects	3	2	3
TF2216	Grip I	4	3	3
TF2316	Grip II	4	3	3
TF2220	Lighting	4	3	3

Pathway Set Design

Code	Title	Cr	Le	La
TF1130	Script Supervision	3	2	3
TF2125	Props	4	3	3
TF2320	Scenic Paint	4	3	3
TF2325	Set Decoration	4	3	3

Semester 3

Code	Title	Cr	Le	La
TF3110	Film Project - Technical Production	6	3	10
TF3115	Field Placement Preparation	0	0	2 wks
TF3210	Field Placement	0	0	6 wks

Note: TF3110 Film Project - Technical Production and TF3115 Field Placement Preparation will be completed in the first nine (9) weeks of the semester. TF3210 Field Placement will take place during the last six (6) weeks of the semester.

Textile & Apparel Design

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus Delivery

PROGRAM DESCRIPTION

Textile & Apparel Design provides students with an opportunity to learn and create one-of-a-kind textile and apparel products through drawing, design, textile and apparel practices. Individuals with creative and artistic interests in fashion and design will gain important technical design skills and knowledge of the integral relationships among fabric, surface and apparel design.

In the program, students will nurture an appreciation for the handcrafted product with the use of natural and sustainable materials. In fabric design, students will create fabric through knit, weave and felt. In surface design, they will explore hand sewing, embroidery, quilt, print, dye, and rug hooking. In apparel design, they will design and create clothing and accessories using hand-sewing skills, machine sewing and garment construction techniques, while exploring the exciting world of fashion and apparel.

Different media and techniques are introduced in the first year of the program. Innovation and creativity are encouraged through contemporary application of traditional skills and the incorporation of innovative materials into project ideas. The relationship between a maker's intent and content will form, through discourse in contemporary and traditional practice. Technical and critical skill development will occur in progression throughout the program.

The program is designed to offer innovative training that reaches beyond the classroom with an emphasis on experiential learning during fine craft and design fairs, wholesale trade shows, gallery exhibitions, and a fashion show. The program is supported by courses in colour theory, digital design, art and craft history, communications, entrepreneurial studies, art marketing development and proposal writing. The second year is an opportunity to focus studies and further develop design and technical skills when students choose two out of the three studio areas: fabric design, surface design or apparel design. Second-year students will also enrich their learning through courses in project coordination and implementation.

Graduates of the Textile & Apparel Design program will gain the solid foundation necessary to begin building a career as an independent artist, a production craftsperson, or as an employee in the craft and apparel industry. The program also offers graduates a solid foundation for exploring higher learning opportunities.

OBJECTIVES

Upon completion of this program, graduates will be able to:

1. Create aesthetic, functional, and innovative designs and products in the textile and apparel industry.
2. Integrate learned skills and techniques in fabric, surface and apparel design towards building a career as a professional artist.
3. Solve textile and apparel design issues through research and critical analysis.
4. Apply personal style and media choices in the creation of drawings, which support conceptual and technical design work.
5. Contribute to and enrich the quality, standards and professionalism of the textile and apparel industry.
6. Utilize effective communication techniques while promoting oneself in a professional manner as an emerging artist or designer.
7. Write professional proposals, grant applications, work reviews, and critiques.

8. Employ entrepreneurial skills, art marketing and self-promotion during events such as gallery exhibitions, fashion shows, craft fairs, wholesale trade shows, workshops and conferences.
9. Plan, develop, monitor and implement a successful textile and/or apparel-based event.
10. Express the importance of the relationship between traditional and contemporary craft and art within individual studio practice.

ENTRANCE REQUIRMENTS

1. High School
Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science Transition Certificate
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program must be at least 19 years of age at the time of application and out of school for at least one year to be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Note: This program is not suitable for applicants with respiratory problems or colour blindness.

FUTURE OPPORTUNITIES

Working within the field of textile and apparel design offers rewarding opportunities and work experiences. Graduates of the Textile & Apparel Design program may become employed within the craft and fashion industry, which is inclusive of textile and apparel. Not only are graduates employed in their immediate area of skill and with various employers in full-time, part-time and contractual employment, but they also may become self-employed. Graduates of this program may find gainful employment working with art galleries, and during film/theatre productions. Visit the Craft Council of Newfoundland and Labrador exhibition, showcasing graduates individual interests, unique visions, style, creative process and practiced skills.

Courses

Semester 1

Code	Title	Cr	Le	La
GA1130	Digital Design Fundamentals	2	2	1
HY1106	Art History	3	3	0
TX1100	Fibre & Fabric Exploration	5	4	2
TX1200	Introduction to Sewing	3	2	2
VA1100	Introduction to Drawing	2	2	1

Code	Title	Cr	Le	La
VA1200	Elements of Design	3	3	0
VA1400	Colour Theory	3	2	2

Semester 2

Code	Title	Cr	Le	La
HY1200	Craft History	3	3	0
TX1220	Fabric Design I	3	2	4
TX1225	Surface Design I	3	2	4
TX1400	Apparel Design I	3	2	2
VA1101	Drawing Application	3	3	1
VA1201	Principles of Design	3	3	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CG1400	Production Fundamentals	4	3	3
CM1450	Writing Fundamentals	3	3	0
TX1210	Industrial Sewing	3	2	2

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length.

Semester 4

Code	Title	Cr	Le	La
EP1100	Entrepreneurial Studies	4	3	2
TX2101	Art Marketing	3	3	0
VA2100	Intermediate Drawing	3	3	0
VA2260	Application of Design Theory I	3	3	1

Studio Areas - Students select two areas from the following:

Code	Title	Cr	Le	La
ST2405	Apparel Design II	4	3	3
ST2450	Fabric Design II	4	3	3
ST2455	Surface Design II	4	3	3

Semester 5

Code	Title	Cr	Le	La
CM1530	Proposal Writing	3	3	0
TX1230	Studio Practice I	3	2	2
VA2101	Advanced Drawing	3	3	0
VA2251	Application of Design Theory II	3	3	1

Studio Areas - Students select two areas from the following:

Code	Title	Cr	Le	La
ST2406	Apparel Design III	4	3	3
ST2461	Fabric Design III	4	3	3
ST2465	Surface Design III	4	3	3

Semester 6 (Intersession)

Code	Title	Cr	Le	La
TX1235	Studio Practice II	6	4	8

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length.

Video Game Art & Design

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

Level Up!

Game designers and artists inspire through innovation and imagination. They merge storytelling, art, and technology to bring interactive experiences to life.

The video game industry has grown into one of the largest and most successful on the globe, generating revenue of over $4 billion in Canada in 2021 alone.[1] With upwards of 1,000 active video game companies nation-wide (a 35 per cent increase since 2019)[2], video game artists and designers are in demand.

Our Video Game Art & Design (VGAD) program taps into this growth, providing training in the creative approaches involved in making engaging interactive experiences. In this rapidly evolving field, we prepare you for exciting work through the exploration of creative foundations and the application of game design theory, technical practices and aesthetic skills for a credential that is sought after world-wide.

Not just about providing entertainment, game designers and products are embraced by numerous industries today to improve our ability to solve the world's problems, train the workforce of tomorrow, and fuel innovative discovery through digital interactions and simulation. This innovative field is also building skills for today's technology-driven labour market through creative vision and the desire to influence the possibilities of tomorrow.

Apply now and take your career to an exciting new level!

Program Highlights

- Mentorship with faculty who have decades worth of industry experience and credits
- Extensive training in game theory and design, 2D and 3D art, game mechanics and visual scripting, narrative and level design
- Studies in art fundamentals, serious games, design documentation, creative writing, art history, sound design, interactive and visual storytelling, virtual reality experiences, game industry business and portfolio development
- Career opportunities in games, simulation and related media can include: quality assurance game tester, game producer, game designer (entertainment, education, training and simulation, etc.), level designer, writer, 2D and 3D asset artist, texture artist, character modelling, graphic interface designer, user interface designer, animator, sound designer, cinematographer, entrepreneur for media design

Did You Know?

- There are over 900 active video game studios in Canada (a 35% increase since 2019).
- In 2021, the gaming industry contributed $5.5 billion to Canada's GDP (an increase of 29% since 2019).
- VGAD graduates have worked at companies and projects including Epic Games, Other Ocean Interactive, Ubisoft Halifax, Sculpin, Zorbit's Math by Carnegie Learning, Stormy Shore Studio, SMSM Mummer's Journey Gams and Kraken Robotics.
- Students have competed at Skills Canada competitions, winning gold and bronze medals on the national level, and competed internationally in the WorldSkills Competition.
- The global games market will continue to grow, expecting to exceed $200 billion by 2023 (newzoo.com).

[1] Entertainment Software Association of Canada (theesa.ca)
[2] Canada's Video Game Industry – A National Champion Making a Global Impact (canadasvideogameindustry.ca)

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Understand and utilize the theory, practices, computer software, and hardware resources needed to create video game art and design.
2. Demonstrate appropriate attitudes, behaviours, and work practices for employment in the game industry and other areas of media development.
3. Utilize effective visual, oral and written communication skills, and continue to grow personally in one-on-one communications.
4. Promote their work through portfolio development.
5. Work productively in a collaborative team environment.
6. Appreciate the role of history and art history as game art and design references.
7. Cultivate a desire for life-long learning.
8. Design original video games, art, and narrative for games.

FUTURE OPPORTUNITIES

There are many diverse opportunities for graduates of the Video Game Art & Design program. **Graduates may choose from an array of different exciting careers, including, but not limited to:** Quality Assurance Game Tester, Game Producer, Game Designer (entertainment, education, training and simulation, etc..), Level Designer, Writer for games and related media, Concept Artist for games and related media, 2D and 3D Asset Artist for games and related media, 3D Modeller for simulation, Texture Artist for games and related media, Character Modelling for games and related media, Graphic Interface Designer, Animator for games and related media, Sound Designer for games and related media, Cinematographer for games and related media*, Entrepreneur for media design, Marketing and Promotions for games and related media.

*Related media includes film, digital animation, visual arts, graphic arts, simulation, music and audio production, etc.

ENTRANCE REQUIREMENTS

Eligibility for admission to the Video Game Art & Design program requires the applicant to meet one of the following four academic criteria:

1. High School
Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (CAS) Transition Certificate
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
Note: It is highly recommended that those applying for the Video Game Art & Design program have an appreciation for drawing and creating art, basic computer skills as well as strong core skills in English and writing.

5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

PORTFOLIO REQUIREMENTS

All applicants to the Video Game Art & Design program must submit a portfolio as part of the admission requirements. A portfolio is a collection of the applicant's work, based on detailed guidelines as described below, that shows the potential to build on demonstrated skills and aptitudes when in the program.

The applicant portfolio should consist of:

1. An essay which consists of a written personal statement explaining your reasons for wanting to be a video game artist and/or designer, your goals, and your interest in the program at College of the North Atlantic. This should be approximately 300 to 400 words.
2. Two pieces of art as described below by the College's Video Game Art & Design program portfolio entry detailed guidelines.

Portfolio Entry – Detailed Guidelines

All applicants to the Video Game Art & Design program must submit the specific, assigned writing and art samples to fulfil additional program entry requirements. The additional entry requirements should consist of:

1. An essay which consists of a written personal statement explaining your reasons for wanting to be a video game artist and/or designer, your goals, and your interest in the program at College of the North Atlantic. This should be approximately 300 to 400 words.

Present your document as follows:

- The document must be delivered in a digital format or printed on paper from a digital format (not hand written).
- Write it in a font of Times New Roman at a font size of 12, double spaced
- Title the document: **VGAD Essay by "your name"**
- Set only the title in a bold font, no cover page
- Proper articulation of content and writing mechanics are expected and presented in paragraph form (grammar, spelling, syntax, structure, etc.)
- Save the document as a common digital file type (docx, doc, rtf) with your last name in the file name, for example: Smith_Essay.rtf
- If word processing software is unavailable, providing the content within the body of an email is acceptable. Additionally a physical, typed print-out can be mailed.

2. Two pieces of art as outlined below by the College's Video Game Art and Design program.

Present your document as follows:

- Please sign and date each piece.
- Please include PHOTOCOPIES or DIGITAL COPIES ONLY, as the portfolio will not be returned.
- All submissions must be your own work. Any submission that contains plagiarized work, copied either manually or electronically, will be disqualified and you will be refused consideration.
- Any submission that contains inappropriate or offensive content will be refused consideration.
- ENSURE THAT YOUR NAME IS ON EACH OF THE CLEARLY LABELLED PIECES.

- Additional drawings or game ideas will not be accepted, viewed, or considered.
- Art submissions should show the applicant's current level of proficiency in the visual arts.
- All observational drawings are to be executed from real-life subject material, not from photographs, images, artwork, or other drawings.
- Drawings must be made on 8.5 x 11 sheets of plain white paper.

2a. Pencil sketch of a landscape (not based on images or photos). You may draw this from inside, looking out a window and it may include a building structure. Suggested time for completion of the final drawing, not including practice sketches: 30 – 60 minutes.

2b. Pencil or color pencil drawing of a real toy such as an action figure, collectible statue, video game console controller, teddy bear, or vehicle (not based on images or photos). The full view of the toy is visible in the drawing. Suggested time for completion of the final drawing, not including practice sketches: 30 – 60 minutes.
View the Application Portfolio Rubric for this program (57KB PDF)

HOW DO I SUBMIT THESE ADDITIONAL ADMISSION REQUIREMENTS?

a. Applicants should submit only copies of their artwork, such as a photocopied drawing, or a digital scan of the drawing. No originals should be submitted. Include applicant name and contact information.
b. Do not submit any framed, fragile or 3-dimensional work. Take a photo and submit that instead. Include applicant name and contact information.
c. If applicants submit digital files, please burn them onto a disk to include with the application, or email the images and include applicant name and contact information.
d. Any physical photocopies or printed pages of work on paper should be submitted in a 9 "x12" envelope and identified with applicant name on each page. Include applicant name and contact information within.
e. Each item included should be identified with an applicant name and date, and entry requirement number at the bottom of the page. Include contact information.

Please note: We emphasize that while advanced levels of writing, drawing, and computer skills may be an asset, they are not necessary, nor a guarantee for admission to the program.

Courses

Semester 1

Code	Title	Cr	Le	La
CM1100	Writing Essentials	3	3	1
GD1130	Game Design Theory	3	3	0
HY1120	Prehistory to Renaissance	3	2	2
PY1150	Photography	3	2	2
VA1110	Drawing Methods & Media	3	2	2
VA1115	2D Design	2	1	2
VA1400	Colour Theory	3	2	2

Semester 2

Code	Title	Cr	Le	La
CM1521	Writing for the Arts	3	3	0
GD1120	Storytelling in Games I	3	3	0
GD1140	Serious Games Theory	3	3	0
HY1130	Renaissance to 20th Century	3	2	2
VA1120	Digital Imaging	3	2	2
VA1140	Figure Drawing	3	2	2
VA1170	3D Design	3	2	2

Semester 3

Code	Title	Cr	Le	La
CM2200	Oral Communications	2	2	0
GD1150	Game & Level Design I	4	3	2

Code	Title	Cr	Le	La
GD1160	Art for Games I	4	3	3
GD1170	Sound Design for Games	3	2	2
GD1180	Game Industry Professionalism	3	3	0
Elective		3	3	0

Semester 4

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
GD1600	Business of Game Development	3	3	0
GD2110	Game & Level Design II	4	3	3
GD2121	Art for Games II	4	3	2
GD2130	Storytelling in Games II	3	2	2
Elective		3	3	0

Semester 5 (Intersession)

Code	Title	Cr	Le	La
GD2140	Game & Level Design III	4	6	6
GD2150	Art for Games III	3	4	4
GD2160	QA & Playtesting for Games	2	4	0

Intersession hours are actual and will not be adjusted.

Semester 6

Code	Title	Cr	Le	La
GD3100	Game & Level Design IV	4	3	3
GD3110	Art for Games IV	4	3	3
GD3120	3D Game Character Design	4	3	3
GD3130	Visual Narrative for Games	3	2	2
EP1100	Entrepreneurial Studies	4	3	2

Semester 7

Code	Title	Cr	Le	La
GD3140	Game & Level Design V	4	3	2
GD3150	Interactive Storytelling	3	3	0
GD3160	Portfolio for the Game Industry	3	2	2
GD3170	Art for Games V	4	3	2
GD3190	VR & AR in Games & Simulation	3	2	2

Semester 8 (Intersession)

Code	Title	Cr	Le	La
GD3180	Game Design Capstone Project	7	8	16

Intersession hours are actual and will not be adjusted.

***Note:**

Electives to be offered in each semester will be made available prior to registration. Other courses may be chosen provided that:

1. All prerequisites have been met,
2. The course is offered during the semester,
3. The maximum enrolment of the course is not exceeded,
4. The student's schedule can accommodate all scheduled classes for that course.

Tourism & Hospitality Management

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Academics, Applied Arts, and Tourism

Locations:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Are you a people-oriented individual with a passion for thriving in a fast-paced environment? Look no further than the Tourism & Hospitality programs at College of the North Atlantic (CNA)! Tourism is a global giant, accounting for over 10 percent of all jobs worldwide and playing an essential role in our provincial and national economies. With hundreds of diverse career opportunities in the field and a growing demand for skilled workers, this sector is your gateway to a vibrant career.

Our programs are designed to equip you with the essential skills and knowledge required for success in this dynamic sector. We emphasize global perspectives, sustainability, leadership, innovation, entrepreneurship, diversity, equity, inclusion and experiential learning opportunities to prepare you for the evolving landscape of tourism and hospitality.

Managing excellence.

Prepare for management and leadership roles in the major industry groups of the tourism sector: accommodations, food & beverage, recreation & entertainment, transportation and travel services with a Tourism & Hospitality Management diploma. The first year of this diploma is a common year with the Tourism & Hospitality Services certificate. In the second year of the program, you are further prepared for a career that may quickly lead to supervisory and management roles in the tourism sector.

The emphasis of this program is acquiring the necessary supervisory and management skills required in the global tourism sector The program provides you with practical, theoretical and experiential learning, field trips and two six-week field placements. You will attain the skills, competencies and attitudes necessary to manage expanding and increasingly sophisticated tourism operations. You have the opportunity to develop excellent teamwork, decision-making, critical thinking, communication and leadership skills throughout the program. You will also be exposed to marketing, human resources, law and risk management, leadership, events, accounting, tourism planning and development, hotel and food and beverage management methodologies, and a number of professional industry certifications.

With this diploma in your hands, you can pursue a variety of careers with a wide range of organizations, agencies and associations dedicated to tourism and hospitality such as government and non-government agencies, community and tourism development associations, and restaurants and hotels, while working as a destination developer, tour guide, event planner, foodservice manager, manager of a hotel or international resort, or employee for an airline, ferry service or cruise ship. You may also decide to take the entrepreneurial route and start you own business!

Program Highlights

- Complete the diploma program in person at the Prince Philip Drive campus
- Train for a variety of career options in the tourism sector
- Current, industry relevant curriculum
- Participate in two six-week field placements
- Obtain professional industry certifications
- Gain a local and global perspective in the tourism sector

Did You Know?

- Tourism is highly inclusive – compared to other sectors, it employs a higher proportion of women, youth and newcomers. [1]
- The hospitality industry in Canada market size is estimated at USD 22.86 billion in 2024, and is expected to reach USD 27.08 billion by 2029. [2]
- As many Canadians become more confident with travel, they are looking to catch up on much-delayed gatherings and vacations. This has fueled a surge in domestic travel. [3]
- Across all sectors, the tourism industry employs over 20,000 people in Newfoundland and Labrador, attributing to 9.4% of the provincial workforce. [4]

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[1] Government of Canada, Government of Canada releases new Federal Tourism Growth Strategy - Canada.ca
[2] Mordor Intelligence, https://www.mordorintelligence.com/industry-reports/hospitality-industry-in-canada
[3] Mordor Intelligence, Hospitality Industry in Canada - Statistics (mordorintelligence.com)
[4] Hospitality NL, 2023 Annual Report (hnl.ca)

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Summarize the social, cultural and economic contributions of tourism to society.
2. Meet the demands of the thriving tourism sector, equipped with a knowledge of its characteristics and modern trends
3. Communicate and engage with peers, supervisors, and customers, both in person and through digital channels.
4. Demonstrate effective interpersonal and customer service skills in a professional and courteous manner.
5. Engage in the progressively interconnected landscape of global tourism.
6. Discuss the importance of serving a diverse clientele in a culturally sensitive manner.
7. Contribute to the daily operations of a tourism and hospitality organization or business as a skilled team member.
8. Foster responsible and eco-conscious tourism experiences using sustainable principles and practices.
9. Contribute to the growth of the tourism sector.
10. Adapt to emerging industry trends and developments in tourism and hospitality.
11. Demonstrate leadership skills for supervisory and management roles within various industry groups.
12. Engage with industry stakeholders to stay connected with the broader tourism and hospitality community.
13. Pursue a wide range of career opportunities within tourism and hospitality and actively drive their continued and professional growth in the competitive global sector.

FUTURE OPPORTUNITIES

Upon successful completion of the program, graduates will be prepared for employment in a variety of roles and entrepreneurial opportunities including, but not limited to:

- Accommodations - Front desk agent, front office manager, night auditor, concierge, banquet staff, housekeeping manager, sales & marketing, etc.
- Food & Beverage - Server, bartender, supervisor, host, restaurant manager, food service director, catering manager, sales, etc.
- Recreation and Entertainment - Heritage interpreter, tour guide, event coordinator, meeting planner, recreation director, etc.
- Transportation - Reservations, car rental agent, customer service agent, travel coordinator, etc.
- Travel Services - Tour operator, destination development specialists, travel writer, tourism marketing, fundraising & membership coordinator, social media coordinator, etc.

CERTIFICATIONS

Students in the Tourism & Hospitality Management Diploma program will complete the following professional certifications during the program:

- Serve Responsible
- Service First
- Indigenous Cultural Diversity Training
- Emergency First Aid
- Nationally Recognized Food Handler Certificate program
- Workplace Hazardous Materials Information System (WHIMIS)
- Canadian Centre for Occupational Health and Safety's Psychological Health and Safety for Workers certification program
- Opioid Poisoning Response Training

Note: Students should be aware that additional fees apply for the certifications.

ENTRANCE REQUIREMENTS

Eligibility for admission to the Tourism & Hospitality requires the applicant to meet one of the following four academic criteria:

1. High School

Provincial High School Graduation Diploma with a 60% average in eight Level 3000 credits or equivalent

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science Transition Certificate

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an overall average pass mark of 60%.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

PLEASE NOTE: Basic computer literacy skills, as well as strong core skills in English and Mathematics are definite assets for this program. These skills are important for success in the program.

PROGRAM TRANSFERABILITY

The Tourism and Hospitality program offers exit points after Year 1 and Year 2:

* Students can graduate at the end of Year 1 with a Tourism and Hospitality Services Certificate.
* Students graduate at the end of Year 2 with a Tourism and Hospitality Management Diploma.

Courses

Semester 1

Code	Title	Cr	Le	La
CM1280	Academic Communications	3	3	1
TR1140	Customer Service	3	3	0
TR1145	Food & Beverage I	4	3	4
EP1110	Introduction to Business	4	4	0
TR1150	Introduction to Tourism	4	4	0
TR1155	Tourism Destinations	3	3	0

Semester 2

Code	Title	Cr	Le	La
TR1215	Accommodations I	4	4	0
TR1220	Cultural & Heritage Tourism	3	3	0
TR1225	Digital Tourism	3	3	0
EP1100	Entrepreneurial Studies	4	3	2
TR1230	Intro to Sustainable Tourism	4	4	0
HR1215	Professional Development	3	3	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
FW1130	Field Placement I	6	0	6 wks

Intersession hours are actual and will not be adjusted.

Semester 4

Code	Title	Cr	Le	La
TR2100	Accommodations II	4	4	0
AC1100	Bookkeeping I	4	3	2
TR2105	Food & Beverage II	4	4	0
PS2340	Organizational Behaviour	4	4	0
TR2110	Tour Guiding	3	2	2
TR2115	Tourism Planning & Development	4	4	0

Semester 5

Code	Title	Cr	Le	La
TR2235	Events Management	3	3	0
HN1230	Human Resource Management I	3	3	1
TR2205	Independent Tourism Project	3	3	0
TR2210	Professional Certifications	0	4	0
TR2215	Tourism Law & Risk Management	3	3	0
TR2220	Tourism Marketing	3	3	0

Semester 6 (Intersession)

Code	Title	Cr	Le	La
FW1140	Field Placement II	6	0	6 wks

Intersession hours are actual and will not be adjusted.

Tourism & Hospitality Services

Start Date: September

Credential: Certificate

Program Length: One Year

School: Academics, Applied Arts, and Tourism

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery
- Online - Asynchronous delivery

PROGRAM DESCRIPTION

Are you a people-oriented individual with a passion for thriving in a fast-paced environment? Look no further than the Tourism & Hospitality programs at College of the North Atlantic (CNA)! Tourism is a global giant, accounting for over 10 percent of all jobs worldwide and playing an essential role in our provincial and national economies. With hundreds of diverse career opportunities in the field and a growing demand for skilled workers, this sector is your gateway to a vibrant career.

Our programs are designed to equip you with the essential skills and knowledge required for success in this dynamic sector. We emphasize global perspectives, sustainability, leadership, innovation, entrepreneurship, diversity, equity, inclusion and experiential learning opportunities to prepare you for the evolving landscape of tourism and hospitality.

Serving excellence.

The Tourism & Hospitality Services program focuses on tourism knowledge, skills and modern trends, with an emphasis on the fundamentals and characteristics of the major industry groups within the tourism sector.

Courses in this certificate program will be available on campus or online, over a one-year period so that those who are interested in taking courses in this dynamic and growing field can do so in an alternative learning format. Once you complete all 13 courses (full- or part-time), you will receive a post-secondary certificate in Tourism & Hospitality Services.

Program Highlights

- Complete the certificate online through CNA's Distributed Learning Service
- Full- or part-time study options
- Current, industry relevant curriculum
- Participate in a six-week field placement
- Obtain professional industry certifications
- Gain a local and global perspective in the tourism sector
- Continue after the certificate for one more year to complete a diploma in Tourism & Hospitality Management

Did You Know?

- Tourism is highly inclusive – compared to other sectors, it employs a higher proportion of women, youth and newcomers.
- The hospitality industry in Canada market size is estimated at USD 22.86 billion in 2024, and is expected to reach USD 27.08 billion by 2029.
- As many Canadians become more confident with travel, they are looking to catch up on much-delayed gatherings and vacations. This has fueled a surge in domestic travel.
- Across all sectors, the tourism industry employs over 20,000 people in Newfoundland and Labrador, attributing to 9.4% of the provincial workforce.

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Summarize the social, cultural and economic contributions of tourism to society.
2. Meet the demands of the thriving tourism sector, equipped with a knowledge of its characteristics and modern trends
3. Communicate and engage with peers, supervisors, and customers, both in person and through digital channels.
4. Demonstrate effective interpersonal and customer service skills in a professional and courteous manner.
5. Engage in the progressively interconnected landscape of global tourism.
6. Discuss the importance of serving a diverse clientele in a culturally sensitive manner.
7. Contribute to the daily operations of a tourism and hospitality organization or business as a skilled team member.
8. Foster responsible and eco-conscious tourism experiences using sustainable principles and practices.
9. Contribute to the growth of the tourism sector.

FUTURE OPPORTUNITIES

Upon successful completion of the program, graduates will be prepared for employment in a variety of roles and entrepreneurial opportunities including, but not limited to:

- Accommodations - Front desk agent, concierge, valet, banquet staff, room attendant, and night auditor.
- Food & Beverage - Server, bartender, supervisor, and host.
- Recreation and Entertainment - Heritage interpreter, tour guide, event coordinator, and guest services representative.
- Transportation - Reservations, car rental agent, customer service agent, etc.
- Travel Services - Non-governmental organization (NGO) employee, fundraising & membership coordinator, and social media coordinator.

CERTIFICATIONS

Students in the Tourism & Hospitality Services certificate program will complete the following professional certifications during the program:

- Serve Responsible
- Service First
- Indigenous Cultural Diversity Training

Note: Students should be aware that additional fees apply for the certifications.

ENTRANCE REQUIREMENTS

Eligibility for admission to Tourism & Hospitality requires the applicant to meet one of the following four academic criteria:

1. High School

Provincial High School Graduation Diploma with a 60% average in eight Level 3000 credits or equivalent

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science Transition Certificate

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an overall average pass mark of 60%.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements. For more information regarding the Mature Student Requirements, please refer to Procedure AC-102-PR: Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

PLEASE NOTE: Basic computer literacy skills, as well as strong core skills in English and Mathematics are definite assets for this program. These skills are important for success in the program.

Courses

Semester 1

Code	Title	Cr	Le	La
CM1280	Academic Communications	3	3	1
TR1140	Customer Service	3	3	0
TR1145	Food & Beverage I	4	3	4
EP1110	Introduction to Business	4	4	0
TR1150	Introduction to Tourism	4	4	0
TR1155	Tourism Destinations	3	3	0

Semester 2

Code	Title	Cr	Le	La
TR1215	Accommodations I	4	4	0
TR1220	Cultural & Heritage Tourism	3	3	0
TR1225	Digital Tourism	3	3	0
EP1100	Entrepreneurial Studies	4	3	2
TR1230	Intro to Sustainable Tourism	4	4	0
HR1215	Professional Development	3	3	0

Semester 3 Intersession

Code	Title	Cr	Le	La
FW1130	Field Placement I	6	0	6 wks

Intersession hours are actual and will not be adjusted.

School of Business and Information Technology

Accounting

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Business and Information Technology

Locations & Delivery Modes:

- Corner Brook - On Campus delivery
- Online - Asynchronous delivery
- Online - Synchronous delivery

PROGRAM DESCRIPTION

A meticulous art.

A highly functioning business counts on critical financial fundamentals that accounting brings to the table. More than number crunching, accounting is a data-driven, strategic, and ultimately impactful, practice for success, whether that be in local or global markets. Preparation is key, with planning and administering of accounting systems, reporting of financial information, examination of records, analysis of statements and more.

This two-year Accounting program has the goods to help you develop multiple skills in the field of general financial accounting. You will focus on developing critical thinking, communication, and problem-solving skills, with the addition of learning to interpret complex information and develop comprehensive reports that are typically presented to management. You will leave here with a learning portfolio, prepared to launch into your career or continue your educational plans.

If you have natural proficiency and a love for numbers and are excited about the concept of keeping a business or organization at peak operational efficiency, this field is an excellent choice for you.

This is a career to count on.

Program Highlights

- A six-week work exposure to hone your skills
- Training for diverse career opportunities
- Accredited by the Accreditation Council for Business Schools and Programs (ACBSP)
- Transfer credits to institutions such as Memorial University of Newfoundland (Grenfell), Athabasca University, Plymouth University and University of New Brunswick (Saint John)

Did you know?

- Canada's accounting sector is relatively more open to foreign service providers than the average of the 48 countries evaluated in the Services Trade Restrictiveness Index.[1]
- According to Statistics Canada, the operating revenue of the accounting, tax preparation, bookkeeping and payroll services industry in Canada increased by 5.2% to $21.4 billion in 2019.
- Canada is the second largest destination market for U.S. accounting services exports and the fourth largest source of imports of accounting services to the United States.[2]
- In 2020, accounting services exports to Canada represented 9.9% of total U.S. accounting services exports and 7.1% of total U.S. accounting services imports.

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Apply fundamental principles of accounting to various types of financial transactions and situations including a broad understanding of international accounting standards and practices
2. Demonstrate proficiency in financial reporting that includes the preparation and analysis of financial statements for a range of businesses and organizations using both manual and computerized accounting systems
3. Use a variety of software applications and tools, including accounting software, and spreadsheet programs to assist in preparing and analyzing financial statements
4. Develop financial and budgetary plans based on varying business objectives, changing business environments, and underlying business assumptions including a solid understanding of income tax, payroll tax, and sales tax
5. Make responsible and ethical accounting decisions that align with organizational values and effectively communicate to various stakeholders using both oral and written communications methods
6. Exhibit the application of employability skills defined by the Conference Board of Canada to facilitate successful entry into the workplace and work collaboratively with team members from diverse backgrounds and skill sets to achieve common goals

ENTRANCE REQUIREMENTS

Eligibility for admission to Accounting program requires the applicant to meet one of the following academic criteria:

1. High School

Provincial High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or English 3202 (60% minimum)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Five credits at the 3000 Level

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041
Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Business-Related College Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Students – Admission Requirements and Information

1. High School

i. Proof of senior high school/secondary school Diploma/Certificate with equivalent minimum grades for the required high school courses listed above.
ii. India applicants only – Proof of senior high school/secondary school Diploma/Certificate with an equivalent Grade 10 Mathematics (50% min.) and Business/Commerce Stream.

2. English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

CAREER OPPORTUNITIES

Graduates of this program may obtain employment in a variety of marketing areas such as:

- Administrative Assistant
- Project Team Lead
- Finance Associate
- Financial Clerk
- Treasury Clerk
- Payroll Clerk

ACCREDITATION

Accounting is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) in all campus locations. ACBSP is the leading specialized accreditation association for business education supporting, celebrating, and rewarding teaching excellence.

PROGRAM TRANSFERABILITY

The Accounting program offers exit points after Year 1 and Year 2.
*Students can graduate at the end of Year 1 with a Business Administration Certificate.
*Students graduate at the end of Year 2 with a Accounting Diploma.

Graduates of the Accounting program may have the opportunity to transfer credits to institutions/associations such as:

- Memorial University of Newfoundland, Grenfell Campus
- Athabasca University, Alberta
- Plymouth University, UK
- University of New Brunswick, Saint John Campus

Graduates may also wish to further their studies to achieve professional designations with:

- Canadian Institute of Financial Planning
- The Payroll Association of Canada
- Chartered Professional Accountants of Canada (CPA)

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[1] https://www.oecd.org/trade/topics/services-trade/documents/oecd-stri-sector-note-psacc.pdf

[2] Accounting Services in Canada: Data and Trends (trade.gov)

Courses

Semester 1

Code	Title	Cr	Le	La
AC1260	Financial Accounting I	5	4	3
CM1240	Business Communications I	3	3	1
HN1230	Human Resource Management I	3	3	1
FN1140	Introduction to Finance	3	3	1

Code	Title	Cr	Le	La
MC1260	Integrated Software Applications	3	2	2
MR1100	Marketing I	4	4	0

Semester 2

Code	Title	Cr	Le	La
AC2260	Financial Accounting II	5	4	3
CM1241	Business Communications II	3	3	1
HN1240	Human Resource Management II	3	3	1
LW1230	Business Law	3	3	0
MR2100	Marketing II	4	4	0
MC1242	Spreadsheet Essentials	3	2	3

Semester 3 (Intersession)

Code	Title	Cr	Le	La
AC2230	Computerized Accounting I	3	2	3
CM2200	Oral Communications	2	2	0

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
AC2220	Intermediate Financial Accounting I	5	3	5
AC3270	Payroll and Commodity Taxes	4	3	2
AC2250	Managerial Accounting I	4	4	1
CM2300	Report Writing	2	2	0
EC1110	Microeconomics	4	4	0
MA1670	Statistics	4	4	1

Semester 5

Code	Title	Cr	Le	La
AC1350	Income Tax	4	3	2
AC3220	Intermediate Financial Accounting II	5	3	5
AC3250	Managerial Accounting II	4	4	1
AC2365	Principles of Internal Auditing	3	2	2
EP2150	Entrepreneurship	3	3	0
SD2200	Work Exposure Orientation	0	1	1

Semester 6 (Intersession)

Code	Title	Cr	Le	La
OJ1580	Work Exposure - Accounting	0	0	6 wks

Accounting and Financial Management

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Business and Information Technology

Locations & Delivery Modes:

- Grand Falls-Windsor - On Campus delivery
- Prince Philip Drive - On Campus delivery

PROGRAM DESCIRPTION

Strength in numbers.

The global economy counts on critical skills that accountants hold, as they are at the forefront of socioeconomic change. With a keen eye on best practices, and an affinity for numbers and regulation, those in the accounting field are managing information to make the most effective business decisions for their organization.

Our three-year Accounting and Financial Management diploma is designed to provide you with the knowledge and skills necessary to manage vital financial information and ensure that organizations run smoothly while complying with financial regulations. With a wide range of topics including financial accounting, managerial accounting, principles of auditing, taxation, and business finance, you'll engage in a combination of theoretical learning and practical experience.

A work exposure will give you the opportunity to gain real-world experience for a variety of roles, increasing your value as an accounting clerk, bookkeeper, tax preparer, auditor, or financial analyst.

If you are interested in pursuing a lucrative and reputable career, this comprehensive and practical diploma has absolute value for you.

It pays to be accountable.

Program Highlights

- A six-week work exposure to hone your skills
- Training for diverse career opportunities
- Accredited by the Accreditation Council for Business Schools and Programs (ACBSP)
- Transfer credits to institutions such as with Memorial University of Newfoundland (Grenfell), Athabasca University, Cape Breton University, Northwood University, Okanagan College, Plymouth University, and the University of New Brunswick (Saint John)

Did You Know?

- According to research, those working in accounting and finance typically earn an average of $123,000 per year in Canada. And on average, their starting salary doubles by the time they reach the 10-year mark.[1]
- Canada's accounting sector is relatively more open to foreign service providers than the average of the 48 countries evaluated in the Services Trade Restrictiveness Index.[2]
- According to Statistics Canada, the operating revenue of the accounting, tax preparation, bookkeeping and payroll services industry in Canada increased by 5.2% to $21.4 billion in 2019.
- Canada is the second largest destination market for U.S. accounting services exports and the fourth largest source of imports of accounting services to the United States.[3]
- In 2020, accounting services exports to Canada represented 9.9% of total U.S. accounting services exports and 7.1% of total U.S. accounting services imports.

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Apply fundamental principles of accounting to various types of financial transactions and situations including a broad understanding of international accounting standards and practices
2. Demonstrate proficiency in financial reporting that includes the preparation and analysis of financial statements for a range of businesses and organizations using both manual and computerized accounting systems
3. Use a variety of software applications and tools, including accounting software, and spreadsheet programs to assist in preparing and analyzing financial statements
4. Develop financial and budgetary plans based on varying business objectives, changing business environments, and underlying business assumptions including a solid understanding of income tax, payroll tax, and sales tax
5. Make responsible and ethical accounting decisions that align with organizational values and effectively communicate to various stakeholders using both oral and written communications methods
6. Exhibit the application of employability skills defined by the Conference Board of Canada to facilitate successful entry into the workplace and work collaboratively with team members from diverse backgrounds and skill sets to achieve common goals
7. Integrate business concepts for effective business planning and strategic management in a professional accounting environment using effective professional, time management, organization, teamwork, and leadership skills
8. Analyze complex financial data, identify problems, and propose solutions using sound accounting principles and practices

ENTRANCE REQUIREMENTS

Eligibility for admission to Accounting and Financial Management program requires the applicant to meet one of the following academic criteria:

1. High School

Provincial High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or English 3202 (60% minimum)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Five credits at the 3000 Level

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041
Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Business-Related College Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Students – Admission Requirements and Information

1. High School

i. Proof of senior high school/secondary school Diploma/Certificate with equivalent minimum grades for the required high school courses listed above.

ii. India applicants only – Proof of senior high school/secondary school Diploma/Certificate with an equivalent Grade 10 Mathematics (50% min.) and Business/Commerce Stream.

2. English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

CAREER OPPORTUNITIES

Graduates of this program may obtain employment in a variety of marketing areas such as:

- Administrative Assistant
- Project Team Lead
- Finance Associate
- Financial Clerk
- Treasury Clerk
- Payroll Clerk

And with additional experience:

- Junior to Senior
- Treasury Specialist
- Assistant Controller (when CPA is completed)
- Lead Accounts Payable
- Treasury Supervisor
- Payroll Supervisor

ACCREDITATION

Accounting and Financial Management is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) in all campus locations. ACBSP is the leading specialized accreditation association for business education supporting, celebrating, and rewarding teaching excellence.

PROGRAM TRANSFERABILITY

The Accounting and Financial Management program offers exit points after Year 1, Year 2 and Year 3.
*Students can graduate at the end of Year 1 with a Business Administration Certificate.
*Students can graduate at the end of Year 2 with an Accounting Diploma.
*Students graduate at the end of Year 3 with an Accounting and Financial Management Diploma.

Graduates of the Accounting and Financial Management program may have the opportunity to transfer credits to institutions/associations such as:

- Memorial University of Newfoundland, Grenfell Campus
- Athabasca University, Alberta
- Cape Breton University, Sydney, NS
- Northwood University, Michigan, USA
- Okanagan College, British Columbia
- Plymouth University, UK
- University of New Brunswick, Saint John Campus

Graduates may also wish to further their studies to achieve professional designations with:

- Canadian Institute of Financial Planning
- The Payroll Association of Canada
- Chartered Professional Accountants of Canada (CPA)

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[1] Accounting and Finance Average Salaries in Canada 2023 - The Complete Guide (salaryexplorer.com)

[2] https://www.oecd.org/trade/topics/services-trade/documents/oecd-stri-sector-note-psacc.pdf

[3] Accounting Services in Canada: Data and Trends (trade.gov)

Courses

Semester 1

Code	Title	Cr	Le	La
AC1260	Financial Accounting I	5	4	3
CM1240	Business Communications I	3	3	1
HN1230	Human Resource Management I	3	3	1
FN1140	Introduction to Finance	3	3	1
MC1260	Integrated Software Applications	3	2	2
MR1100	Marketing I	4	4	0

Semester 2

Code	Title	Cr	Le	La
AC2260	Financial Accounting II	5	4	3
CM1241	Business Communications II	3	3	1
HN1240	Human Resource Management II	3	3	1
LW1230	Business Law	3	3	0
MR2100	Marketing II	4	4	0
MC1242	Spreadsheet Essentials	3	2	3

Semester 3 (Intersession)

Code	Title	Cr	Le	La
AC2230	Computerized Accounting I	3	2	3
CM2200	Oral Communications	2	2	0

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
AC2220	Intermediate Financial Accounting I	5	3	5
AC3270	Payroll and Commodity Taxes	4	3	2
AC2250	Managerial Accounting I	4	4	1
CM2300	Report Writing	2	2	0
EC1110	Microeconomics	4	4	0
MA1670	Statistics	4	4	1

Semester 5

Code	Title	Cr	Le	La
AC1350	Income Tax	4	3	2
AC3220	Intermediate Financial Accounting II	5	3	5
AC3250	Managerial Accounting II	4	4	1
AC2365	Principles of Internal Auditing	3	2	2

Code	Title	Cr	Le	La
EP2150	Entrepreneurship	3	3	0
SD2200	Work Exposure Orientation	0	1	1

Semester 6 (Intersession II)

Code	Title	Cr	Le	La
OJ1580	Work Exposure - Accounting	0	0	6 wks

Semester 7

Code	Title	Cr	Le	La
AC2375	Principles of External Auditing	4	3	3
EP2250	Market Feasibility	4	3	2
FN2110	Business Finance	4	4	1
MN2600	Strategic Management	3	2	2
PS2340	Organizational Behaviour	4	4	0
Option Course (minimum 3 credits, selected from list below)		3	3	0

Semester 8

Code	Title	Cr	Le	La
FN2111	Business Finance II	4	4	1
EC1210	Macroeconomics	4	4	0
EP2200	Business Planning	4	2	5
MA3700	Production and Operations Management	4	4	1
Option Course (minimum 3 credits, selected from list below)		3	3	0

Options will be selected from the following list by each campus after consultation with the students and/or local industry. Please note that all courses may not be available at each campus.

Option Courses

Code	Title	Cr	Le	La
AC2540	Oil and Gas Production Accounting	4	3	2
HN2200	Strategic Compensation & Benefits	3	3	1
HN2195	Inclusion, Diversity and Equity	3	3	0
CP2070	Social Media Management	3	2	2
MR3125	AI for Marketing	3	2	2

Atlantic Trades Business Seal

Start Date: October

Credential: Certificate

Program Length: 30 Weeks (Part-Time)

School: Business and Information Technology

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

The Atlantic Trades Business Seal program is designed for journeypersons to advance their business and leadership skills and to gain regional career mobility. Graduates will be prepared for a managerial role within a company or will have gained the skillset required to create and manage their own business. Existing business owners will benefit from the program by developing the skills needed to take their business to the next level.

The program provides graduates with knowledge and skills in the following functional areas of business:

- Marketing & Sales
- Operations Management
- Business Planning
- Financial Management
- Human Resource Management

OBJECTIVES

Graduates of the Atlantic Trades Business Seal program will have the knowledge and skills that will allow them to:

1. Design an organizational structure for trade-related businesses
2. Write a trade-related business plan
3. Design and implement personnel policies
4. Identify and analyze trends and statistical data related to the growth and improvement of trade-related businesses
5. Identify options and alternatives for business growth and improvement
6. Interpret financial statements to make informed business decisions
7. Develop appropriate marketing strategies for trade-related businesses
8. Schedule people, materials and equipment
9. Develop feasible, competitive and profitable quotes or estimates

ACADEMIC ADVISING

Each student will be assigned an academic advisor to help guide you through the college experience. The advisor is trained to counsel you on college-related issues or to make mutually agreed upon referrals for you to other college professionals.

EMPLOYMENT OPPORTUNITIES

The Seal can prepare graduates for a managerial role at a company or to create their own business. Existing business owners will benefit from the program by developing the skills needed to take their business to the next level.

ENTRANCE REQUIREMENTS

Applicants must hold a Red Seal Credential or Certificate of Qualification in a designated trade.

CERTIFICATE REQUIREMENTS

Individuals must complete five stand-alone modules to meet the requirements for the Atlantic Trades Business Seal. Once these are successfully completed, a transcript must be submitted to the Apprenticeship and Trades Certification Division, which will issue the Atlantic Trades Business Seal.

Courses

Semester 1

Code	Title	Hrs
TB1000	Marketing & Sales	30
TB1010	Operations Management	30
TB1020	Business Planning	30
TB1030	Human Resources Management	30
TB1040	Financial Management	30

Business Administration

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Business and Information Technology

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

A study in being irreplaceable.

The successful business administrator is an effective leader, communicator and problem solver – one who can integrate rapidly emerging technology with diverse business functions such as accounting, marketing and human resource management. These movers and shakers are found in multiple industries including manufacturing, retail, hospitality, health care, education, finance and private and public service, among many others.

CNA's Business Administration program provides core business, office and technology skills to develop an employee that can complete many different tasks across departments. You'll learn every angle of running a successful business – marketing, tech, finance, and communicating and working with diverse individuals in a challenging environment. This is an absolute must for future business leaders, no matter what industry you choose. Once equipped with the aptitudes and problem-solving skills of a business professional, you can seek out wide-ranging employment opportunities or even start your own business.

You will develop interpersonal and organizational skills, use the latest computer technology in business decision making and attain practical tools that fit the bill for building a solid knowledge base that will work for you your entire business career.

Make it your business to succeed!

Program Highlights

- A six-week work exposure to hone your skills
- Graduate after year one with a Business Administration certificate or continue on for the two-year diploma
- Transfer credits to institutions such as Athabasca University, Grenfell Campus of Memorial University, and Cape Breton University

Did you know?

- Just about every kind of organization needs professionals who can effectively manage business resources and practices.
- Business advisors in Canada can earn an average annual base salary of 77,805 CAD. [1]
- Many companies offer comprehensive health insurance, retirement plans, paid vacation and other perks to attract and retain top talent. [2]
- Some 41,700 new administrative jobs are expected to become available in Canada between now and 2028. [3]

OBJECTIVES

Upon successful completion of the Business Administration diploma program, graduates will be able to:

1. Demonstrate expertise in foundational concepts of business, office management, and information technology.
2. Display ethical decision-making, exhibit a deep understanding of organizational behavior, demonstrate effective leadership skills, and communicate proficiently in diverse contexts.
3. Demonstrate the capability to transition seamlessly between organizational areas, effectively prioritize tasks, and skillfully manage projects.

4. Utilize modern tools and technologies designed for overall business operations, showcasing skillful management of office tasks, the effective use of technology applications, and proficient utilization of software systems.
5. Exhibit the application of employability skills defined by the Conference Board of Canada to facilitate successful entry into the workplace and work collaboratively with team members from diverse backgrounds and skill sets to achieve common business goals.

ENTRANCE REQUIREMENTS

Academic:

Eligibility for admission to Business Administration/Business Management programs requires the applicant to meet one of the following four academic criteria:

1. High School

Provincial High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or English 3202 (60% minimum)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Five credits at the 3000 Level

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041
Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Business-Related College Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

International Students – Admission Requirements and Information

1. High School

i. Proof of senior high school/secondary school Diploma/Certificate with equivalent minimum grades for the required high school courses listed above.
ii. India applicants only – Proof of senior high school/secondary school Diploma/Certificate with an equivalent Grade 10 Mathematics (50% min.) and Business/Commerce Stream.

2. English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

CAREER OPPORTUNITIES
Graduates may find entry level job opportunities in a wide spectrum of organizations such as public institutions, small and/or large businesses, and financial institutions.

ACCREDITATION
Business Administration program is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) in all campus locations. ACBSP is the leading specialized accreditation association for business education supporting, celebrating, and rewarding teaching excellence.

PROGRAM TRANSFERABILITY
The Business Administration programs offer exit points after Year 1, Year 2.

* Students can graduate at the end of Year 1 with a Business Administration Certificate.
* Students graduate at the end of Year 2 with a Business Administration Diploma.

Graduates of the Business Administration program may have the opportunity to transfer credits to institutions/associations such as:
• Cape Breton University, Sydney, Nova Scotia
• Memorial University (Grenfell)
• Athabasca University
• Griffith University
• Northwood University
• University of New Brunswick (Saint John)

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[1] Source: CanadianVisa.org, retrieved from: Top Business Administration Jobs in Canada | Canadianvisa.org
[2] Source: CanadianVisa.org, retrieved from: Top Business Administration Jobs in Canada | Canadianvisa.org
[3] Source: Randstad staffing company, retrieved from: Job Market Trends in Administrative Roles | Randstad Canada

Courses

Semester 1

Code	Title	Cr	Le	La
AC1260	Financial Accounting I	5	4	3
CM1240	Business Communications I	3	3	1
HN1230	Human Resource Management I	3	3	1
FN1140	Introduction to Finance	3	3	1
MC1260	Integrated Software Appplications	3	2	2
MR1100	Marketing I	4	4	0

Semester 2

Code	Title	Cr	Le	La
AC2260	Financial Accounting II	5	4	3
CM1241	Business Communications II	3	3	1
HN1240	Human Resource Management II	3	3	1
LW1230	Business Law	3	3	0
MR2100	Marketing II	4	4	0
MC1242	Spreadsheet Essentials	3	2	3

Semester 3 (Intersession)

Code	Title	Cr	Le	La
AC2230	Computerized Accounting I	3	2	3
CM2200	Oral Communications	2	2	0

The Course and Lab hours per week are based on a 15 weeks semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
EP1190	Business Solutions	4	4	0
OF1305	Digital Tools for the Office	3	2	2
LD1220	Effective Leadership	3	3	1
CP1060	Excel: Visual Data Analysis	3	2	2
CP1011	File Management and Security	2	1	2
PS2340	Organizational Behavior	4	4	0

Semester 5

Code	Title	Cr	Le	La
CP2640	Desktop Publishing	3	2	2
CP2070	Social Media Management	3	2	2
CP1070	Emerging Innovations	4	3	2
MN3100	Business Ethics	3	3	1
PR2170	Project Management	2	2	1
SD2200	Work Exposure Orientation	0	1	1

Semester 6 (Intersession II)

Code	Title	Cr	Le	La
OJ1590	Work Exposure - General	0	0	6 wks

OJ1590: 6 wks (40 hours/wk or as determined by the employer)

Executive Office Management

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Business and Information Technology

Locations & Delivery Modes:

- Corner Brook - On Campus delivery
- Grand Falls-Windsor - On Campus delivery
- Prince Philip Drive - On Campus delivery
- Online - Asynchronous delivery
- Online - Synchronous delivery

PROGRAM DESCRIPTION

This two-year diploma program is designed to enable students to acquire the entry level knowledge and skills needed to work as administrative professionals in today's modern office.

The major components of the program include document production, office management, personal and career growth with a service-learning element, social media management and current software programs. Related courses include communications, bookkeeping, computerized accounting, electronic spreadsheets, and organizational behaviour.

OBJECTIVES

Upon successful completion of the Executive Office Management program, graduates will be able to:

1. Design and create business documents using integrated software at an advanced level for effective communication.
2. Integrate professional communication and office management practices for application in the office environment.
3. Apply program learning in the business environment through experiential learning opportunities for enhanced industry networking.
4. Demonstrate application of the Conference Board of Canada employability skills for successful entry into the workplace.

CAREER OPPORTUNITIES

Graduates of the diploma program may expect to find employment opportunities in both the public and private sectors, including all levels of government, legal and medical offices, accounting firms, hospital and education facilities, and general business offices. As well as acquiring skills and knowledge necessary to become effective employees in today’s electronic office, graduates may gain insight into the creation of a small business of their own. Graduates are trained for the following specific positions: administrative assistant, word processing operator, executive assistant, computerized bookkeeper, data processor, microcomputer specialist, receptionist, office assistant, as well as additional employment opportunities depending on electives selected.

PROGRAM TRANSFERABILITY

The Office Administration programs offer exit points after Year 1 and Year 2:
- Students can graduate at the end of Year 1 with an Office Administration Certificate
- Students graduate at the end of Year 2 with an Executive Office Management Diploma

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Comprehensive Arts and Science Certificate

Effective Academic Year 2025 - 2026:

College Transition Certificate

3. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile)

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

ACCREDITATION

Executive Office Management is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) in all campus locations. ACBSP is the leading specialized accreditation association for business education supporting, celebrating, and rewarding teaching excellence.

Courses

Semester 1

Code	Title	Cr	Le	La
AC1100	Bookkeeping I	4	3	2
CM1100	Writing Essentials	3	3	1
DM1200	Document Production I	6	4	6
EP1110	Introduction to Business	4	4	0
OF1105	Personal and Career Growth	3	2	3

Semester 2

Code	Title	Cr	Le	La
AC2100	Bookkeeping II	4	3	2
CM2110	Business Writing Fundamentals	3	3	0
DM1300	Transcription	4	3	2
DM1210	Document Production II	6	4	6
OF1101	Operational Management	4	3	2

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CP2310	Electronic Spreadsheets	3	2	2
OF1305	Digital Tools for the Office	3	2	2

The Course and Lab hours per week are based on a 15-week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
AC2230	Computerized Accounting I	3	2	3
CM2200	Oral Communications	2	2	0
CP2110	Advanced Electronic Spreadsheets	3	2	2
DM2200	Document Production III	6	4	6
OF2100	Career Planning Strategies	4	3	2
Elective	minimum 2-4 credits	2-4	2-4	0

Semester 5

Code	Title	Cr	Le	La
CP2640	Desktop Publishing	3	2	2
DM2240	Document Production IV	6	4	6
OF2101	Office Simulation	4	3	2
PS2340	Organizational Behaviour	4	4	0
OF2700	Career Readiness	2	2	0
Elective	minimum 2-4 credits	2-4	2-4	0

Semester 6 (Intersession II)

Code	Title	Cr	Le	La
OJ1900	Work Exposure - Executive Office Management	0	0	6 wks

Human Resources

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Business and Information Technology

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

People first.

In today's competitive business environment, leaders recognize the importance of human resources (HR) to the success of organizations. The management of HR is a strategic approach to engaging and supporting employees, which in turn, creates an engaging, productive workplace. The functions of an HR Manager can vary across industries, but they typically include recruitment and onboarding of staff, compensation and benefits, training and professional development, compliance and safety, and employee relations. Today's HR manager must be knowledgeable about the practices involved in creating a welcoming, inclusive workplace culture.

Our two-year diploma in Human Resources has been designed to provide insight into the theory and practice of effective management in this exciting field. We want to provide you with an opportunity to gain the essential skills needed to become an effective HR coordinator in the various facets of HR, which can lead to a career in such areas as industrial/labour relations, supervision, occupational health and safety, recruitment, training and development, and compensation.

Venture into the world of business.

Program Highlights

- A six-week work exposure to gain real-world experience
- Transferable credits with CNA's articulation agreements with Memorial University (Grenfell), Athabasca University, Griffith University, Plymouth University, and the University of New Brunswick (Saint John)
- Preparation for a career in Human Resource Management, Industrial/Labour Relations, Supervision and General Management

Did You Know?

- Work culture leaders must look to the trends and threats on the horizon facing the Canadian workplace.
- Studies show that engaging with applicants in-person forges more meaningful connections than online alone.[1]
- Recruitment events offer cost-effective marketing strategies and enable hiring managers to conduct hundreds of micro interviews within the span of a few hours.
- Your success at a hiring event will only be as strong as your follow-up.

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Demonstrate proficiency in fundamental Human Resource Management concepts, including recruitment and selection, training and development, compensation and benefits, and employee relations
2. Design and implement effective recruitment and selection strategies to attract and retain top talent and design and deliver training and development programs to improve employee skills and enhance organizational performance
3. Foster positive employee relations by understanding employee needs, resolving conflict, and creating a positive workplace culture
4. Develop compensation and benefits programs that align with organizational goals and that are competitive with industry

5. Make responsible and ethical decisions that align with organizational values and effectively communicate human resource strategies and results to various stakeholders.
6. Exhibit the application of employability skills defined by the Conference Board of Canada to facilitate successful entry into the workplace and work collaboratively with team members from diverse backgrounds and skill sets to achieve common human resource goals

ENTRANCE REQUIREMENTS

Eligibility for admission to Human Resources program requires the applicant to meet one of the following academic criteria:

1. High School

Provincial High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or English 3202 (60% minimum)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Five credits at the 3000 Level

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041
Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Business-Related College Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Students – Admission Requirements and Information

1. High School

i. Proof of senior high school/secondary school Diploma/Certificate with equivalent minimum grades for the required high school courses listed above.
ii. India applicants only – Proof of senior high school/secondary school Diploma/Certificate with an equivalent Grade 10 Mathematics (50% min.) and Business/Commerce Stream.

2. English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

CAREER OPPORTUNITIES

Graduates of this program may obtain employment in a variety of marketing areas such as:

- Clerk IV
- Administrative Officer
- HR Clerks
- HR Admin
- HR Assistant
- Project Officers
- HR Advisor
- Team Lead
- HR Coordinators

ACCREDITATION

Human Resources is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) in all campus locations. ACBSP is the leading specialized accreditation association for business education supporting, celebrating, and rewarding teaching excellence.

PROGRAM TRANSFERABILITY

The Human Resources program offers exit points after Year 1 and Year 2.
*Students can graduate at the end of Year 1 with a Business Administration Certificate.
*Students graduate at the end of Year 2 with a Human Resources Diploma.

Graduates of the Human Resources program may have the opportunity to transfer credits to institutions/associations such as:

- Memorial University of Newfoundland, Grenfell Campus
- Athabasca University, Alberta
- Griffith University, Australia
- Plymouth University, UK
- University of New Brunswick, Saint John Campus

Graduates may also wish to further their studies to achieve professional designations with:

- Chartered Professionals in Human Resources (CPHR)
- Canadian Institute of Management (CIM)
- Canadian Professional Sales Association
- Canadian Public Relations Society
- International Personnel Management Association (IPMA) - Canada

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[1] HR News for Canada's HR Leaders | Canadian HR Reporter

Courses

Semester 1

Code	Title	Cr	Le	La
AC1260	Financial Accounting I	5	4	3
CM1240	Business Communications I	3	3	1
HN1230	Human Resource Management I	3	3	1
FN1140	Introduction to Finance	3	3	1
MC1260	Integrated Software Applications	3	2	2
MR1100	Marketing I	4	4	0

Semester 2

Code	Title	Cr	Le	La
AC2260	Financial Accounting II	5	4	3
CM1241	Business Communications II	3	3	1
HN1240	Human Resource Management II	3	3	1
LW1230	Business Law	3	3	0
MR2100	Marketing II	4	4	0
MC1242	Spreadsheet Essentials	3	2	3

Semester 3 (Intersession)

Code	Title	Cr	Le	La
AC2230	Computerized Accounting I	3	2	3
CM2200	Oral Communications	2	2	0

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
CM2300	Report Writing	2	2	0
EC1110	Microeconomics	4	4	0
HN1100	Industrial Relations	3	3	1
HN2130	Recruitment and Selection	3	3	1
HN2150	Training and Development	3	3	1
MA1670	Statistics	4	4	1
MR2300	Marketing Research	4	3	2

Semester 5

Code	Title	Cr	Le	La
AC2600	Managerial Accounting for HRM	4	4	1
HN1400	Occupational Health and Safety	3	3	1
HN2100	Collective Agreement Administration	3	3	1
LW1225	Employment Law	4	4	1
PS2340	Organizational Behaviour	4	4	0
EP2150	Entrepreneurship	3	3	0
SD2200	Work Exposure Orientation	0	1	1

Semester 6 (Intersession II)

Code	Title	Cr	Le	La
OJ1550	Work Exposure - HR	0	0	6 wks

Legal Administration

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Business and Information Technology

Locations & Delivery Modes:

- Prince Philip Drive – On Campus delivery

PROGRAM DESCRIPTION

This two-year diploma program is designed to provide students with extensive knowledge of legal terminology, legal writing, court practices and document formatting. Students will obtain hands on experience through simulation exercises to prepare them for employment in the field of Legal Administration.

The major components of the program include Legal Transcription, Business Law, Office Management and Legal Document Production. Related courses include Communications (both oral and written), Bookkeeping, Digital Tools for the Office, and Medical Terminology for the Legal field.

OBJECTIVES

Upon successful completion of the Legal Administration program, graduates will be able to:

1. Create legal and business documents using extensive knowledge of legal terminology, legal writing, court practices and rules, and document formatting with integrated software at an advanced level for effective communication.
2. Apply professional communication, ethical behavior, and office management practices for application in the legal office environment.
3. Apply program learning in the legal office environment through experiential learning opportunities for enhanced industry networking.
4. Demonstrate application of the Conference Board of Canada employability skills for successful entry into the workplace.

CAREER OPPORTUNITIES

Graduates of the diploma program may expect to find employment opportunities in both the public and private sectors, including all levels of government, as well as legal firms, provincial and supreme courts, and other government and corporate legal departments. As well as acquiring skills and knowledge necessary to become effective employees in today's electronic office, graduates will be knowledgeable in the areas of civil litigation, incorporation, real estate, wills, estates, and family law.

Graduates are trained for the following specific positions: legal administrative assistant, legal assistant, court clerk I, court officer I, judicial assistant, legal transcriptionist, and administrative officer.

PROGRAM TRANSFERABILITY

The Office Administration programs offer exit points after Year 1 and Year 2.

* Students can graduate at the end of Year 1 with an Office Administration Certificate
* Students graduate at the end of Year 2 with a Legal Administration Diploma

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Comprehensive Arts and Science Certificate
Effective Academic Year 2025 - 2026:
College Transition Certificate
3. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile)
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

ACCREDITATION

Legal Administration is accredited by the Accreditation Council for Business Schools and Programs (ACBSP). ACBSP is the leading specialized accreditation association for business education supporting, celebrating, and rewarding teaching excellence.

Courses

Semester 1

Code	Title	Cr	Le	La
AC1100	Bookkeeping I	4	3	2
CM1100	Writing Essentials	3	3	1
DM1200	Document Production I	6	4	6
EP1110	Introduction to Business	4	4	0
OF1105	Personal and Career Growth	3	2	3

Semester 2

Code	Title	Cr	Le	La
AC2100	Bookkeeping II	4	3	2
CM2110	Business Writing Fundamentals	3	3	0
DM1300	Transcription	4	3	2
DM1210	Document Production II	6	4	6
OF1101	Operational Management	4	3	2

Semester 3 Intersession

Code	Title	Cr	Le	La
CP2310	Electronic Spreadsheets	3	2	2
OF1305	Digital Tools for the Office	3	2	2

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
TM1301	Medical Terminology for the Legal Field	2	2	0
CM2200	Oral Communications	2	2	0
DM1311	Legal Transcription I	3	2	2
DM2220	Legal Document Production I	6	4	7
LW1100	Business Law I	2	2	1
OF2505	Legal Office Procedures I	4	3	2

Semester 5

Code	Title	Cr	Le	La
DM2421	Legal Transcription II	3	2	2
DM3251	Legal Document Production II	6	4	7
OF2531	Legal Office Procedures II	4	3	2
OF2700	Career Readiness	2	2	0
LW1235	Business Law II	2	2	1

Semester 6 Intersession II

Code	Title	Cr	Le	La
OJ1910	Work Exposure - Legal	0	0	6 wks

Marketing

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Business and Information Technology

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

Invested.

In this fast-paced world of supply and demand, marketers are aiming to work smarter, not harder. They must be efficient with workflows and processes, as well as flexible, adaptable, and prepared to pivot.

Our two-year Marketing diploma program is designed to provide you with a broad background in business administration with an emphasis on marketing. You will gain the knowledge and skills necessary to analyze the marketing environment and effectively develop comprehensive marketing strategies for implementation and monitoring, marketing product, price, promotion, and distribution.

You will build on your critical thinking, communication, and problem-solving skills. With the foundations of accounting, human resource management, business law, research, communications and more, you will be thoroughly prepared to work for a variety of organizations in marketing, sales, retailing, administration, advertising, and general management.

This investment of time will gain you dividends as you build your career!

Program Highlights

- A six-week work exposure to gain real-world experience in marketing
- Accredited by Accreditation Council for Business Schools and Programs (ACBSP)
- Transferable credits with CNA's articulation agreements with Memorial University (Grenfell), Athabasca University, Griffith University, Plymouth University, and the University of New Brunswick (Saint John)

Did you know?

- According to a recent industry report, e-commerce will account for 20.4% of global retail sales by the end of 2022, up from only 10% five years ago.[1]
- Reports from November 2022 show that consumers' usage of social media is up nearly 8% since the beginning of the year and there are an estimated 4.74 billion users currently on social media.[2]
- Globally, reports show that 85% of people have changed their purchasing habits to become more sustainable in the past five years.[3]

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Demonstrate proficiency in fundamental marketing concepts, including segmentation, targeting, positioning, branding, pricing, and promotion
2. Develop and implement comprehensive marketing strategies that are both effective and measurable
3. Analyze marketing decisions related to product, price, promotion, and distribution to provide viable business solutions
4. Utilize the latest digital marketing trends and tools, such as social media, search engine optimization, and email marketing to achieve marketing goals
5. Make responsible and ethical decisions that align with organizational values and effectively communicate marketing strategies and results to various stakeholders

6. Exhibit the application of employability skills defined by the Conference Board of Canada to facilitate successful entry into the workplace and work collaboratively with team members from diverse backgrounds and skill sets to achieve common marketing goals

ENTRANCE REQUIREMENTS

Eligibility for admission to Marketing program requires the applicant to meet one of the following academic criteria:

1. High School

Provincial High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or English 3202 (60% minimum)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Five credits at the 3000 Level

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041
Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Business-Related College Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Students – Admission Requirements and Information

1. High School

i. Proof of senior high school/secondary school Diploma/Certificate with equivalent minimum grades for the required high school courses listed above.
ii. India applicants only – Proof of senior high school/secondary school Diploma/Certificate with an equivalent Grade 10 Mathematics (50% min.) and Business/Commerce Stream.

2. English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

CAREER OPPORTUNITIES

Graduates of this program may obtain employment in a variety of marketing areas such as:

- Coordinator (Marketing)
- Social Media Marketing Coordinator
- Content Creator
- Social Medial Management
- Coordinator
- Associate
- Consultant
- Marketing Assistant
- Business Development Representative
- Chamber Representatives

ACCREDITATON

Marketing is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) in all campus locations. ACBSP is the leading specialized accreditation association for business education supporting, celebrating, and rewarding teaching excellence.

PROGRAM TRANSFERABILITY

The Marketing program offers exit points after Year 1 and Year 2.
*Students can graduate at the end of Year 1 with a Business Administration Certificate.
*Students graduate at the end of Year 2 with a Marketing Diploma.

Graduates of the Marketing program may have the opportunity to transfer credits to institutions/associations such as:

- Memorial University of Newfoundland, Grenfell Campus
- Athabasca University, Alberta
- Griffith University, Australia
- Plymouth University, UK
- University of New Brunswick, Saint John Campus

Graduates may also wish to further their studies to achieve professional designations with:

- Canadian Institute of Management (CIM)
- Canadian Professional Sales Association
- Canadian Public Relations Society
- International Personnel Management Association (IPMA) - Canada

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[1] E-Commerce Trends 2022: What The Future Holds (forbes.com)

[2] 9 Top Business Trends (2023 & 2024) (explodingtopics.com)

[3] 9 Top Business Trends (2023 & 2024) (explodingtopics.com)

Courses

Semester 1

Code	Title	Cr	Le	La
AC1260	Financial Accounting I	5	4	3
CM1240	Business Communications I	3	3	1
HN1230	Human Resource Management I	3	3	1
FN1140	Introduction to Finance	3	3	1
MC1260	Integrated Software Applications	3	2	2
MR1100	Marketing I	4	4	0

Semester 2

Code	Title	Cr	Le	La
AC2260	Financial Accounting II	5	4	3
CM1241	Business Communications II	3	3	1
HN1240	Human Resource Management II	3	3	1
LW1230	Business Law	3	3	0
MR2100	Marketing II	4	4	0
MC1242	Spreadsheet Essentials	3	2	3

Semester 3 (Intersession)

Code	Title	Cr	Le	La
AC2230	Computerized Accounting I	3	2	3
CM2200	Oral Communications	2	2	0

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
CM2300	Report Writing	2	2	0
EC1110	Microeconomics	4	4	0
MA1670	Statistics	4	4	1
MR1500	Consumer Behaviour	3	3	0
MR2400	Advertising & Marketing Comm.	5	4	2
MR2300	Marketing Research	4	3	2

Semester 5

Code	Title	Cr	Le	La
EC1210	Macroeconomics	4	4	0
EP2150	Entrepreneurship	3	3	0
PS2340	Organizational Behaviour	4	4	0
CP2070	Social Media Business	3	2	2
MR1600	Relationship Selling	4	3	2
PR2170	Project Management	2	2	1
SD2200	Work Exposure Orientation	0	1	1

Semester 6 (Intersession II)

Code	Title	Cr	Le	La
OJ1560	Work Exposure - Marketing	0	0	6 wks

Marketing Management and Analytics

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Business and Information Technology

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Capitalizing on skills.

Businesses are striving to meet their customers where they are. Influencer marketing, digital platforms, video reels and social media are changing the world of brand building and advertising and enabling businesses to connect with niche audiences. Being tapped into e-commerce trends today is no longer an option – it's a necessity if businesses want to be competitive.

Essential to maximizing these tools is a strong foundation of marketing strategy and tactics, an understanding of trending and digital engagement and how to interpret the metrics, and the creation of consistent, high-quality content that helps build a brand and position it far and above the others.

Our three-year Marketing Management and Analytics program will help you capitalize on your natural go-getter skills with a combination of theoretical learning and practical experience. We cover a wide range of training, including market research, consumer behaviour, branding, advertising, digital marketing, artificial intelligence, design, customer experience management and sales management.

With us, you'll gain the knowledge and skills necessary to develop effective marketing strategies and tactics for a wide range of organizations. You will be able to competently fill the roles of marketing coordinator, brand manager, advertising specialist, digital marketing specialist or sales manager.

You'll be market ready – apply today!

Program Highlights

- Six-week work exposure to gain real-world experience in marketing
- Includes graphic design, artificial intelligence for marketing, customer experience management, and digital analytics
- Comprehensive management training for a high-demand, face-paced field
- Accredited by Accreditation Council for Business Schools and Programs (ACBSP)
- Transferable credits through CNA's articulation agreements with Cape Breton University, Memorial University (Grenfell), Athabasca University, Griffith University, Northwood University, Okanagan College, Plymouth University, and the University of New Brunswick (Saint John)

Did you know?

- Social media was the #1 marketing channel in 2022.[1]
- The #1 social media-related challenge for marketers is creating engaging content.[2]
- YouTube is the number one social media platform on which marketers build communities.[3]
- Consumers are most frustrated with inconsistent brand messaging.[4]
- A 2022 survey found that nearly 80% of retailers who've dedicated resources to improving sustainability believe their efforts have resulted in increased customer loyalty.[5]

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Demonstrate proficiency in fundamental marketing concepts, including segmentation, targeting, positioning, branding, pricing, and promotion
2. Develop and implement comprehensive marketing strategies that are both effective and measurable
3. Analyze marketing decisions related to product, price, promotion, and distribution to provide viable business solutions
4. Utilize the latest digital marketing trends and tools, such as social media, search engine optimization, and email marketing to achieve marketing goals
5. Make responsible and ethical decisions that align with organizational values and effectively communicate marketing strategies and results to various stakeholders
6. Exhibit the application of employability skills defined by the Conference Board of Canada to facilitate successful entry into the workplace and work collaboratively with team members from diverse backgrounds and skill sets to achieve common marketing goals
7. Develop effective marketing plans that align with the overall business strategy and meet the needs of the target market while building customer relationships and customer experience strategies
8. Collect, analyze, and interpret marketing data using various analytical tools such as Excel, Facebook Analytics, Earned Media Analytics, Google Analytics, and artificial intelligence tools

ENTRANCE REQUIREMENTS

Eligibility for admission to Business Administration/Business Management programs requires the applicant to meet one of the following four academic criteria:

1. High School

Provincial High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or English 3202 (60% minimum)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Five credits at the 3000 Level

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041
Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Business-Related College Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Students – Admission Requirements and Information

1. High School

i. Proof of senior high school/secondary school Diploma/Certificate with equivalent minimum grades for the required high school courses listed above.
ii. India applicants only – Proof of senior high school/secondary school Diploma/Certificate with an equivalent Grade 10 Mathematics (50% min.) and Business/Commerce Stream.

2. English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into

regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

CAREER OPPORTUNITIES

Graduates of this program may obtain employment in a variety of marketing areas such as:

- Coordinator (Marketing)
- Social Media Marketing Coordinator
- Content Creator
- Content Manager
- Social Medial Management
- Coordinator
- Associate
- Consultant
- Manager
- Marketing Assistant
- Business Development Representative
- Chamber Representatives

ACCREDITATON
Marketing Management and Analytics is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) in all campus locations. ACBSP is the leading specialized accreditation association for business education supporting, celebrating, and rewarding teaching excellence.

PROGRAM TRANSFERABILITY
The Marketing Management and Analytics program offers exit points after Year 1, Year 2, and Year 3.
*Students can graduate at the end of Year 1 with a Business Administration Certificate.
*Students can graduate at the end of Year 2 with a Marketing Diploma.
*Students can graduate at the end of Year 3 with a Marketing Management and Analytics Diploma.

Graduates of the Marketing Management and Analytics program may have the opportunity to transfer credits to institutions/associations such as:

- Memorial University of Newfoundland, Grenfell Campus
- Cape Brenton University, Sydney, Nova Scotia
- Athabasca University, Alberta
- Griffith University, Australia
- Plymouth University, UK
- University of New Brunswick, Saint John Campus
- Okanagan College, British Columbia
- Northwood University, Michigan, USA

Graduates may also wish to further their studies to achieve professional designations with:

- Canadian Institute of Management (CIM)
- Canadian Professional Sales Association
- Canadian Public Relations Society
- International Personnel Management Association (IPMA) – Canada

[1] 2022_State-of-Inbound-Marketing-Trends_V08122022.pdf (hubspot.com)
[2] 2022_State-of-Inbound-Marketing-Trends_V08122022.pdf (hubspot.com)
[3] https://www.hubspot.com/marketing-statistics
[4] https://www.hubspot.com/marketing-statistics
[5] 9 Top Business Trends (2023 & 2024) (explodingtopics.com)

Courses

Semester 1

Code	Title	Cr	Le	La
AC1260	Financial Accounting I	5	4	3
CM1240	Business Communications I	3	3	1
HN1230	Human Resource Management I	3	3	1
FN1140	Introduction to Finance	3	3	1
MC1260	Integrated Software Applications	3	2	2
MR1100	Marketing I	4	4	0

Semester 2

Code	Title	Cr	Le	La
AC2260	Financial Accounting II	5	4	3
CM1241	Business Communications II	3	3	1
HN1240	Human Resource Management II	3	3	1
LW1230	Business Law	3	3	0
MR2100	Marketing II	4	4	0
MC1242	Spreadsheet Essentials	3	2	3

Semester 3 (Intersession)

Code	Title	Cr	Le	La
AC2230	Computerized Accounting I	3	2	3
CM2200	Oral Communications	2	2	0

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
CM2300	Report Writing	2	2	0
EC1110	Microeconomics	4	4	0
MA1670	Statistics	4	4	1
MR1500	Consumer Behaviour	3	3	0
MR2400	Advertising & Marketing Comm.	5	4	2
MR2300	Marketing Research	4	3	2

Semester 5

Code	Title	Cr	Le	La
EC1210	Macroeconomics	4	4	0
EP2150	Entrepreneurship	3	3	0
PS2340	Organizational Behaviour	4	4	0
CP2070	Social Media Management	3	2	2
MR1600	Relationship Selling	4	3	2
PR2170	Project Management	2	2	1
SD2200	Work Exposure Orientation	0	1	1

Semester 6 (Intersession II)

Code	Title	Cr	Le	La
OJ1560	Work Exposure - Marketing	0	0	6 wks

Semester 7

Code	Title	Cr	Le	La
EP2250	Market Feasibility	4	3	2
MR3125	AI for Marketing	3	2	2
MN2600	Strategic Management	3	2	2
MR2450	Services Marketing	3	2	2
VA1230	Graphic Design	3	2	3
MR3130	Digital Analytics	3	2	3

Semester 8

Code	Title	Cr	Le	La
EP2200	Business Planning	4	2	5
MR2620	Sales Management	4	4	0
MR3210	Customer Experience Management	4	3	1
MR3100	Current Topics in Marketing	3	3	1
MR2200	Retailing Management	3	3	1

Medical Office Management

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Business and Information Technology

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery
- Online - Asynchronous delivery
- Online - Synchronous delivery

PROGRAM DESCRIPTION

This two-year diploma program is designed to provide students with a focused study of medical office management theories and practices through hands on learning and simulation exercises needed to be successful in a medical office environment.

The major areas of the program include confidentiality, empathetic patient care, efficient medical office management practices, effective communications, document production, medical transcription, medical terminology, ethics, and medical office management. Students also utilize current software and medical office practices for document production, electronic and paper medical records, effective human relations skills, scheduling methods, patient record information management, medical billing, and various current computer applications.

OBJECTIVES

Upon successful completion of the Medical Office Management program, graduates will be able to:

1. Create advanced medical and business documents using extensive knowledge of medical terminology and integration of current software for professional and effective communication between patients, visitors, health care professionals and all stakeholders.
2. Manage a medical office by integrating current technologies to perform duties adhering to industry standards of ethics, confidentiality, professionalism, and compassionate patient care while applying effective office management practices.
3. Apply program learning in a medical office environment though experiential learning opportunities for enhanced industry networking and development of skills.
4. Demonstrate application of the Conference Board of Canada employability skills for successful entry into the workplace.

CAREER OPPORTUNITIES

Graduates of the diploma program may expect to find employment opportunities in various medical environments including hospital departments, long-term care facilities, general practitioners' and specialists' clinics, health boards, government departments, as well as in allied health care facilities such as chiropractics, physiotherapy, occupational therapy, massage therapy, mental health, and counselling services. Graduates are also prepared to work in community clinics, public health, dental, and optometry practices. As well as acquiring skills and knowledge necessary to become effective employees in today's electronic office, graduates will have extensive knowledge and skills in document production, medical transcription, medical terminology, anatomy, MCP Billing, electronic medical records, medical office management, and other related areas. Graduates are trained for the following specific positions: medical administrative assistant, medical office assistant, dental office assistant, medical receptionist, medical records clerk, and medical transcriptionist.

PROGRAM TRANSFERABILITY

The Office Administration programs offer exit points after Year 1 and Year 2.

* Students can graduate at the end of Year 1 with an Office Administration Certificate
* Students graduate at the end of Year 2 with a Medical Office Management Diploma

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Comprehensive Arts and Science Certificate
Effective Academic Year 2025 - 2026:
College Transition Certificate
3. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile)
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

ACCREDITATION

Medical Office Management is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) in all campus locations. ACBSP is the leading specialized accreditation association for business education supporting, celebrating, and rewarding teaching excellence.

Courses

Semester 1

Code	Title	Cr	Le	La
AC1100	Bookkeeping I	4	3	2
CM1100	Writing Essentials	3	3	1
DM1200	Document Production I	6	4	6
EP1110	Introduction to Business	4	4	0
OF1105	Personal and Career Growth	3	2	3

Semester 2

Code	Title	Cr	Le	La
AC2100	Bookkeeping II	4	3	2
CM2110	Business Writing Fundamentals	3	3	0
DM1300	Transcription	4	3	2

Code	Title	Cr	Le	La
DM1210	Document Production II	6	4	6
OF1101	Operational Management	4	3	2

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CP2310	Electronic Spreadsheets	3	2	2
OF1305	Digital Tools for the Office	3	2	2

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
BL1330	Anatomy	4	4	0
CM2200	Oral Communications	2	2	0
DM1400	Medical Transcription I	3	2	4
DM2200	Document Production III	6	4	6
OF2400	Medical Office Management I	3	3	1
TM1100	Medical Terminology I	2	2	0

Semester 5

Code	Title	Cr	Le	La
DM1405	Medical Transcription II	4	3	3
DM2240	Document Production IV	6	4	6
OF2300	MCP Billing	2	2	1
OF2401	Medical Office Management II	4	4	1
TM2100	Medical Terminology II	2	2	0
OF2700	Career Readiness	2	2	0

Semester 6 (Intersession II)

Code	Title	Cr	Le	La
OJ1920	Work Exposure - Medical	0	0	6 wks

Project Management

Start Date: September

Credential: Post Diploma

Program Length: Two Semesters

School: Business and Information Technology

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

Driving change one project at a time.

Project management is the roadmap for reaching goals, and project managers are the drivers. Through their strategic management skills, they help improve the success of planned initiatives by establishing objectives and goals, clear roles and responsibilities, timelines, and monitoring and reporting, among other critical project requirements.

Today's project-oriented economy requires highly trained managers to plan for change and innovation across every industry. Analysis shows that the demand for project managers is growing faster than that for workers in other occupations, putting them at the forefront of immense opportunities.[1]

Through this two-semester Post Diploma in Project Management you will develop robust skills and competencies to successfully implement projects that align with organizational strategic plans. You will acquire the techniques and tools to communicate effectively with colleagues, promote teamwork and successfully plan and implement projects that lead to successful business developments. Whether you're a manager, project manager or member of a team, these skills will help you to stay on track and motivate others.

With this training you can advance your first credential or work experience to transform your career journey. Set a course today!

Program Highlights

- This program aligns with the Project Management Institute's (PMI®) *A Guide to the Project Management Body of Knowledge* (PMBOK® Guide) and heavily utilizes the foundational standards and practice frameworks prescribed by the PMI®
- Learn to implement the PMI project management knowledge, processes, lifecycle phases, and the embodied concepts, tools, and techniques to achieve project success relative to stakeholder needs
- Gain knowledge to apply appropriate legal and ethical standards to your projects
- Become proficient with technology tools for communication, collaboration, information management, and decision support
- Align a project to an organization's strategic plans and business justification throughout the project management lifecycle

Did you know?

- According to the report published by RBC RBC-Future-Skills-Report-FINAL-Singles.pdf, Canada is undergoing a demographic transformation requiring modern new-age leadership and project management styles.
- The **Project Management Institute (PMI)** has stated that by 2027, employers will need 87.7 million people working in project management roles across 11 countries. In Canada alone, nearly 90,000 new project managers will be hired.
- Project managers contribute to a nation's productivity, which supports GDP that in turn contributes to the standard of living.
- The average salary for a Project Management Manager is CA$89,755.[2]

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Apply appropriate legal and ethical standards
2. Utilize technology tools for communication, collaboration, information management, and decision support
3. Align a project to the organization's strategic plans and business justification throughout the project management lifecycle
4. Apply project management practices to the launch of new programs, initiatives, products, services, and events relative to the stakeholder needs
5. Implement the PMI® project management knowledge, processes, lifecycle phases, and the embodied concepts, tools, and techniques to achieve project success

ACADEMIC ADVISING

Each student will be assigned an academic advisor to help guide you through the college experience. They are trained to advise you on college-related issues or to make mutually agreed upon referrals for you to other college professionals.

Students intending to complete the program on a part-time basis (less than four courses per semester) will be contacted by their advisor to create an academic plan that will enable them to complete the program. A part-time student must complete the program within five year from the date of program enrollment.

EMPLOYMENT OPPORTUNITIES

Graduates of the Project Management program can expect to find employment in a variety of industries, including construction, engineering, information technology, healthcare, finance, marketing, and many others. Any industry that involves managing projects or teams can benefit from the expertise of a project manager. Project managers can work in both the private and public sectors, in companies of various sizes, and in a range of job titles, such as project coordinator, project manager, program manager, or project director. They may also work as consultants or contractors, offering their services to multiple clients.

ENTRANCE REQUIREMENTS

Graduation from a recognized two- or three-year post-secondary diploma or degree, or a combination of other post-secondary work and industry experience acceptable to the College.

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[1] Job Growth and Talent Gap in Project Management 2017 (pmi.org)
[2] Project Management Manager Salary in Canada | PayScale

Courses

Semester 1

Code	Title	Cr	Le	La
PJ1005	Intro to Project Management	4	3	2
PJ1010	Project Planning - Scope & Quality	4	3	2
PJ1015	PM Software & Excel	3	2	3
PJ1020	Business Operations	3	3	0
PJ1205	PM-Leadership & Teams	4	3	2
PJ1210	PM-Stakeholder Management	4	3	2

Semester 2

Code	Title	Cr	Le	La
PJ2000	Agile Project Management	4	3	2
PJ1215	PM-Schedules & Budgets	4	3	2
PJ1305	Risk & Issues Management	3	2	2
PJ1310	Adv Project Planning & Control	3	3	1
PJ2005	PM-Applied Project	6	4	6

Records and Information Management

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Business and Information Technology

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery
- Online - Asynchronous delivery

PROGRAM DESCRIPTION

This two-year diploma program is designed to provide students with an intense study of records and information theories and practices. Students will obtain hands on experience through simulation exercises to prepare them for employment in the field of Records and Information Management.

The major components of the program include Management and Control of Records, File Management and Information Security, Archives Principles, and Classification Systems. Related courses include Communications, Document Production, Office Management, Bookkeeping, Digital Tools for the Office, and Advanced Electronic Spreadsheets. Students will also receive participatory training with an Electronic Document Management System.

OBJECTIVES

Upon successful completion of the Records and Information Management program, graduates will be able to:

1. Manage records using extensive knowledge of information management principles ensuring quality control and improvement.
2. Demonstrate ability to administer records management systems in accordance with retention policies by verifying accuracy and adherence to current legislation.
3. Design and create business documents using integrated software at an advanced level for effective communication in the office environment.
4. Demonstrate application of the Conference Board of Canada employability skills for successful entry into the workplace.

CAREER OPPORTUNITIES

Graduates of the diploma program may expect to find employment opportunities in public and private sectors including government, oil and gas, healthcare, legal offices, educational facilities, and general offices. As well as acquiring skills and knowledge necessary to become effective employees in today's electronic office, graduates will have extensive knowledge and skills in information protection, management and control of records, confidentiality and security, document production, office management, plus other related areas. Graduates are trained for the following specific positions: information management technician (IM Tech I, II, or III), document control clerk, document control technician, information management coordinator, and archives assistant.

PROGRAM TRANSFERABILITY

The Office Administration programs offer exit points after Year 1 and Year 2.

* Students can graduate at the end of Year 1 with an Office Administration Certificate
* Students graduate at the end of Year 2 with a Records and Information Management Diploma

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Comprehensive Arts and Science Certificate
Effective Academic Year 2025 - 2026:
College Transition Certificate
3. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile)
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

ACCREDITATION

Records and Information Management is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) in all campus locations. ACBSP is the leading specialized accreditation association for business education supporting, celebrating, and rewarding teaching excellence.

Courses

Semester 1

Code	Title	Cr	Le	La
AC1100	Bookkeeping I	4	3	2
CM1100	Writing Essentials	3	3	1
DM1200	Document Production I	6	4	6
EP1110	Introduction to Business	4	4	0
OF1105	Personal and Career Growth	3	2	3

Semester 2

Code	Title	Cr	Le	La
AC2100	Bookkeeping II	4	3	2
CM2110	Business Writing Fundamentals	3	3	0
DM1300	Transcription	4	3	2
DM1210	Document Production II	6	4	6
OF1101	Operational Management	4	3	2

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CP2310	Electronic Spreadsheets	3	2	2
OF1305	Digital Tools for the Office	3	2	2

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
CM2200	Oral Communications	2	2	0
DM2200	Document Production III	6	4	6
OF2100	Career Planning Strategies	4	3	2
RP1100	Introduction to Records Management	3	3	1
RP1200	Archives Principles	2	2	0
RP1301	Document Control Processes	2	2	0
CP1011	File Management & Security	2	1	2

Semester 5

Code	Title	Cr	Le	La
DM2240	Document Production IV	6	4	6
CP2110	Advanced Electronic Spreadsheets	3	2	2
RP1205	Document Management Systems & Records Control	4	4	0
RP1400	Information Security and Procedures	2	2	0
RP2200	Classification Systems	2	2	1
OF2700	Career Readiness	2	2	0

Semester 6 (Intersession)

Code	Title	Cr	Le	La
OJ1930	Work Exposure - RIM	0	0	6 wks

Strategic Human Resource Management

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Business and Information Technology

Locations & Delivery Modes:

- Grand Falls-Windsor - On Campus Delivery
- Prince Philip Drive - On Campus Delivery
- Online - Asynchronous delivery

PROGRAM DESCRIPTION

It's a people thing.

Human resource management is the strategic approach of engaging and supporting employees to create a productive, thriving workplace. The functions of an HR manager can vary across industries, but they typically include recruitment and onboarding, compensation and benefits, training and professional development, compliance and safety, and employee relations.

Our three-year diploma in Strategic Human Resource Management has been designed to provide insight into the theory and practice of effective management in this field. We offer the opportunity to gain powerful skills needed to become effective in the various areas of HR, leading to career options in industrial/labour relations, supervision, occupational health and safety, recruitment, training and development, compensation, human resource planning, attendance and disability management, and dispute resolution.

With us, you will build on fundamental business principles and go beyond, with a combination of theoretical learning and practical experience that focuses on developing critical thinking, communication, and problem-solving skills essential to effective and efficient management.

It is every manager's business to create and administer the programs and processes that improve workplace efficiency and build the employer-employee relationships that will ultimately drive the success of their company's strategy.

Make it your business. Apply now!

Program Highlights

- A six-week work exposure to gain real-world experience
- Transferable credits with CNA's articulation agreements with Cape Breton University, Memorial University (Grenfell), Athabasca University, Griffith University, Northwood University, Okanagan College, Plymouth University, and the University of New Brunswick (Saint John)
- WHIMIS certification

Did you know?

- A great leader is like the captain of a ship – relaying clear purpose and clarity to the crew in the journey ahead.
- Diversity, equity, and inclusion is a major contributor to empowering employees and creating a productive working environment. In fact, when it comes to retaining and securing talent in a competitive labour market, investing in DE&I is critical.[1]
- Work culture leaders must look to the trends and threats on the horizon facing the Canadian workplace
- Studies show that engaging with applicants in-person forges more meaningful connections than online alone.[2]
- Recruitment events offer cost-effectiveness marketing strategies and enable hiring managers to conduct hundreds of micro interviews within the span of a few hours
- Your success at a hiring event will only be as strong as your follow-up

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Demonstrate proficiency in fundamental Human Resource Management concepts, including recruitment and selection, training and development, compensation and benefits, and employee relations
2. Design and implement effective recruitment and selection strategies to attract and retain top talent and design and deliver training and development programs to improve employee skills and enhance organizational performance
3. Foster positive employee relations by understanding employee needs, resolving conflict, and creating a positive workplace culture
4. Develop compensation and benefits programs that align with organizational goals and that are competitive with industry
5. Make responsible and ethical decisions that align with organizational values and effectively communicate human resource strategies and results to various stakeholders.
6. Exhibit the application of employability skills defined by the Conference Board of Canada to facilitate successful entry into the workplace and work collaboratively with team members from diverse backgrounds and skill sets to achieve common human resource goals
7. Design and implement effective performance management systems that align employee goals with organizational objectives while contributing to the development of an organizations strategic plan by identifying and addressing human resource issues that impact organizational goals
8. Demonstrate knowledge of employment law and compliance requirements to ensure that organizational policies and practices meet legal standards

ENTRANCE REQUIREMENTS

Eligibility for admission to Strategic Human Resource Management program requires the applicant to meet one of the following academic criteria:

1. High School

Provincial High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or English 3202 (60% minimum)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Five credits at the 3000 Level

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041
Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Business-Related College Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Students – Admission Requirements and Information

1. High School

i. Proof of senior high school/secondary school Diploma/Certificate with equivalent minimum grades for the required high school courses listed above.

ii. India applicants only – Proof of senior high school/secondary school Diploma/Certificate with an equivalent Grade 10 Mathematics (50% min.) and Business/Commerce Stream.

2. English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

CAREER OPPORTUNITIES

Graduates of this program may obtain employment in a variety of marketing areas such as:

- Clerk IV
- Administrative Officer
- HR Clerks
- HR Admin
- HR Assistant
- Project Officers
- HR Advisor
- Team Lead
- HR Coordinators

ACCREDITATON

Strategic Human Resource Management is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) in all campus locations. ACBSP is the leading specialized accreditation association for business education supporting, celebrating, and rewarding teaching excellence.

PROGRAM TRANSFERABILITY

The Strategic Human Resource Management program offers exit points after Year 1, Year 2, and Year 3.

*Students can graduate at the end of Year 1 with a Business Administration Certificate.

*Students can graduate at the end of Year 2 with a Human Resources Diploma.

*Students graduate at the end of Year 3 with a Strategic Human Resource Management Diploma.

Graduates of the Strategic Human Resource Management program may have the opportunity to transfer credits to institutions/associations such as:

- Cape Brenton University, Sydney, Nova Scotia
- Memorial University of Newfoundland, Grenfell Campus
- Athabasca University, Alberta
- Griffith University, Australia
- Northwood University, Michigan, USA
- Okanagan College, British Columbia
- Plymouth University, UK
- University of New Brunswick, Saint John Campus

Graduates may also wish to further their studies to achieve professional designations with:

- Chartered Professionals in Human Resources (CPHR)
- Canadian Institute of Management (CIM)
- Canadian Professional Sales Association
- Canadian Public Relations Society
- International Personnel Management Association (IPMA) - Canada

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[1] Diversity, equity & inclusion: A new approach to employee benefits to empower your workforce | Canadian HR Reporter

[2] HR News for Canada's HR Leaders | Canadian HR Reporter

Courses

Semester 1

Code	Title	Cr	Le	La
AC1260	Financial Accounting I	5	4	3
CM1240	Business Communications I	3	3	1
HN1230	Human Resource Management I	3	3	1
FN1140	Introduction to Finance	3	3	1
MC1260	Integrated Software Applications	3	2	2
MR1100	Marketing I	4	4	0

Semester 2

Code	Title	Cr	Le	La
AC2260	Financial Accounting II	5	4	3
CM1241	Business Communications II	3	3	1
HN1240	Human Resource Management II	3	3	1
LW1230	Business Law	3	3	0
MR2100	Marketing II	4	4	0
MC1242	Spreadsheet Essentials	3	2	3

Semester 3 (Intersession)

Code	Title	Cr	Le	La
AC2230	Computerized Accounting I	3	2	3
CM2200	Oral Communications	2	2	0

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
CM2300	Report Writing	2	2	0
EC1110	Microeconomics	4	4	0
HN1100	Industrial Relations	3	3	1
HN2130	Recruitment and Selection	3	3	1
HN2150	Training and Development	3	3	1
MA1670	Statistics	4	4	1
MR2300	Marketing Research	4	3	2

Semester 5

Code	Title	Cr	Le	La
AC2600	Managerial Accounting for HRM	4	4	1
HN1400	Occupational Health and Safety	3	3	1
HN2100	Collective Agreement Administration	3	3	1
LW1225	Employment Law	4	4	1

Code	Title	Cr	Le	La
PS2340	Organizational Behaviour	4	4	0
EP2150	Entrepreneurship	3	3	0
SD2200	Work Exposure Orientation	0	1	1

Semester 6 (Intersession II)

Code	Title	Cr	Le	La
OJ1550	Work Exposure - HR	0	0	6 wks

Semester 7

Code	Title	Cr	Le	La
EP2250	Market Feasibility	4	3	2
FN2110	Business Finance	4	4	1
HN2140	Attendance & Disability Management	3	3	1
HN2200	Strategic Compensation & Benefits	3	3	1
MN2600	Strategic Management	3	2	2
HN2195	Inclusion, Diversity & Equity	3	3	0

Semester 8

Code	Title	Cr	Le	La
EP2200	Business Planning	4	2	5
HN2110	Dispute Resolution	3	3	1
HN2215	Human Resource Planning	3	3	1
HN3110	Current Topics in HRM	3	3	1
MN3100	Business Ethics	3	3	1
MN3200	Performance Management	3	3	1

Strategic Leadership and Project Management (International)

Start Date: January 2024

Credential: Post Diploma

Program Length: Two Years

School: Business and Information Technology

Locations & Delivery Modes: TBD

For more information, please contact the Registrar's Office at registrar@cna.nl.ca

PROGRAM DESCRIPTION

Architects of Success.

Strategic leadership is about building and inspiring a strong, collaborative team that works toward the best outcomes for the company. Project management is about designing the blueprint for that success.

All business begins with strategy and requires strong leadership to cultivate talent, determine development needs and build a thriving organizational culture. Combining this skillset with the knowledge and best practices of project management – setting clear accountabilities, planning, monitoring, and reporting – creates clear, organized plans and improves team collaboration.[1]

With this two-year Post Diploma in Strategic Leadership and Project Management you can advance your first credential or work experience to transform your career in this globally relevant, future-focused field.

Applicable to every industry, these techniques and tools will provide you with the knowledge and know-how to successfully implement projects, bring out the best in your teams, and manage the complexities of meeting short-term targets while positioning the organization for sustainable growth and prosperity.

Through your innovative and flexible leadership strategies, you will help turn strategic vision into trackable success for your organization and create a solid framework for your future.

Program Highlights

- The program aligns itself with the PMI® A Guide to the Project Management Body of Knowledge (PMBOK® Guide), Project Management Institute, and heavily utilizes foundational standards and practice frameworks prescribed by the Project Management Institute (PMI)
- Incorporates innovative leadership into current and future business strategies
- Identify how organizational culture impacts leadership success
- Apply key leadership models/behavior styles in different environments
- Utilize technology tools for communication, collaboration, information management, and decision support
- Align a project to the organization's strategic plans and business justification throughout the project management lifecycle
- Apply project management practices to the launch of new programs, initiatives, products, services, and events relative to the stakeholder needs

Did you know?

- According to the report published by RBC RBC-Future-Skills-Report-FINAL-Singles.pdf, Canada is undergoing a demographic transformation requiring modern new-age leadership and project management styles.
- Analysis shows that senior professionals are quickly approaching retirement age and set to exit the workforce, leaving knowledge and leadership gaps across every industry.[2]
- An Indeed job search for Strategic Leadership employment opportunities in November 2022 resulted in over 8,000 employment opportunities nationwide.
- The Project Management Institute (PMI) has stated that by 2027, employers will need 87.7 million people working in project management roles across 11 countries. In Canada alone, nearly 90,000 new project managers will be hired.

- Project managers contribute to a nation's productivity, which supports GDP that in turn contributes to the standard of living.
- The average salary for a Project Management Manager is CA$89,755.[3]

OBJECTIVES

Upon successful completion of this program graduates will be able to:

1. Apply appropriate legal and ethical standards
2. Incorporate innovative leadership into current and future business strategies
3. Identify how culture impacts leadership success
4. Apply key leadership models/behavior styles in different environments
5. Utilize technology tools for communication, collaboration, information management, and decision support
6. Align a project to the organization's strategic plans and business justification throughout the project management lifecycle
7. Apply project management practices to the launch of new programs, initiatives, products, services, and events relative to the stakeholder needs
8. Implement the Project Management Institutes (PMI)® project management knowledge, processes, lifecycle phases, and the embodied concepts, tools, and techniques to achieve project success

ACADEMIC ADVISING

Each student will be assigned an academic advisor to help guide you through the college experience. They are trained to advise you on college-related issues or to make mutually agreed upon referrals for you to other college professionals.

Students intending to complete the program on a part-time basis (less than four courses per semester) will be contacted by their advisor to create an academic plan that will enable them to complete the program. A part-time student must complete the program within five years from the date of program enrolment.

EMPLOYMENT OPPORTUNITIES

Graduates of the Strategic Leadership and Project Management program can expect to find employment in various sectors, including but not limited to, the corporate sector, non-profit organizations, government agencies, consulting firms, the healthcare sector, and the education sector. These organizations often require individuals with strategic leadership skills to manage resources, develop long-term plans, and drive growth, impact, and improvement initiatives.

ENTRANCE REQUIREMENTS

Graduation from a recognized two- or three-year post-secondary diploma or degree, or a combination of other postsecondary work and industry experience acceptable to the College.

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

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[1] What is Project Management and its Benefits? [2023] • Asana

[2] 12 Tips For Developing Next-Gen Leaders As Baby Boomers Retire (forbes.com)

[3] Project Management Manager Salary in Canada | PayScale

Courses

Semester 1

Code	Title	Cr	Le	La
PJ1005	Intro to Project Management	4	3	2
LD1220	Effective Leadership	3	3	1
PJ1015	PM Software and Excel	3	2	3
PJ1020	Business Operations	3	3	0
PS2340	Organizational Behaviour	4	4	0

Semester 2

Code	Title	Cr	Le	La
PJ1205	PM-Leadership & Teams	4	3	2
PJ1210	PM-Stakeholder Management	4	3	2
PJ1215	PM-Schedules & Budgets	4	3	2
PJ1010	Project Planning-Scope & Quality	4	3	2
PJ1305	Risk & Issues Management	3	2	2

Semester 3

Code	Title	Cr	Le	La
MN1210	Organizational Design	3	3	1
PJ1310	Adv Project Panning	3	3	1
EP1320	Entrepreneurship	3	2	2

Semester 4

Code	Title	Cr	Le	La
MN2100	Supply Chain Management	5	4	2
PJ2000	Agile Project Management	4	3	2
MN3105	Applied Ethics	3	3	1
MN2605	Strategic Management for Leaders	3	2	2
MN2410	Workplace Culture & Innovation	3	3	1

Semester 5

Code	Title	Cr	Le	La
PJ2005	PM-Applied Project	6	4	6
PJ2010	PM-Certification Preparation	6	4	6
PJ2015	Orientation to Work Exposure	0	1	0

Semester 6

Code	Title	Cr	Le	La
OJ3050	Work Exposure	0	0	7 wks
	Or			
PR3640	WIL Project	0	0	7 wks

Bachelor of Applied Information Technology - Systems and Network Cybersecurity

Start Date: September

Credential: Applied Degree

Program Length: Four Years

School: Business and Information Technology

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

Note:

Applicants who have a Computer Systems and Networking diploma for CNA (or equivalent), may apply directly to year 3 of the Applied Degree program. Applicants who do not have this diploma should apply to year 1 of Computer Systems and Networking.

PROGRAM DESCRIPTION

Cyber-criminal activity is the fastest-growing crime in the nation and globally. Organizations are challenged with having to detect and respond to cybersecurity breaches as, or before, they happen and employers are in dire need of trained, educated cyber professionals. The Bachelor of Applied Information Technology: Systems and Network Cybersecurity is designed to meet the needs of this rapidly growing field.

Building on the existing two-year Diploma in Computer Systems and Networking, students will have the option to complete an additional two years to obtain a specialized Applied Degree titled: Bachelor of Applied Information Technology: Systems and Network Cybersecurity.
The student will learn how to protect against unauthorized access ensuring confidentiality, integrity and availability of resources shielding an organization from internal and external infiltration and attacks. Hands-on activities will prepare students with the skills to safeguard and monitor IT infrastructures, edge devices, networks, and data. This will be accomplished by:

- Utilizing specialized tools
- Applying information security practices
- Creating incident management policies and procedures; and,
- Implementing security risk management procedures.

These skills will ensure that the individual, and the organization, can effectively respond to dynamic security threats and adversaries.

Students will complete an applied degree that balances the hands-on training and theory required by employers. Courses incorporating personal development, communication, and leadership skills will enable the student to advance their career allowing them to take on more responsibility

OBJECTIVES
The Bachelor of Applied Information Technology: Systems and Network Cybersecurity degree will specialize in the field of Systems and Network Cybersecurity enabling the graduate to:

1. Execute a vision for security aligned with a company's IT strategy
2. Communicate short- and long-term organizational security strategies and policies
3. Design an organization's infrastructure
4. Securely manage an organization's infrastructure
5. Implement security risk management strategies
6. Conduct active and passive network monitoring

7. Analyze the cybersecurity needs of an organization
8. Develop the appropriate safeguards to ensure delivery of critical services
9. Implement the appropriate safeguards to ensure delivery of critical services
10. Create organizational policies and procedures for security incidents
11. Implement policies and procedures for security incidents
12. Utilize forensics software and tools to detect incidents
13. Execute offensive and defensive technologies to protect a network infrastructure
14. Perform continuous network monitoring to provide real-time security solutions
15. Interpret security reports to educate the organization about existing and emerging security risks

Graduates will be positioned to pursue industry certifications such as Cisco certifications, EC-Council certifications and certifications offered by the SANs institute.

EMPLOYMENT OPPORTUNITIES
Graduates of the program will be able to fill roles in industry such as:

- Cyber Security Expert (Defensive)
- IT Security Specialist
- Security Operations Specialist
- Penetration Tester
- Cyber Security Specialist
- Cybersecurity-Security Architect
- Cybersecurity Analyst
- Information Security Advisor
- Cloud Security Analyst

ENTRANCE REQUIREMENTS

Eligibility for admission to Bachelor of Applied Information Technology: Systems and Network Cybersecurity program requires the applicant to meet one of the following four academic criteria:

1. High School
Provincial High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or English 3202 (60% minimum)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Five credits at the 3000 Level

2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with Business-Related College Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Applicants with Adult Basic Education (Level III) Graduation with a different profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the educational prerequisites for this program, must be at least 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Eligibility for direct admission to Year-3 of the Bachelor of Applied Information Technology: Systems and Network Cybersecurity program requires the applicant to meet the following academic criteria:

Completion of the College of the North Atlantic's Computer Systems and Networking (CSN) Diploma or the Computing Systems Engineering (CSE) Diploma or equivalent program provided they:

1. Have graduated within the last five (5) academic years from date of application

or:

2. Have graduated previous to the last five (5) academic years and have recent related and verifiable experience in the industry

Graduation from a recognized College or University with a diploma or degree in the area of Information Technology with a concentration in operating systems, networking and infrastructure may also be considered for advanced standing. A combination of other post-secondary and industry experience acceptable to the college as an entrance requirement will be considered on a case-by-case basis.

Courses

Semester 1

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
MA1521	Applied Mathematics for CSN	3	3	1
CP1923	Computer Hardware and Troubleshooting I	4	3	3
CR1107	Network Fundamentals	4	3	3
CR1020	Desktop Application Support	3	2	2
CP3125	Command Line and PowerShell	3	2	2
CR1120	Introduction to the Field of IT and Ethics	0	1	0

Semester 2

Code	Title	Cr	Le	La
CM1401	Technical Report Writing II	3	3	0
CR1030	Linux Server Administration	3	2	3
CP1927	Computer Hardware and Troubleshooting II	4	3	3
CP1465	Windows Server Administration	4	3	2
CR2402	Switching, Routing & Wireless	4	3	3
CR1260	Client Service for the IT Industry	2	2	1

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CR3456	Scripting with Bash	3	2	2
CR2511	Advanced Linux Server	3	2	3
EP1130	Business for Information Systems	3	3	0

The Lecture and Lab hours per week are based on a 15 week semester. In intersession, the Lecture and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
CM2200	Oral Communications	2	2	0
CP2290	Advanced Windows Enterprise Server	3	2	3
CR2231	Microsoft Exchange Server	4	3	3
CR2903	Enterprise Network Security & Automation	4	3	3
CP2730	Project Management and Analysis	3	2	2
CR2242	Information Systems Security	4	3	2

Semester 5

Code	Title	Cr	Le	La
CR2950	Emerging Trends in IT Infrastructure	3	2	2
CR2252	Intro to Amazon Web Services	4	3	3
CR2265	Virtualization	4	3	2
CR2130	Enterprise Client Management	4	3	2
CR2970	Capstone Project	4	3	2
CR2270	CSN WT Orientation	0	2	0

Semester 6

Code	Title	Cr	Le	La
WT1185	Work Term	5	0	15 wks

Note: Students may graduate at the end of Year 2 with a Computer Systems & Networking Diploma.

Semester 7

Code	Title	CU	Cr	Le	La
CR4100	Foundations of InfoSec	3	3	2	2
CR4105	OS Security: Windows	3	4	3	2
CR4111	OS Security: Linux	3	4	3	2
CR4115	Network Security I	3	3	2	2
CP1855	Introduction to Programming with Python	3	6	5	3

Semester 8

Code	Title	CU	Cr	Le	La
CR4120	Management of InfoSec	3	3	2	2
CR4200	Wireless & Mobile Security	3	4	3	2
CR4205	Virtualization and Cloud Security	3	4	3	2
CR4210	Network Security II	3	4	3	2
MN1520	Supervisory Leadership	3	4	4	0

Semester 9

Code	Title	CU	Cr	Le	La
CR4215	Defensive/Offensive Security I	3	4	3	2
CP4450	Research and Statistics	3	3	3	0
PD4400	Work Term II Seminar	0	0	1	0

The Lecture and Lab hours per week are based on a 15 week semester. In intersession, the Lecture and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 10

Code	Title	CU	Cr	Le	La
WT4300	Work Term II	6	5	0	15 wks

Semester 11

Code	Title	CU	Cr	Le	La
CR4305	Defensive/Offensive Security II	3	4	3	2
CR4220	Incident Response	3	4	3	2
CR4310	Applied Cybersecurity Project	3	4	3	3
EP4000	Entrepreneurship	3	4	3	2
Elective		3	3	3	0

Computer Systems and Networking

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Business and Information Technology

Locations & Delivery Modes:

- Corner Brook - On Campus delivery
- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

The Computer Systems and Networking two-year program focuses on the skills, competencies and attitudes required to research, design, install and maintain computer systems and network infrastructure in a highly available and secure computing environment. The program combines theoretical and practical learning experiences in a team-oriented setting encompassing front-line computer systems, back-end server environments and the local and wide-area network infrastructure. The Infrastructure Support industry is customer-oriented and requires a high level of customer interaction and professionalism. These critical skills are developed through a number of courses in this program.

The program includes course work, team-oriented projects, and a final 15-week work term focusing on areas of technical learning, team building, communications, interpersonal skills, ethics, and best practices. This diversity provides opportunities for the student to acquire the skills, professionalism and adaptability required to succeed in the dynamic and challenging field of Information Technology infrastructure support.

The capstone project will enable the student to demonstrate the application of knowledge and skills developed throughout the program by performing an in-depth study of a problem, design, or technological application and fully documenting and presenting the findings.

OBJECTIVES

The aim of the Computer Systems and Networking program is to graduate a student with the theoretical and practice skills in information technology infrastructure support. This will enable her/him to:

1. Provide computer technical assistance, support, and advice to customers and other users
2. Install, modify and repair computer hardware and software
3. Support local-area networks (LAN), wide-area networks (WAN), network segments, and Internet and intranet systems
4. Design an organization’s computer system in which all of the components including computers, the network, and software, work properly together
5. Plan, coordinate, and implement the organization’s information security policy
6. Interpret and effectively apply industry procedures and policies in the workplace
7. Incorporate the social, interpersonal and communication skills necessary to be a productive member of a team
8. Apply the self-awareness and reflective skills required to create, evaluate and modify the personal growth and career plans

College of the North Atlantic is a Cisco Networking Academy. Students have the opportunity to complete courses in the Academy program which provide a strong foundation in computer networking knowledge and skills utilizing the equipment of the industry's leading provider. As well, College of the North Atlantic is the only accredited Cisco Academy Instructor Training Center in Atlantic Canada.

EMPLOYMENT OPPORTUNITIES

Interconnected computing systems are an integral part of every business and the Computer Systems and Networking graduates are well suited to a broad range of computing infrastructure roles. These roles can be included, but not limited to:

Computer Support Specialist
Network Specialist
Computer Support Technician
LAN Team Member
I.T. Support Technician
Help Desk Technician
Server Support Analyst/Technician
Help Desk Analyst
Technology Support Analyst

ENTRANCE REQUIREMENTS

Eligibility for admission to Computer Systems and Networking program requires the applicant to meet one of the following four academic criteria:

1. High School

Provincial High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or English 3202 (60% minimum)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Five credits at the 3000 Level

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
Math Fundamentals: MA1040, MA1041
Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Business-Related College Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Applicants with Adult Basic Education (Level III) Graduation with a different profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the educational prerequisites for this program, must be at least 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
MA1521	Applied Mathematics for CSN	3	3	1
CP1923	Computer Hardware and Troubleshooting I	4	3	3
CR1107	Network Fundamentals	4	3	3
CR1020	Desktop Application Support	3	2	2
CP3125	Command Line and PowerShell	3	2	2
CR1120	Introduction to the Field of IT and Ethics	0	1	0

Semester 2

Code	Title	Cr	Le	La
CM1401	Technical Report Writing II	3	3	0
CR1030	Linux Server Administration	3	2	3
CP1927	Computer Hardware and Troubleshooting II	4	3	3
CP1465	Windows Server Administration	4	3	2
CR2402	Switching, Routing & Wireless	4	3	3
CR1260	Client Service for the IT Industry	2	2	1

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CR3456	Scripting with Bash	3	2	2
CR2511	Advanced Linux Server	3	2	3
EP1130	Business for Information Systems	3	3	0

The Lecture and Lab hours per week are based on a 15 week semester. In intersession, the Lecture and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
CM2200	Oral Communications	2	2	0
CP2290	Advanced Windows Enterprise Server	3	2	3
CR2231	Microsoft Exchange Server	4	3	3
CR2903	Enterprise Network Security & Automation	4	3	3
CP2730	Project Management and Analysis	3	2	2
CR2242	Information Systems Security	4	3	2

Semester 5

Code	Title	Cr	Le	La
CR2950	Emerging Trends in IT Infrastructure	3	2	2
CR2252	Intro to Amazon Web Services	4	3	3
CR2265	Virtualization	4	3	2
CR2130	Enterprise Client Management	4	3	2
CR2970	Capstone Project	4	3	2
CR2270	CSN WT Orientation	0	2	0

Semester 6

Code	Title	Cr	Le	La
WT1185	Work Term	5	0	15wks

Data Analytics

Start Date: September

Credential: Post Diploma

Program Length: Two Semesters

School: Business and Information Technology

Locations & Delivery Modes:

- Online - Asynchronous delivery

This program will be delivered in block format. Please note courses highlighted with an * will be delivered Online-Synchronous.

PROGRAM DESCRIPTION

Decisions powered by data.

The field of data analytics has rapidly emerged as a critical component of businesses across all industries, with an ever-increasing volume of data generated each day. Professionals in data analytics are responsible for using data to uncover insights that can inform important business decisions and improve overall performance. As a result, there is a high demand for skilled professionals who can work with data and extract actionable insights.

This two-semester data analytics program has been designed to equip you with the necessary skills and knowledge to excel in the field of data analytics. The program is tailored for individuals seeking to launch a career in data analytics, as well as professionals who seek to upskill or re-skill in data analytics.

The program is structured around two semesters, which are carefully curated to cover a comprehensive range of topics in data analytics. You will begin with an overview of the field and its impact on business performance and decision-making processes. Throughout the program, you will learn how to create effective data-driven strategies that can overcome challenges and capitalize on opportunities. You will also gain hands-on experience using a variety of tools and technologies commonly used in the industry and various business analytics reporting tools. You will learn how to manipulate, transform, model, and visualize data for analytical purposes and create interactive dashboards, graphs, and visualizations to effectively communicate insights from data.

You will have access to a range of resources, including hands-on exercises, case studies, and real-world projects designed to enhance your understanding and application of data analytics concepts and techniques.

The program includes an industry-specific capstone project, where you will apply your knowledge and skills to solve a real-world problem while honing your critical thinking, problem-solving, project management, and presentation skills.

Program Highlights

- Transfer (and transform) data from different platforms into usable contexts
- Convert a data analytic problem and related information into a proper representation
- Identify the appropriate methodologies for analysis based on attributes of the available datasets
- Adhere to ethical practices for the collection and storage of data
- Communicate results of data analysis in written, oral and visual form
- Learn to select the appropriate methods and tools for data analysis in specific organizational contexts
- Become proficient with specialist data visualization packages and tools

Did You Know?

- Global expert in web analytics, Avinash Kaushik, wrote the definition in 2007 for data analytics as, *"…the analysis of qualitative and quantitative data from your business and the competition to drive a continual improvement of the online experience that your customers and potential customers have which translates to your desired outcomes (both online and offline)."*
- The ICTC forecasts Canada's demand for digital talent will reach 2.6 million by 2026 with the addition of 250,000 new jobs, with data-driven roles leading the pack.
- According to a recent KPMG global survey, organizations are investing heavily in technology to build longer-term competitiveness and operational resilience.[1]
- According to research by global talent leader Deloitte, digital transformation drives financial performance.[2]

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Assist in evaluating the impact of data analytics on business performance and decision-making processes
2. Prepare reports for both internal and external audiences using various business analytics reporting tools
3. Use tools to prepare, transform, model, and visualize data
4. Create interactive dashboards, graphs, and visualizations to effectively communicate insights from data
5. Utilize measures of central tendency and data visualization techniques to compare datasets and draw insights from data
6. Write programs to solve practical problems in a programming language commonly used for general-purpose scripting and software development
7. Utilize version control in a collaborative software development environment
8. Use databases to retrieve, insert, delete, and update data stored in relational database systems
9. Manipulate, reshape, summarize, and analyze data
10. Create data visualizations to gain insights from various sources, and summarize data
11. Apply supervised, and unsupervised learning to create predictive models

EMPLOYMENT OPPORTUNITIES

The data analytics profession is a dynamic and growing field that offers many opportunities for skilled workers. The demand for data analytics is expected to increase in the coming years, as more organizations rely on data to make informed decisions and improve their performance. These roles can be included, but not limited to:

- Data Analyst
- Applications Analyst
- Technical Designer
- Data & Research Analyst
- Business Intelligence Analyst
- Business Data Analyst
- Business System Analyst

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet the following academic criteria:

Graduation from a recognized College or University with a two or three-year diploma or degree. A combination of post-secondary and industry experience acceptable to the college will be considered on a case-by-case basis.

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[1] Going digital, faster in Canada - KPMG Canada (home.kpmg)
[2] 2020 Digital transformation survey | Deloitte Insights

Courses

Semester 1

Code	Title	Cr	Le	La
CP1020	Principles of Data Analysis	3	3	0
CP1025	Data Analysis: Excel	4	3	3
CP1030	Statistics for Data Analysis	3	3	1
CP1035*	Programming Foundations	4	3	3
CP1045*	Visualization, ETL & Modeling	4	3	4

Semester 2

Code	Title	Cr	Le	La
CP2015	BI & Visualization	3	2	3
CP2020*	Machine Learning	3	2	3
CP2025	Data Gathering	2	1	2
CP2035*	Applied Data Analytics	4	2	5
CP2045	Capstone	3	2	3

Note:

Semester 1

Weeks 1-6 - Online-Synchronous Tuesday & Thursday, 6 p.m. to 9 p.m.
Weeks 7-9 - Online-Asynchronous
Weeks 10-15 - Online-Synchronous Tuesday & Thursday, 6 p.m. to 9 p.m.

Semester 2

Weeks 1-4 - Online-Asynchronous
Weeks 5-13 - Online-Synchronous Tuesday & Thursday, 6 p.m. to 9 p.m.
Weeks 14-15 - Online-Asynchronous

Enterprise Web Development

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Business and Information Technology

Locations & Delivery Modes:

- Online - Synchronous delivery

PROGRAM DESCRIPTION

The web development and e-commerce fields are experiencing unprecedented growth as companies shift their businesses online. Professionals in this industry use software development skills and business knowledge to build, program and manage websites to attract customers and increase e-commerce revenue. The need exists for a technology program that focuses on a combination of Business and IT training to prepare graduates for the increased automation of the global marketplace.

The six-semester Enterprise Web Development diploma is an entry-level program designed for students to develop the competencies to program, design, configure, and maintain secure transaction-based websites on the Internet. Students will be able to build a web presence utilizing different frameworks and software to create a professional, efficient website where clients and customers can interact.

Students will learn how to utilize customer relationship management (CRM) systems, content management systems (CMS), social media management systems and enterprise resource planning (ERP) systems to strengthen and streamline how end-to-end transactions occur in both large corporations and small-medium sized companies. Students will be able to monitor the day-to-day activity and overall performance of websites to improve user experience and increase traffic while executing ad campaigns on search engines using the latest digital marketing tools and strategies.

The applied e-commerce website project in semester six (6) will give students the opportunity to demonstrate the application of knowledge by conducting an in-depth study of a problem, design, or industry project and documenting, and presenting the results. The final semester also includes a seven-week work exposure which gives the students an opportunity to apply their knowledge and skills in the workplace.

OBJECTIVES

Upon successful completion of the Enterprise Web Development diploma program, graduates will be able to:

1. Execute a vision for commerce sites aligned with a company's business strategy
2. Apply effective communication strategies to written and verbal output
3. Utilize critical thinking skills in analysis of day-to-day tasks
4. Develop secure e-commerce web software platforms
5. Maintain e-commerce websites and software platforms
6. Ensure e-commerce sites are properly integrated with backend systems including pricing inventory and customer relationship databases
7. Enable business transactions to be conducted on commercial websites
8. Implement a website solution based upon a set of business requirements or client specifications
9. Utilize content management systems (CMS) integrating databases and scripting languages
10. Develop data-driven websites for multiple platforms in accordance with best practices, security, usability, accessibility, and personalization
11. Implement customer relationship management (CRM) and social media management systems
12. Integrate enterprise resource planning (ERP) solutions
13. Implement UI/UX (User experience design/User interface design) cross-browser compatibility
14. Create a web presence utilizing programming languages such as Python, HTML, CSS, JavaScript, and API's

ENTRANCE REQUIREMENTS

Eligibility for admission to the Enterprise Web Development program requires the applicant to meet one of the following four academic criteria:

1. High School

Provincial High School Graduation Certificate with 60% overall average in the following (or equivalent):
i. English 3201 or English 3202(60% minimum)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. 5 credits from 3000 Level

Note: High School students who participated in the Technology Career Pathways (TCP) program can apply for the following exemptions:
i. If MI1850 was completed as part of the TCP program an exemption can be granted for CP1855.
ii. If MI1890 was completed as part of the TCP program an exemption can be granted for CP1895.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041
Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Business-Related College Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
CP1855	Introduction to Programming with Python	6	5	3
MA1905	Problem Solving for IT	4	4	0
CR1511	Website Development	3	2	2

Code	Title	Cr	Le	La
EP1130	Business for Information Systems	3	3	0
CP1212	Introduction to JavaScript	3	2	2

Semester 2 (Winter)

Code	Title	Cr	Le	La
CM1401	Technical Report Writing II	3	3	0
CP3510	Relational Database Design	3	2	2
CP1895	Advanced Python Programming	4	3	3
CP1501	Business & E-Commerce	3	2	2
CP1292	JavaScript and NodeJS	3	2	2
CP1410	E-Commerce Web Analysis and Design	4	3	2

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CP1505	Designing Effective E-Commerce Sites	4	3	3
CP1580	Using Internet APIs	3	2	2

Semester 4 (Fall)

Code	Title	Cr	Le	La
CP1135	SD: Technology & Tools	3	2	3
CP2426	PHP	3	2	3
CR2805	Application Security	3	3	0
CP2010	Frameworks	3	2	3
CP2070	Social Media Management	3	2	2
CP2030	AWS Cloud Development	3	2	2

Semester 5 (Winter)

Code	Title	Cr	Le	La
CP2080	Salesforce Development	4	3	2
CP2205	Advanced PHP Laravel	3	2	3
CP2075	Digital Analytics	3	2	3
CP3105	Word Press	3	2	3
CP3155	UI/UX Design	3	2	3

Semester 6 (Spring)

Code	Title	Cr	Le	La
PR3000	Applied E-Commerce Website Project	3	2	3
CP4475	Emerging Trends and Innovation	3	2	2
CP2085	Orientation to the EWeb Work Exposure	0	1	0
OJ3106	EWeb Work Exposure	0	0	7 wks

Semester 6 – Spring will be 14 weeks. Students will complete PR3000, CP4475, and CP2085 in the first seven (7) weeks of the semester. The seven (7) week EWeb Work Exposure (OJ3106) will commence following successful completion of these three (3) courses.

Information Management

Start Date: September

Credential: Post Diploma

Program Length: One Year

School: Business and Information Technology

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

A career at your command

Did you know that professionals spend up to 50 per cent of their time searching for information? Today's workplace relies on the accurate, efficient and secure management of information to meet operational demands, demonstrate legal compliance and maintain competitive advantage. Information Management (IM) is the processes and technology that controls the storage, structure, processing, access and usage of the information required for organizational and business intelligence.

IM professionals organize and manage all activities involved in the information life cycle, automating processes, reducing operating costs and improving efficiencies for an organization's bottom line. They have the technical competencies needed to effectively analyze business processes and utilize IM tools and systems.

In CNA's three-semester online Information Management post-diploma program, we provide the training ground for you to build a career in this field. You will be able to implement IM best practices in training and consultation to ensure everyone in the organization adheres to regulatory standards, including the security, legal and privacy regulations required. The program will prepare you to meet the demand in today's rapidly changing world, and in the last semester you will have a chance to apply your knowledge in a seven-week work exposure and a capstone project. The future is at your fingertips!

Program Highlights:

- Only IM post-diploma program in Newfoundland and Labrador
- Engagement with industry experts and professional organizations
- The most current knowledge in the field, designed and delivered online by industry experts
- Includes national and international standards and important governance and compliance regulations
- Learn how to implement information management policies and programs transforming companies to compete in a global environment
- You are leveraging your first credential – whether it is a diploma or degree – to launch a new career in Information Management

Did You Know?

- Information helps businesses gain a competitive advantage
- Demand for IM professionals is growing for both public and private sectors and our graduates are filling those roles
- There is an increasing need to incorporate privacy and security in business processes
- Instructors are members of industry organizations such as Association of Records Management and Administrators (ARMA) and International Association of Privacy Professionals (IAPP)

OBJECTIVES

The objective of the Information Management program is to develop graduates with the ability to:

1. Conduct themselves in an ethical and professional manner
2. Participate as a member of a team providing information management services

3. Manage all activities involved in the information life cycle
4. Analyze information to inform the decision-making processes in order to support the organization
5. Advocate the importance of and advise on Information Management policies and procedures throughout the organization through education, training and consultation
6. Maximize technology to manage information in an efficient and effective manner

ACADEMIC ADVISING
Each student will be assigned an academic advisor to help guide you through the college experience. They are trained to advise you on college-related issues or to make mutually agreed upon referrals for you to other college professionals.

Students intending to complete the program on a part-time basis (less than four courses per semester) will be contacted by their advisor to create an academic plan that will enable them to complete the program. A part-time student must complete the program within five years from the date of program enrolment.

EMPLOYMENT OPPORTUNITIES
Graduates of the Information Management program can expect to find employment as Information Management Analysts, Records Analysts, and Records Management Consultants in industries such as oil & gas, healthcare and in government agencies.

Due to the nature of this field, employers may require a clear Certificate of Conduct from the Royal Newfoundland Constabulary (RNC), the Royal Canadian Mounted Police (RCMP) or local provincial/municipal police force prior to hiring.

ENTRANCE REQUIREMENTS
Graduation from a recognized two or three year post-secondary diploma or degree, or a combination of other post-secondary work and industry experience acceptable to the College.

Courses

Semester 1

Code	Title	Cr	Le	La
OP1390	Information Management I	4	3	2
IM2100	IM Business Principles & Practices	4	3	2
CR1050	IM Computer Technologies	3	2	2
LW1280	IM Legal & Regulatory Framework	3	3	0
IM1370	Information Analysis & Communication	4	4	0
PR2700	Project Management	4	3	2

Semester 2

Code	Title	Cr	Le	La
OP1401	Information Management II	4	3	2
CP3470	IM Systems Analysis and Design	6	5	3
OP1600	Electronic Records Management	4	3	2
OP1410	Information Life Cycle	4	3	2
IM2110	Information Privacy and Security	4	3	2

Semester 3

Code	Title	Cr	Le	La
CR3540	Capstone Project	4	0	6
IM2115	IM Strategic Documentation	3	3	0
IM3010	Orientation to the IM Work Exposure	0	1	0
OJ3040	IM Work Exposure	0	0	7 wks

Note: CR3540 Capstone Project, IM2115 IM Strategic Documentation and IM3010 Orientation to the IM Work Exposure will be completed in the first seven (7) weeks of the semester. OJ3040 IM Work Exposure will be completed in the second seven (7) weeks of the semester.

Software Development (Co-op)

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Business and Information Technology

Locations & Delivery Modes:

- Corner Brook - On campus delivery
- Prince Philip Drive - On campus delivery

PROGRAM DESCRIPTION

The Software Development (Co-op) three-year program focuses on the competencies required to design, implement, and maintain software systems that operate in a secure business networked environment containing stationary and mobile devices. The program combines theoretical and practical learning experiences in a team-oriented setting.

The program includes course work, team projects, and three co-op placements. The program focuses on application development, database design and development, systems analysis, team building, communications, interpersonal skills, ethics, and best practices. This diversity provides opportunities for the student to acquire the skills, professionalism and adaptability required to succeed in the dynamic and challenging field of programming.

This is a co-operative education program that offers the student work term placements in May of the first academic year, in January of the second academic year and in September of the third academic year.

OBJECTIVES

Graduates of the Software Development (Co-op) program will have the knowledge and skills that will allow them to:

1. Work effectively and efficiently in the Information and Communication Technology industry
2. Be knowledgeable of the ethics, professionalism, safety and diversity in the work environment
3. Demonstrate effective communications skills, a capacity for leadership, adaptability, responsible teamwork, quality assurance and co-operation in problem solving
4. Write and maintain secure, customized web applications based on user requirements
5. Analyze, design, develop, test, deploy and maintain full stack applications
6. Possess practical programming skills enabling them to function as an entry level programmer in an object-oriented, database-oriented business programming environment
7. Have in-depth understanding of object-oriented programming practices including database layer development on all dominate mobile and cloud ecosystems
8. Understand and apply application security best practices when developing applications

EMPLOYMENT OPPORTUNITIES

Software Development graduates may find employment in both the private and public sectors.

Graduates of the program will be able to fill roles in industry such as:

- Application Developer
- Business Developer
- Software Developer
- Web Developer
- Computer Programmer
- Mobile App Developer
- Database Developer

ENTRANCE REQUIREMENTS

Eligibility for admission to Software Development (Co-op) program requires the applicant to meet one of the following four academic criteria:

1. High School

Provincial High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or English 3202(60% minimum)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. 5 credits from 3000 Level

Note: High School students who participated in the Technology Career Pathways (TCP) program can apply for the following exemptions:
i. If MI1850 was completed as part of the TCP program an exemption can be granted for CP1850.
ii. If MI1890 was completed as part of the TCP program an exemption can be granted for CP1890.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math Fundamentals: MA1040, MA1041

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Business-Related College Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, and 3101C
Applicants with Adult Basic Education (Level III) Graduation with a different profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years of age or older, and have been out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
CP1520	Web Development	3	2	2
CP1850	Procedural Programming	6	5	3
MA1905	Problem Solving for IT	4	4	0
CP1135	SD: Technology & Tools	3	2	3
CR1130	Intro to the Field of SD	0	1	0

Semester 2

Code	Title	Cr	Le	La
CM1401	Technical Report Writing II	3	3	0
CP1210	JavaScript	4	3	2
CP1935	Systems Analysis I	4	3	2
CP1895	Advanced Python Programming	4	3	3
CP1556	Database Management Systems I	3	2	2
PD1105	Prof. Development I	1	1	0

Semester 3

Code	Title	Cr	Le	La
WC1155	Work Term I	5	0	0

Semester 4

Code	Title	Cr	Le	La
EP2415	Management Information Systems	4	4	0
CM2200	Oral Communications	2	2	0
CP3417	Database Management Systems II	4	3	2
CP2280	Object-Oriented Programming in Java	4	3	3
CP1946	Systems Analysis II	3	2	3
CP1295	Advanced JavaScript	3	2	2
PD2310	Prof. Development II	1	1	0

Semester 5

Code	Title	Cr	Le	La
WC2151	Work Term II	5	0	0

Semester 6

Code	Title	Cr	Le	La
CP4471	Emerging Trends in Software	3	2	2
CP2561	Java Programming II	4	3	3
CP4282	Programming for Mobile Devices	3	2	3
CP2315	Cloud Developer	4	3	3
CP4485	Emerging Trends in DB and Web Dev	3	2	2

Semester 7

Code	Title	Cr	Le	La
WC3151	Work Term III	5	0	0

WC2151: 12-16 weeks in duration

Semester 8

Code	Title	Cr	Le	La
CR2805	Application Security	3	3	0
CR2980	Capstone Project	4	3	2
CP1370	Distributed Computing	4	3	3
CP3010	Server-Side Programming	4	3	2
PD2140	Work Term Seminar	0	1	0
CP3566	Applied Java Programming	4	3	2

School of Engineering Technology

Architectural Engineering Technology

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Engineering Technology

Locations & Delivery Modes:

- Ridge Road - On Campus delivery

PROGRAM DESCRIPTION

The foundation for changing landscapes.

Buildings are an exciting and vital part of our lives. Not only do they provide shelter for living and enterprise, but they must do so in a way that provides safe, healthy, and comfortable environments.

There is major development underway toward sustainability and the management of one's carbon footprint, opening doors to the exciting creation of resources and infrastructure such as biomimetic materials, green rooftops, and other resilient systems.

These advancing technologies and innovations bring vast opportunities and have created the need for multidisciplinary teams in building technology – including architectural engineering technologists.

And we've got you covered! The foundation of our Architectural Engineering Technology program was developed based on input from industry experts in the design and construction of buildings. Our programming is structured to meet the rising need for modern, exciting, complex configurations that can also be built and operated within given cost guidelines.

The opportunities for employment are as vast as they are exciting! As part of a team of specialists, you may find employment with architectural firms, engineering firms, government departments, crown corporations, construction firms, manufacturing industries, or supply chain and sales companies. Some of our graduates work in the fields of oil & gas, energy, aerospace, mining, shipbuilding, manufacturing, and health services.

Start training today for your own ground-breaking career!

Program Highlights

- Accredited by Technology Accreditation Canada (TAC)
- Graduates are internationally recognized as technologists under the Sidney Accord
- Work Integrated Learning (WIL) experience in the form of a co-op work term or relevant WIL project, practical labs, projects, and an applied research capstone project in Year 3 of the program
- Seamless transfer to a Bachelor of Technology degree, through the Memorial University of Newfoundland and Labrador.

Did you know?

- Graduates of this program may obtain employment in a wide variety of industries. Previous graduates have been successful in obtaining employment with oil & gas, energy, servicing, aerospace, mining, ship building, manufacturing, and health services industries.
- Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.
- Graduates earn between $55,000 CAD to $130,000 CAD per year with a median salary of CA$85,000 after 10 years' experience. (AETTNL Salary Survey, 2020)
- The Sydney Accord, administered by the International Engineering Alliance, is an international agreement between the bodies responsible for accrediting engineering technologist qualification programs in each of the signatory countries. It recognizes the substantial equivalency of programs accredited by those bodies and

recommends that graduates of accredited programs in any of the signatory countries be recognized by the other countries as having met the academic requirements for entry to the practice of engineering technologist

ACCREDITATION

This program is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists.
The academic credentials of graduates of accredited technology programs are recognized internationally by the signatories of the Sydney Accord. This provides graduates of the program with both national and international mobility for work and/or study.

OBJECTIVES

As a graduate of the Architectural Engineering Technology program, graduates will have the knowledge and skill that will allow him/her to:

1. Prepare complete sets of architectural drawings, building details, and related documentation for residential and commercial construction/renovation projects using 3-D computer graphics and building information modelling software.
2. Apply the principles of building science and construction engineering to analyze and solve technical problems for construction projects.
3. Analyze and coordinate relationship between architectural, structural, mechanical, electrical, and environmental building systems.
4. Apply the principles of project management to planning, scheduling, and monitoring of project development.
5. Communicate effectively with clients, contractors, other building professionals and municipal authorities during the design and construction of the building project.
6. Apply knowledge of applicable codes, zoning bylaws, and regulations to the building project.

CURRICULUM

General education consisting of Project Management Skills (theoretical and applied), Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrical and Magnetic Theory, Engineering Graphics, Engineering Technology Awareness.

Specific education in various aspects (theory and principles) of the Architectural profession including building services, site supervision, project management and construction management.

Practical education in various aspects of working drawings, architectural utility systems, and architectural graphics layouts.

CAREER OPPORTUNITIES
The need is growing for people trained in building technology. Graduates may find employment in a variety of areas such as architectural firms, engineering firms, government departments, crown corporations, construction firms, manufacturing industries, and supply and sales companies.

Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Architectural Engineering Technology program are required to obtain a certificate of completion of Standard First Aid/Heart Start and WHMIS/OHS over their three-year period of studies.

***Students should be aware that additional fees may apply to external certifications.**

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. High School

High School Graduation Certificate with 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for this exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. College Transition

College Transition Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1025, BL1026
b. Introductory Chemistry: CH1035, CH1036
c. Introductory Physics: PH1055, PH1056
Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
PH1100	Physics	4	3	2
EG1170	Engineering Graphics & CAD	3	2	4
MA1700	Mathematics	4	3	2
CM1400	Technical Report Writing I	3	3	0
DR1405	Architectural Technology	3	3	0
CF2615	Building Materials I	2	2	1
CG1700	Environmental Design	2	2	0

**Admission into the appropriate Mathematics course will be decided by the grade in high school math.*

Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from MA1700 Mathematics. Students must apply for the exemption.

Note: Students may apply for an exemption from MA1700 provided they meet the appropriate high school level in Mathematics as noted above.

Semester 2 (Winter)

Code	Title	Cr	Le	La
PH1101	Physics	4	3	2
EG1255	Architectural Graphics I	3	2	3
MA1101	Advanced Mathematics	5	5	0
CM1401	Technical Report Writing II	3	3	0
BU2410	Building Science I	3	3	0
CF2616	Building Materials II	2	2	1
BU2130	Service Learning	2	2	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
EG1315	Architectural Graphics II	2	1	2
DR2150	Architectural Drawings	2	1	3
BU2250	Electrical Systems	2	1	3
CG1310	Commercial Construction	2	2	0

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4 (Fall)

Code	Title	Cr	Le	La
EG2255	Architectural Graphics III	2	1	4
MA2100	Mathematics – Calculus	5	5	0
CM2800	Oral/Written Communication Skills	3	3	0
DR3110	Working Drawings I	6	4	6
BU2300	Building Codes I	2	2	0
BU2411	Building Science II	3	3	0

Semester 5 (Winter)

Code	Title	Cr	Le	La
EG2350	Architectural Graphics IV	2	1	3
MA1530	Statistics	2	2	1
DR3111	Working Drawings II	6	4	6
CG1800	Building Site Development	4	3	4
BU2260	Plumbing Systems	2	2	1
BU2301	Building Codes II	2	2	0

Semester 6 (Spring)

Code	Title	Cr	Le	La
WC1160	Co-op Work Term	5	0	0
OR				
PR1110	AET Work Integrated Project	5	5	0

Semester 7 (Fall)

Code	Title	Cr	Le	La
BU2270	HVAC	5	4	3
CF3620	Building Materials III	2	2	0
CG3230	Procurement & Contract Administration	5	5	0
DR4120	Working Drawings III	5	3	7
LW1610	Management & Construction Law	2	2	0
PR2750	Capstone Project I (Seminar)	0	1	0

**The credit hour from PR2750 Capstone Project I (Seminar) in Semester 7 is allotted to PR2751 Capstone Project II in Semester 8.*

Semester 8 (Winter)

Code	Title	Cr	Le	La
BU3300	Building Specifications	3	3	1
CF3440	Structural Design	4	3	2
CG3320	Estimating for Buildings	4	3	3
DR4111	Working Drawings IV	4	2	6
PR2751	Capstone Project II	4	3	0

Chemical Process Engineering Technology (Co-op)

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Engineering Technology

Locations & Delivery Modes:

- Ridge Road - On Campus delivery

PROGRAM DESCRIPTION

Chemical Process Engineering Technologists play a vital role in the monitoring, operation, control and maintenance of equipment in a variety of industries including oil & gas. The program equips graduates with both the knowledge and practical skills necessary to begin their career as competent process operators and chemical engineering technologists.

The program covers safe work practices, process operations, chemical engineering principles and regulatory processes, process stream analysis, instrumentation and process control. Students will also acquire valuable work experience through the completion of a co-op work term.

Upon completion of this program graduates may choose to further their education by completing a bachelor degree in technology or engineering at one of several institutions that have articulation agreements with College of the North Atlantic.

ACCREDITATION

This program is currently accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists.

The academic credentials of graduates of accredited technology programs are recognized internationally by the signatories of the Sydney Accord. This provides graduates of the program with both national and international mobility for work and/or study.

OBJECTIVES

As a chemical process engineering technologist, the graduate will have the knowledge and skills that will allow him/her to:

1. Assist in safe and efficient design, operation, troubleshooting, and maintenance of chemical process equipment.
2. Monitor and optimize petroleum, petrochemical, water and wastewater treatment processes.
3. Establish and maintain a safe work environment by adhering to and enforcing established safety standards, policies and procedures.
4. Work with other technologists, engineers and skilled trades persons to develop innovative solutions to problems in chemical process industries.
5. Work and communicate as members of a team with other professionals, as well as supervise the work of skilled professionals and trades persons in a variety of chemical processes and procedures.

CURRICULUM

General education consisting of Project Management Skills (theoretical and applied), Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrical and Magnetic Theory, Engineering Graphics, Engineering Technology Awareness.

Specific education in various aspects (theory and principles) of the chemical process control discipline including industrial chemistry, fluid mechanics, and mechanical systems.

Practical education in various aspects of chemical process applications including process controls, chemical reactors, and separation processes.

Work exposure consisting of field experience, gained from compensated work terms, in the field of chemical processes.

CAREER OPPORTUNITIES

Graduates of the Chemical Process Engineering Technology (Co-op) program can expect to find employment as process operators and technologists in areas such as oil & gas extraction and refining, offshore petroleum production installations, petrochemical industries, primary metal manufacturing, thermal power plants and water & waste treatment facilities.
Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.

Note: Students will also be required to complete a number of non-credit co-op education seminars throughout the program (resume writing, job search skills and interview preparation).

CERTIFICATIONS

Students in the Chemical Process Engineering Technology (Co-op) program are required to obtain the following external certifications throughout the program:
- Workplace Hazardous Materials Information System (WHMIS)
- Standard First Aid/Heart Start
- Transportation of Dangerous Goods
- H2S Awareness

***Students should be aware that additional fees may apply to external certifications.**

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation Certificate with 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 amd 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% minimum) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
   a. Introductory Biology: BL1020, BL1021
   b. Introductory Chemistry: CH1030, CH1031

c. Introductory Physics: PH1050, PH1051

Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:

i. Math (60% minimum) MA1040, MA1041

ii. Two Science courses chosen from one of the following three combinations:

a. Introductory Biology: BL1025, BL1026

b. Introductory Chemistry: CH1035, CH1036

c. Introductory Physics: PH1055, PH1056

Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):

i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C

ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C

iii. Science from one of the following sections:

a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C

b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C

c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and have been out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
ET1100	Electrotechnology I	4	3	2
MA1700	Mathematics*	4	3	2
PH1100	Physics	4	3	2
EG1110	Engineering Graphics	3	2	2
CH1120	Chemistry	4	3	2
SD1170	Technology Awareness I	0	1	0

**Admission into the appropriate Mathematics course will be decided by the grade in high school math.*
Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from MA1700 Mathematics. Students must apply for the exemption.

Note: Students may apply for an exemption from MA1700 provided they meet the appropriate high school level in Mathematics as noted above.

Semester 2 (Winter)

Code	Title	Cr	Le	La
CH1121	Chemistry	4	3	2
PH1101	Physics	4	3	2
MA1101	Advanced Mathematics*	5	5	0
ET1101	Electrotechnology	4	3	2
CM1401	Technical Report Writing II	3	3	0
EG1430	AutoCAD Essentials	3	2	2
SD1171	Technology Awareness II	2	1	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
SE2150	Safety Certifications	0	0	0
SE1530	Occupational Health and Safety	4	4	0
PO1170	Industrial Chemical Processes	2	1	2
CF3205	Materials and Corrosion	3	3	1
MC1850	Spreadsheet Applications	1	0	2

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4 (Fall)

Code	Title	Cr	Le	La
CH2451	Industrial Chemistry I	4	3	2
CM2800	Oral/Written Communications	3	3	0
FM2102	Fluid Mechanics	3	3	1
MA2100	Mathematics – Calculus	5	5	0
CL1110	Material Balancing	4	3	2
PE2801	Industrial Mechanical Systems	4	3	2

Semester 5 (Winter)

Code	Title	Cr	Le	La
CH3450	Industrial Chemistry II	4	3	3
TD2100	Thermodynamics	3	3	1
PO1180	Unit Operations and Process Design I	4	3	2
SP1420	Asset Maint. & Reliability	3	2	2
CI1130	Process Control I	4	3	2
PO2010	Water and Wastewater Treatment Operations	4	3	2

Semester 6 (Spring)

Code	Title	Cr	Le	La
WC1830	Work Term (Co-op) (Minimum 10/11 weeks)	5	0	0

Semester 7 (Fall)

Code	Title	Cr	Le	La
TD2120	Thermodynamics	3	3	1
PR3150	Project Management and Financial Analysis	4	4	0
CI1150	Process Control II	4	3	2
PO1190	Natural Gas Processing	4	3	3
PO1000	Mineral Processing I	5	4	2
PR2810	Capstone Project I (Seminar)	0	1	0

Semester 8 (Winter)

Code	Title	Cr	Le	La
SE3310	Process Safety and Risk Management	5	4	2
PO1210	Oil Refining	4	3	3
PO1220	Unit Operations and Process Design II	4	3	2
PO2000	Mineral Processing II	5	4	2
PR2811	Capstone Project II	*4	3	0

**The credit hour from PR2810 Capstone Project I (Seminar) in Semester 7 is allotted to PR2811 Capstone Project II in Semester 8.*

Semester 9 (Spring)

Code	Title	Cr	Le	La
CI3821	Process Analyzers	4	3	3
EN3400	Environment Management and Protection	3	3	0
CI3200	Statistical Process Control	3	3	1

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Civil Engineering Technology (Co-op)

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Engineering Technology

Locations & Delivery Modes:

- Corner Brook - On Campus delivery
- Ridge Road - On Campus delivery

PROGRAM DESCRIPTION

The field of civil design and construction plays a central role in the economic viability of many industries and the province as a whole. The civil field includes such areas as residential, commercial, and industrial buildings; harbours, airports, roads, and other transportation facilities; and municipal infrastructure.

Natural resource development projects (hydropower, oil and gas, mineral processing, etc.) will continue to create substantial employment opportunities for Civil Engineering Technology (Co-op) graduates.

The Civil Engineering Technology (Co-op) program will enable graduates to play an important role in the professional team which is responsible for the translation of ideas into the finished product. The program will ensure that the graduates understand the need for, and have the skills to contribute to, the cost effective and efficient planning of construction projects from concept to completion.

Graduates completing this program are automatically eligible for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), as well as any similar association in Canada.

ACCREDITATION

This program is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists.

Civil Engineering Technology (Co-op) program in St. John's is TAC accredited until April 2026, while the program in Corner Brook is TAC accredited until November 2028.

Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.
Civil Engineering Technology is recognized internationally by the signatories of the Sydney Accord. This provides graduates of the program with both national and international mobility for work and/or study.

OBJECTIVES

A graduate of the Civil Engineering Technology (Co-op) program will have the knowledge and skills that will allow him/her to:

1. Analyze the structural reactions of engineering work.
2. Participate in the scheduling of civil engineering projects and monitor the work.
3. Assist in planning, designing, inspecting, supervising, and constructing civil engineering projects.
4. Plan and design municipal infrastructure projects.
5. Assist with designing, inspecting and troubleshooting of transportation infrastructure.
6. Design, calculate and test asphalt and concrete mixes to industry standards and specifications.
7. Carry out engineering survey and construction layouts using conventional survey instruments and GPS systems.

CURRICULUM

General education consisting of Project Management Skills (theoretical and applied), Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrical and Magnetic Theory, Engineering Graphics, Engineering Technology Awareness.

Specific education in various aspects (theory and principles) of the civil discipline including strength of materials, structures, fluid mechanics, soils & foundations, building codes & services and planning & estimating.

Practical education in various aspects of the civil discipline including CADD drawings, material testing, highway technology, construction surveying, BIM and GIS.

Work exposure consisting of field experience, gained from a compensated work term, in the field of civil engineering technology.

CAREER OPPORTUNITIES

Graduates may find employment with contractors, consultants, house builders, manufacturers, suppliers, municipalities, provincial and federal governments and their agencies, and many others involved in such projects as the design of off-shore and on-shore structures and facilities, testing and inspection of structural components, estimation, sales, construction surveying, and project management.

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Civil Engineering Technology (Co-op) program are required to obtain a certificate of completion of Standard First Aid/Heart Start and WHMIS over their three-year period of studies.

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. High School

High School Graduation Certificate with 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1020, BL1021
b. Introductory Chemistry: CH1030, CH1031
c. Introductory Physics: PH1050, PH1051
Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1025, BL1026
b. Introductory Chemistry: CH1035, CH1036
c. Introductory Physics: PH1055, PH1056
Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

ARTICULATION

Graduates of Civil Engineering Technology (Co-op) may continue their studies at Marine Institute (Memorial University of Newfoundland) in the Bachelor of Technology program.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
ET1100	Electrotechnology I	4	3	2
MA1700	Mathematics*	4	3	2
PH1100	Physics	4	3	2
EG1110	Engineering Graphics	3	2	2
CH1120	Chemistry	4	3	2
SD1170	Technology Awareness I	0	1	0

**Admission into the appropriate Mathematics course will be decided by the grade in high school math. Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in*

both high school Advanced Mathematics 2200 and 3200 can be exempted from MA1700 Mathematics. Students must apply for the exemption.

Note: Students may apply for an exemption from MA1700 provided they meet the appropriate high school level in Mathematics as noted above.

Semester 2 (Winter)

Code	Title	Cr	Le	La
CH1121	Chemistry	4	3	2
PH1101	Physics	4	3	2
MA1101	Advanced Mathematics*	5	5	0
ET1101	Electrotechnology	4	3	2
CM1401	Technical Report Writing II	3	3	0
EG1430	AutoCAD Essentials	3	2	2
SD1171	Technology Awareness II	2	1	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CB2420	Construction Methods	4	4	0
DR1220	Engineering Drawing	2	1	4
SU1200	Plane Surveying	3	1	5

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

CERTIFICATIONS

Students in Civil Engineering Technology (Co-op) will be required to complete the following certificate courses during the second year of the studies:

- Standard First Aid/Heart Start
- WHMIS

***Students should be aware that additional fees may apply to external certifications.**

Semester 4 (Fall)

Code	Title	Cr	Le	La
BU2120	Building Codes & Services	4	4	0
CF2530	Strength of Materials I	4	3	2
CF2710	Materials & Testing I	4	3	2
CM2800	Oral/Written Communication Skills	3	3	0
MA2100	Mathematics - Calculus	5	5	0
SU1210	Construction Surveying	4	3	3

Semester 5 (Winter)

Code	Title	Cr	Le	La
CA2500	Highway Technology	4	3	2
CF2531	Strength of Materials II	4	3	2
CF2711	Materials & Testing II	4	3	2
DR1250	CADD Drawings	2	1	4
MA1530	Statistics	2	2	1
WA1160	Fluid Mechanics	4	4	0
WA1230	Hydrology	2	2	0

Semester 6 (Spring)

Code	Title	Cr	Le	La
WC1460	Work Term (12 weeks minimum)	5	0	0

Semester 7 (Fall)

Code	Title	Cr	Le	La
CA2110	Structures I	4	3	2

Code	Title	Cr	Le	La
CA2320	Urban Development I	4	3	2
CA2810	Soils & Foundations I	4	3	2
CG2330	Planning & Estimating I	4	3	2
EN3110	Environmental Engineering	4	4	0
LW1600	Construction Law	3	3	0
PR2250	Capstone Project I (Seminar)	*0	1	0

**The credit hour from PR2250 Capstone Project I (Seminar) in Semester 7 is allotted to PR2251 Capstone Project II in Semester 8.*

Semester 8 (Winter)

Code	Title	Cr	Le	La
CA2111	Structures II	4	3	2
CA2321	Urban Development II	4	3	2
CA2811	Soils & Foundations II	4	4	0
CG2331	Planning & Estimating II	4	3	2
EC1750	Construction Economics	3	3	0
HR2230	Human Relations	3	3	0
PR2251	Capstone Project II	*4	3	0

Computing Systems Engineering Technology (Co-op)

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Engineering Technology

Locations & Delivery Modes:

- Ridge Road - On Campus delivery

PROGRAM DESCRIPTION

The Computing Systems Engineering Technology (Co–op) program prepares students for the field of scientific and engineering computing. A combination of programming theory and practice, networking, and electronics ensures the graduate will be prepared to work in the fields of cloud computing and mobile device application development, as well as develop the foundation for the emerging fields of machine learning and Big Data. Graduates will obtain theoretical foundations as well as practical hands on experience with analog electronics, digital systems, including logic, microprocessor interfacing, and embedded microcontrollers and applications. Students will work with mobile devices, robotic systems, and wireless control. Specialized skills in the software stream include, but will not be limited to, object-oriented programming, databases, networking, and modern web technologies. Graduates of this three year program receive the Diploma of Computing Systems Engineering Technology (Co-op).

Graduates completing this program are automatically eligible for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), as well as any similar association in Canada.

Upon completion of this program graduates may choose to further their education by completing a bachelor degree in technology or engineering at one of several institutions that have articulation agreements with College of the North Atlantic.

Graduates enrolled in this program will also complete courses in the Cisco Networking Academy program which will place them on the path to Cisco certification at the CCNA level.

Note: This program may not be suitable for applicants who do not have normal colour perception.

ACCREDITATION

Computing Systems Engineering Technology is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists until December 2028. Computing Systems Engineering Technology is also recognized internationally by the signatories of the Sydney Accord. This provides graduates of the program with both national and international mobility for work and/or study.

OBJECTIVES

As engineering technologists, graduates of this program will have the knowledge and skills that will allow them to:

1. Analyze, build, implement, and maintain computing systems and applications.
2. Design, develop, and implement relational database management systems.
3. Develop applications using object-oriented programming methods and practices.
4. Design and develop applications for mobile devices such as smart phones and tablets.
5. Prepare a quality assurance plan for testing and evaluation of software.
6. Design and implement computing systems suitable for cloud computing applications.
7. Specify, select, design, build, and troubleshoot micro-processor or micro-controller based systems.

CURRICULUM

General Education consisting of Project Management Skills (theoretical and applied), Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrotechnology, Engineering Graphics, Technology Awareness and Student Success.

Specific education in various aspects (theory and principles) of the computing engineering discipline including database design, Internet application development, embedded system development, graphical programming, and mobile application development, in addition to digital logic systems, microcontrollers, and IP networking.

Practical education in various aspects of the theory and principles of computing and programming.

Work exposure Laboratory and field experience, gained from compensated work terms, in the application embedded electronics and computing systems.

CAREER OPPORTUNITIES

The graduate from the program will be a technologist who specializes in integrating computing technology into consumer and industrial products, who finds employment with hi-tech companies utilizing computers in new and innovative ways.

Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.

Note: Students will also be required to complete a number of non-credit co-op education seminars throughout the 3-year program (resume writing, job search skills and interview preparation).

CERTIFICATIONS

Students in the Computing Systems Engineering Technology (Co-op) program are required to obtain the following external certifications throughout the program:
- Workplace Hazardous Materials Information System (WHMIS)
- Standard First Aid/Heart Start

***Students should be aware that additional fees may apply to external certifications.**

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. High School
High School Graduation Certificate with 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1020, BL1021
b. Introductory Chemistry: CH1030, CH1031
c. Introductory Physics: PH1050, PH1051
Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1025, BL1026
b. Introductory Chemistry: CH1035, CH1036
c. Introductory Physics: PH1055, PH1056
Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years of age or older, and have been out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
ET1100	Electrotechnology I	4	3	2
MA1700	Mathematics*	4	3	2
PH1100	Physics	4	3	2
EG1110	Engineering Graphics	3	2	2

Code	Title	Cr	Le	La
CH1120	Chemistry	4	3	2
SD1170	Technology Awareness I	0	1	0

**Admission into the appropriate Mathematics course will be decided by the grade in high school math.*

Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from MA1700 Mathematics. Students must apply for the exemption.

Note: Students may apply for an exemption from MA1700 provided they meet the appropriate high school level in Mathematics as noted above.

Semester 2 (Winter)

Code	Title	Cr	Le	La
CH1121	Chemistry	4	3	2
PH1101	Physics	4	3	2
MA1101	Advanced Mathematics*	5	5	0
ET1101	Electrotechnology	4	3	2
CM1401	Technical Report Writing II	3	3	0
EG1430	AutoCAD Essentials	3	2	2
SD1171	Technology Awareness II	2	1	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CI1110	Signals & Measurements	3	2	2
CP1270	Programming Fundamentals	3	2	2
CI1313	Fabrication Techniques/Network Cabling	3	2	3

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4 (Fall)

Code	Title	Cr	Le	La
AE2330	Analog Electronics I	6	5	3
CP1340	Object Oriented Programming	4	3	2
DP1110	Digital Systems I (Logic)	4	3	2
MA2100	Mathematics - Calculus	5	5	0
MP2140	Circuit Analysis I	4	3	2

Semester 5 (Winter)

Code	Title	Cr	Le	La
CM2800	Oral /Written Communication Skills	3	3	0
CR1107	Network Fundamentals	4	3	3
CP2530	Data Structures & Algorithms	4	3	3
DP2120	Digital Systems II (Interfacing)	5	4	3
CT2530	POSIX Operating Systems	3	3	1
MA1530	Statistics	2	2	1

Semester 6 (Spring)

Code	Title	Cr	Le	La
WC1700	Work Term I (12 weeks minimum)	5	0	0

Semester 7 (Fall)

Code	Title	Cr	Le	La
AE3130	Active Circuit Applications	4	3	2
CR2402	Switching, Routing & Wireless	4	3	3
CP3490	Software Engineering	3	2	3
CP3520	Databases	4	3	3

Code	Title	Cr	Le	La
DP3200	Embedded Controller Applications	4	3	2
PR2760	Capstone Project I (Seminar)	*0	1	0

**The credit hour from PR2760 Capstone Project I (Seminar) in Semester 7 is allotted to PR2761 Capstone Project II in Semester 9.*

Semester 8 (Winter)

Code	Title	Cr	Le	La
WC1701	Work Term II	5	0	0

Semester 9 (Spring)

Code	Title	Cr	Le	La
CR2903	Enterprise Network Security & Automation	4	3	3
CP3521	Web Programming	4	3	3
CP3810	iPhone Application Development	4	3	3
CP3831	Computer Graphics and Game Development	3	2	2
PR3150	Project Management & Financial Analysis	4	4	0
PR2761	Capstone Project II	4	3	0

Electrical Engineering Technology (Power and Controls) Co-op

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Engineering Technology

Locations & Delivery Modes:

- Ridge Road - On Campus delivery

PROGRAM DESCRIPTION

Power by design.

Electrical demands across all industries are wide-ranging, requiring a depth and breadth of expertise. Highly prominent in that range is the specialized field of Electrical Engineering Technology (Power & Controls). The emphasis is on power systems, control systems, and electrical design, which can apply to installation, operation, and maintenance activities. And experts in this field are in the highest demand.

The precise skills you develop in CNA's three-year program in Electrical Engineering Technology (Power & Controls) will be sought out across several industries – from production plants and power utilities to petroleum companies and refineries, to shipyards, paper mills, and more. The co-op nature of this program guarantees you extensive real-world experience and work terms, preparing you to launch directly into your career upon graduation – whether that be as an electrical engineering technologist, electrical facilities/maintenance specialist, electrical designer, or electrical CAD specialist, among other dynamic roles.

Graduates can find employment with a wide variety of companies involved in the electrical industry, such as production plants, oil & gas exploration and production companies, refineries, offshore servicing companies, power utilities, pulp & paper mills, electrical sales and service groups, shipyards, provincial and federal government departments and consulting engineering companies.

With this credential, you will be internationally recognized as a technologist by the International Engineering Alliance, under the Sidney Accord. You will also find a direct line to university degrees in a number of technology and engineering disciplines to enhance your career even further.

If you're interested in a power-driven, stimulating career, we can connect you.

Program Highlights

- Accredited by Technology Accreditation Canada (TAC)
- Accredited as a co-op program under CEWIL (Co-operative Education and Work-integrated Learning)
- Work integrated experience in the form of two co-op work terms, and an applied research capstone project in Year 3 of the program
- Link to a Bachelor of Technology degree, through the Memorial University of Newfoundland and Labrador, and transfer of credit towards degree programs at several out-of-province institutions

Did you know?

- Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.
- Graduates earn between CA$55,000 to CA$130,000 per year with a median salary of $85,000 CAD after 10 years' experience. (AETTNL Salary Survey, 2020)
- The Sydney Accord, administered by the International Engineering Alliance, is an international agreement between the bodies responsible for accrediting engineering technologist qualification programs in each of the signatory countries. It recognizes the substantial equivalency of programs accredited by those bodies and recommends that graduates of accredited programs in any of the signatory countries be recognized by the other countries as having met the academic requirements for entry to the practice of engineering technologist.

ACCREDITATION

This program is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists.

The academic credentials of graduates of accredited technology programs are recognized internationally by the signatories of the Sydney Accord. This provides graduates of the program with both national and international mobility for work and/or study.

OBJECTIVES

Upon successful completion of the Electrical Engineering Technology (Power & Controls) Co-op program the graduate will be able to:

1. Evaluate, design and specify facility electrical systems such as power, lighting, heating, control and protection.
2. Design and specify electrical generation, transmission and distribution systems.
3. Design, test, analyze and commission industrial electrical power control systems.
4. Coordinate, plan, direct and interface with other electrical industry professionals as part of a technical support team.
5. Analyze, configure and assist in the electrical design of control systems in commercial and industrial applications employing Programmable Logic Controllers (PLC).
6. Design and specify electrical systems found in electrical utilities and industrial plants.
7. Maintain and troubleshoot electrical equipment such as motors, generators, transformers, protection & control devices.
8. Employ the use of power electronic circuits in the electrical design of commercial and industrial systems utilized by the electrical power industry.
9. Apply knowledge of current applicable codes, practices and safety standards.

CAREER OPPORTUNITIES

Graduates of the Electrical Engineering Technology (Power & Controls) Co-op program can find employment with a wide variety of companies involved in the electrical industry. Typical employers include production plants, oil and gas exploration production companies, refineries, offshore servicing companies, power utilities, pulp and paper mills, electrical sales and service groups, shipyards, provincial and federal government departments and consulting engineering companies.

Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Electrical Engineering Technology (Power & Controls) Co-op program are required to obtain the following external certifications prior to start of Work Term I:
- Workplace Hazardous Materials Information System (WHMIS)
- Standard First Aid/Heart Start
- Arc Flash Awareness

***Students should be aware that additional fees may apply to external certifications.**

Personal Protective Equipment (PPE) Requirements
Students n the Electrical Engineering Technology (Power & Controls) Co-op program are required to purchase the following CSA Approved PPE at their own expense (Contact Instructor prior to purchase):
- Safety Glasses
- Non-conductive Safety Boots

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation Certificate with 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1020, BL1021
b. Introductory Chemistry: CH1030, CH1031
c. Introductory Physics: PH1050, PH1051
Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.
Effective Academic Year 2025 - 2026:

College Transition
College Transition Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1025, BL1026
b. Introductory Chemistry: CH1035, CH1036
c. Introductory Physics: PH1055, PH1056
Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into

regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
PH1100	Physics	4	3	2
EG1170	Engineering, Graphics & CAD	3	2	4
ET1170	DC Circuit Fundamentals	5	4	2
MA1700	Mathematics	4	3	2
CM1400	Technical Report Writing	3	3	0
LW1540	Law, Ethics & Sustainability	3	3	0

**Admission into the appropriate Mathematics course will be decided by the grade in high school math.*

Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from MA1700 Mathematics. Students must apply for the exemption.

Note: Students may apply for an exemption from MA1700 provided they meet the appropriate high school level in Mathematics as noted above.

Semester 2 (Winter)

Code	Title	Cr	Le	La
PH1160	Physics of Energy Conversion	2	2	1
DR2320	Eng. Graphics for Electrical	2	1	2
ET1280	AC Circuit Fundamentals	5	4	2
MA1101	Advanced Mathematics	5	5	0
MA1530	Statistics	2	2	1
CM1401	Technical Report Writing II	3	3	0
CI1210	Controls & Automation	3	2	2

Semester 3 (Intersession)

Code	Title	Cr	Le	La
MP2910	DC Machines	4	3	2
AE1240	Electronic Devices	5	4	2
PE2105	Electrical Practices I	2	1	3

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4 (Fall)

Code	Title	Cr	Le	La
MA2100	Mathematics – Calculus	5	5	0
MP2300	AC Circuits	4	3	3
AE2260	Electronic Power Devices & Circuits	5	4	2
DP1310	Introduction to PLCs	4	3	3
PE2500	Electrical Practices II	2	1	3

Semester 5 (Winter)

Code	Title	Cr	Le	La
CM2800	Oral/Written Communication Skills	3	3	0
PR3150	Project Management & Financial Analysis	4	4	0
MP2350	Transformers	4	3	3
MP2920	AC Machines	4	3	2
DP2540	Advanced PLCs	4	3	3
PE2501	Electrical Practices III	2	1	3

Semester 6 (Spring)

Code	Title	Cr	Le	La
WC1200	Work Term I	5	0	0

Semester 7 (Fall)

Code	Title	Cr	Le	La
MP2210	Power Harmonics and Controls	4	3	2
MP3250	Emergency Standby Systems and Alternate Energy Sources	4	3	2
MP3215	Power Systems: Analysis	4	3	3
MP3110	Motor Control Systems	4	3	3
PE3101	Electrical Facility Design I	4	3	2
PR1415	Capstone Project I (Seminar)	0	1	0

**The credit hour for PR1415 Capstone Project I (Seminar) is transferred to PR1425 Capstone Project II in Semester 9.*

Semester 8 (Winter)

Code	Title	Cr	Le	La
WC1201	Work Term II	5	0	0

Semester 9 (Spring)

Code	Title	Cr	Le	La
MP3225	Power Systems: Analysis & Operation	4	3	3
MP3150	Power Devices & Motor Drives	4	3	3
CI3600	Industrial Process Control	4	3	3
PE4110	Electrical Facility Design II	4	3	3
PR1425	Capstone Project II	4	3	0

Electronic Systems Engineering Technology (Co-op)

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Engineering Technology

Locations & Delivery Modes:

- Corner Brook - On Campus delivery

PROGRAM DESCRIPTION

The Electronic Systems Engineering Technology (Co-op) program focuses on planning, designing, commissioning, servicing, troubleshooting, and decommissioning electronic systems. This general program enables graduates the opportunity to seek careers in a wide variety of technology areas, including electronic communications systems, computer network systems, industrial control systems, and surveillance and navigation systems.

The program is designed to provide graduates with the skills and knowledge required to implement and work with modern communication systems using digital and fiber optics principles, embedded microcontrollers, applications including robotic controls, artificial intelligence, wireless control and industrial instrumentation & controls. Thanks to the widespread proliferation of sophisticated systems around the world, the demand for well-qualified electronics technologists is, and will be, high for years to come.

Graduates of this accredited program automatically satisfy the academic requirements for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), and qualify for certification with the appropriate work experience and references. Students enrolled in this program are eligible for full student membership after the first year. Certification credentials are transferrable across provincial associations.

Upon completion of this program, graduates may choose to further their education by completing a bachelor degree in technology or engineering at one of several institutions that have articulation agreements with College of the North Atlantic.

ACCREDITATION

This program is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists.

The academic credentials of graduates of accredited technology programs are recognized internationally by the signatories of the Sydney Accord. This provides graduates of the program with both national and international mobility for work and/or study.

Note: This program may not be suitable for applicants who do not have normal colour perception.

OBJECTIVES

As an Electronic Systems Engineering Technologist, the graduate will have the knowledge and skill that will allow him/her to:

1. Demonstrate a high level of skill in the application of electronics principles.
2. Produce electrical and electronics drawings, layouts and reports.
3. Apply the skills and techniques to troubleshoot logic and digital circuits, and embedded microprocessor-based and microcontroller-based systems, including assembly and high-level language programs.
4. Design, assemble, maintain, and troubleshoot analog and digital communication systems.
5. Install, analyze and maintain industrial instrumentation and process control equipment.

6. Apply appropriate troubleshooting techniques to electronic circuits or systems, and generate and perform test procedures.
7. Determine, select, recommend and justify the purchase of electronic equipment, components and systems.
8. Modify, maintain, repair and recommend electronic equipment and systems.
9. Design, build, test and troubleshoot electronic circuits, equipment, systems and subsystems.
10. Analyze and troubleshoot computer networks.
11. Apply current industry practices of project management and business principles.

CURRICULUM

General education consisting of Project Management Skills (theoretical and applied), Communication Skills (oral and written), Mathematics, Physics, Electrical and Magnetic Theory, Engineering Graphics, Engineering Technology Awareness.

Specific education in various aspects (theory and principles) of the Electronic Systems Engineering Technology profession including the theory and application of analog and digital electronics with specialized emphasis on Analog and Digital Communication Systems, Computer Programming, Microprocessor Interfacing Systems, Industrial Process Control Systems, and Networking.

Practical education employing labs and shops focused on installation, configuration, operation and maintenance training associated with digital communications, wireless communications systems, microcontrollers, computer networks, cabling systems, and industrial process control systems.

CAREER OPPORTUNITIES

Job prospects for the electronics industry are expected to be strong in the foreseeable future. The Electronics Systems Engineering Technology program is designed to produce a well-rounded graduate who will be capable of working in a variety of electronic related fields. Graduates of the program will find rewarding employment in both the service and support side of the electronics industry as well as the consumer side. They will obtain employment in the areas of telecommunications, manufacturing sales, service, and support, computer sales, service and support, provincial and federal agencies, consulting firms, business equipment sales and service, industrial sales and service, aircraft surveillance and navigation, R&D and utility companies.

Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. High School

High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% minimum) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:

a. Introductory Biology: BL1020, BL1021
b. Introductory Chemistry: CH1030, CH1031
c. Introductory Physics: PH1050, PH1051

Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:

i. Math (60% minimum) MA1040, MA1041

ii. Two Science courses chosen from one of the following three combinations:

a. Introductory Biology: BL1025, BL1026
b. Introductory Chemistry: CH1035, CH1036
c. Introductory Physics: PH1055, PH1056

Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):

i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C

ii. Mathematics (70% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C

iii. Science from one of the following sections:

a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
MA1220	Mathematics	8	8	0
ET1141	Introductory Electric Circuit Analysis	9	8	4
CM1460	Writing for the Workplace	2	2	0
CI1321	Electrical/Electronic Fabrication Techniques	3	2	3

Semester 2 (Winter)

Code	Title	Cr	Le	La
AE2360	Analog Electronics I	6	5	2
DP1110	Digital Systems I (Logic)	4	3	2
CR1107	Network Fundamentals	4	3	3
CT2300	Applied Programming	4	3	2
ET1146	Advanced Electric Circuit Analysis	3	3	1

Code	Title	Cr	Le	La
MC1850	Spreadsheet Applications	1	0	2

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Electronic Systems Engineering Technology (Co-op) program are required to obtain the following certificates of completion prior to WC1310 Co-op Work Term, Semester 3:

- Standard First Aid/Heart Start
- Workplace Hazardous Materials and Information Systems (WHMIS)
- Power Line Hazards Awareness
- Confined Space
- Fall Protection

***Students should be aware that additional fees may apply to external certifications.**

Semester 3 (Spring)

Code	Title	Cr	Le	La
CE3430	Network Cabling	4	3	3
WC1310	Co-op Work Term	5	0	0

Students in Electronic Systems Engineering Technology (Co-op) complete CE3430 (3 weeks) prior to beginning their Work Term.

Semester 4 (Fall)

Code	Title	Cr	Le	La
EG2120	Applied Engineering Drafting	2	1	2
PR3150	Project Management and Financial Analysis	4	4	0
CM2800	Oral/Written Communication Skills	3	3	0
AE2365	Analog Electronics II	5	4	2
DP2110	Digital Systems II (Interfacing)	5	4	3
CE2730	RF Transmission & Antennas	4	3	2
PR2790	Capstone Project I (Seminar)	0	1	0

Semester 5 (Winter)

Code	Title	Cr	Le	La
MA2100	Mathematics – Calculus	5	5	0
AE3300	Industrial Electronics & PLCs	4	3	2
DP3200	Embedded Controller Applications	4	3	2
CP2000	Embedded Linux	3	2	2
CE2280	Modulation and Encoding	5	4	2
PR2791	Capstone Project II	4	3	0

Semester 6 (Intersession)

Code	Title	Cr	Le	La
AE3301	Process Control	5	4	2
CE3110	Wireless Communications Systems	5	4	3
MA1530	Statistics	2	2	1

The Course and Lab hours per week are based on a 15-week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Electronics Engineering Technology (Biomedical)

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Engineering Technology

Locations & Delivery Modes:

- Ridge Road - On Campus delivery

PROGRAM DESCRIPTION

Health care environments have become more dependent on electronic medical diagnostic and therapeutic equipment that must be operated and maintained with great accuracy. Graduates of this program are part of an integrated health care team who install and maintain this equipment as well as their supporting computer systems. Graduates also assist other health care professionals in the optimization of equipment usage. The coordinated use and maintenance of this equipment must be completed in accordance with applicable codes, statutes and associated regulations.

The Electronics Engineering Technology (Biomedical) program is a biomedical engineering technology program with a strong foundation in electronics. Students enrolled in this program also receive training in the areas of biomedical instrumentation, microprocessor applications in the health care setting, anatomy and physiology, chemistry, biochemistry, health care and safety. This comprehensive program concludes with a practicum where students are provided with the opportunity to work in hospital-based biomedical departments or with medical equipment sales and service companies.

Note: This program may not be suitable for applicants who do not have normal colour perception.

ACCREDITATION

This program is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists.

The academic credentials of graduates of accredited technology programs are recognized internationally by the signatories of the Sydney Accord. This provides graduates of the program with both national and international mobility for work and/or study.

OBJECTIVES

As engineering technologists, graduates of this program will have the knowledge and skill that will allow him/her to:

1. Employ specialized biomedical test instrumentation including patient parameter simulators and analyzers, pressure and flow measurement devices, electrosurgical analyzers and electrical safety analyzers.
2. Troubleshoot, maintain, and calibrate complex, electro-medical equipment utilizing industry recognized techniques and protocols.
3. Demonstrate proficiency in the safe operation of electro-medical devices including patient care monitoring systems, defibrillators, electro-surgery units, diagnostic medical imaging systems, clinical laboratory instrumentation, dialysis delivery systems, respiratory care devices and other diagnostic, therapeutic and patient care instruments.
4. Modify, design, and construct medical electronic devices through the application of electronic and patient data-acquisition principles.
5. Apply an engineering approach to problem solving with respect to medical equipment systems, to enable the graduate to readily upgrade their knowledge and skills.
6. Demonstrate an awareness of and concern for patient and staff safety in the health care environment.
7. Maintain and operate Linux-based instrumentation within a wireless networking environment.

CURRICULUM

General education consisting of Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrotechnology, Engineering Graphics, Technology Awareness and Student Success.

Specific education in the theory and application of analog and digital electronics with a specialized emphasis on biomedical instruments, equipment and techniques and the interconnected computer systems associated with a modern healthcare environment.

Practical education in a Health Care environment through curriculum integrated labs.

Work exposure consisting of field experience, gained from the biomedical practicum.

CAREER OPPORTUNITIES

The graduates of this program may enter the work force in the employment of hospital biomedical engineering departments, with manufacturers and distributors of biomedical instrumentation, as well as independent sales and service organizations. Employment may include design and development of medical instrumentation, as well as purchase evaluation, acceptance testing, preventive and demand maintenance and operator training.

Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.

Upon recognition as a P.Tech and supplemental relevant experience in the field of biomedical engineering technology the graduate may be eligible to write certification examinations to be recognized as a Certified Biomedical Engineering Technologist (CBET). In many jurisdictions of Canada this certification is a requirement for advanced practice of the profession.

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Electronics Engineering Technology (Biomedical) program are required to obtain a certificate of completion of Standard First Aid/Heart Start and WHMIS over their three-year period of studies.

***Students should be aware that additional fees may apply to external certifications.**

ENTRANCE REQUIREMENTS
Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation Certificate with 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate with the following courses:

i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
    a. Introductory Biology: BL1020, BL1021
    b. Introductory Chemistry: CH1030, CH1031
    c. Introductory Physics: PH1050, PH1051

Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
    a. Introductory Biology: BL1025, BL1026
    b. Introductory Chemistry: CH1035, CH1036
    c. Introductory Physics: PH1055, PH1056

Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
    a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
    b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
    c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
ET1100	Electrotechnology I	4	3	2
MA1700	Mathematics*	4	3	2
PH1100	Physics	4	3	2
EG1110	Engineering Graphics	3	2	2
CH1120	Chemistry	4	3	2
SD1170	Technology Awareness I	0	1	0

**Admission into the appropriate Mathematics course will be decided by the grade in high school math.*

Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from MA1700 Mathematics. Students must apply for the exemption.

Note: Students may apply for an exemption from MA1700 provided they meet the appropriate high school level in Mathematics as noted above.

Semester 2 (Winter)

Code	Title	Cr	Le	La
CH1121	Chemistry	4	3	2
PH1101	Physics	4	3	2
MA1101	Advanced Mathematics*	5	5	0
ET1101	Electrotechnology	4	3	2
CM1401	Technical Report Writing II	3	3	0
EG1430	AutoCAD Essentials	3	2	2
SD1171	Technology Awareness II	2	1	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CI1110	Signals & Measurements	3	2	2
CI1313	Fabrication Techniques/Network Cabling	3	2	3
CT2300	Applied Programming	4	3	2

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4 (Fall)

Code	Title	Cr	Le	La
AE2330	Analog Electronics I	6	5	2
CG1205	Health Care and Safety	3	2	2
DP1110	Digital Systems I (Logic)	4	3	2
MA2100	Mathematics - Calculus	5	5	0
MP2140	Circuit Analysis I	4	3	2
CM2800	Oral/Written Communication Skills	3	3	0

Semester 5 (Winter)

Code	Title	Cr	Le	La
AE2331	Analog Electronics II	4	3	2
CR1107	Network Fundamentals	4	3	3
CE2280	Modulation and Encoding	5	4	2
DP2120	Digital Systems II (Interfacing)	5	4	3
ET2150	Advanced Circuit Analysis	5	5	0

Semester 6 (Intersession)

Code	Title	Cr	Le	La
BL1300	Anatomy & Physiology	3	3	0
CI1221	BET Electromechanical Systems	3	2	3
MA1530	Statistics	2	2	1

Semester 7 (Fall)

Code	Title	Cr	Le	La
AE3130	Active Circuit Applications	4	3	2
CI3400	Biomedical Instrumentation I	5	4	4
CR2402	Switching, Routing & Wireless	4	3	3
DP3200	Embedded Controller Applications	4	3	2
PR2830	Capstone Project I (Seminar)	*0	1	0
PR3150	Project Management and Financial Analysis	4	4	0

The credit hour from PR2830 Capstone Project I (Seminar) in Semester 7 is allotted to PR2831 Capstone Project II in Semester 8.

Semester 8 (Winter)

Code	Title	Cr	Le	La
TM1111	Medical Terminology	2	2	0
CR2903	Enterprise Network Security & Automation	4	3	3
CP2000	Embedded Linux	3	2	2
CI3412	Biomedical Instrumentation II	4	3	4
CI3510	Advanced Medical Systems	4	3	4
PR2831	Capstone Project II	*4	3	0

Semester 9 (Intersession)

Code	Title	Cr	Le	La
WT1700	Biomedical Practicum (7 weeks)	0	0	0

Note: The final semester of year 3 is a 7 week practicum. As well, in the third year of the program, there are regular site visits to health care facilities. While the requirements for all Health Boards are not the same, it is standard practice for any government position to provide a letter of conduct from local law enforcement (typically RNC or RCMP). Due to the nature of any work in Health care and its inherent risk, it is also required that health vaccination records be updated and any outstanding vaccinations be received prior to commencement of the practicum. As well any allergies or sensitivities should be identified at this time. These requirements are initiated and need to be completed during semester 8 (winter semester, year 3)

A letter of conduct will also be required for registration in some courses in semesters 7 and 8.

Environmental Engineering Technology (Co-op)

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Engineering Technology

Locations & Delivery Modes:

- Corner Brook - On Campus delivery

PROGRAM DESCRIPTION

Nature's solutions.

In the Environmental Engineering Technology program, you'll be stepping into a dynamic industry that's shaping the future of the planet. As one of the fastest-growing sectors of the economy, the environmental industry is calling for skilled individuals like you to lead the charge in tackling 21st- century challenges head-on.

Imagine yourself immersed in multidisciplinary training, delving into the realms of chemical, biological, and soil sciences, while mastering engineering principles. Here, you won't just learn – you'll apply your newfound skills to safeguard public health and our precious ecosystems. From purifying air and water to conserving land resources and championing sustainable development, your impact will be tangible and transformative.

As an Environmental Engineering Technology graduate, you'll wield advanced tools and techniques in environmental sampling, monitoring, and data analysis with finesse. From the inception to the maintenance phase of projects, you'll be at the helm, ensuring their success and sustainability. With your applied knowledge of health, safety, and environmental requirements, you'll contribute to risk assessment and environmental systems management, safeguarding our world for generations to come.

Picture yourself at the forefront of water treatment, air pollution control, and waste management – actively shaping a healthier, greener future. From conducting hazardous-waste management studies to developing groundbreaking regulations for environmental protection, your expertise will drive progress and innovation.

But it doesn't end there. This two-year co-operative education diploma program offers you the invaluable opportunity to merge practical work experience with academic learning. Upon graduation, the doors to further education swing wide open, with pathways to bachelor's degrees in technology or engineering at partner institutions. And as a graduate of this program, you're not just equipped with a diploma, you're automatically welcomed into prestigious professional associations like the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), propelling your career to new heights.

Join this thrilling journey of discovery and impact. Together, let's build a brighter, cleaner, and more sustainable world.

Program Highlights

- Prepares you to enhance public and the environment
- Trains in advanced skills in environmental assessment and project management
- Includes cooperative education for practical work experience
- Focuses on practical knowledge for risk assessment and environmental systems management
- Enables further education through bachelor's degrees at partner institutions
- Plans to pursue ECO Canada Accreditation to enhance program validation and recognition
- Provides the potential for automatic eligibility for professional association membership, like Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), seeking TAC accreditation, enhancing status and networking

Did you know?

- Canada's environmental industry is booming! It's estimated to be valued at $73 billion annually, offering vast opportunities for employment and career growth[1]
- According to Statistics Canada, the demand for environmental engineering technologists is projected to increase by 12% over the next decade, significantly faster than the average for all occupations[1]
- The environmental sector in Canada employs over 314,000 people across various fields[2]
- Environmental engineering technologists play a crucial role in addressing climate change and attainment of the United Nations Sustainable Development Goals.[3]
- The average salary for environmental engineering technologists in Canada is around $60,000 to $86,000 per year, with potential for higher earnings as experience and expertise grow[4]
- Environmental engineering technologists have diverse career paths, from working in government agencies and consulting firms to industries like renewable energy, mining, and manufacturing. [5]

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[1] Government of Canada. (July, 2023). *Canada's Environmental and Clean Technology Sector*. Retrieved from https://www.international.gc.ca/trade-commerce/economist-economiste/analysis-analyse/ect-etp.aspx?lang=eng
[2] Statistics Canada. *Table 36-10-0632-01 Environmental and Clean Technology Products Economic Account, employment*. Retrieved from https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610063201
[3] Utilities One. (2023) *Building a Greener Future: How Environmental Engineering is Shaping Urban Development and Infrastructure.* Retrieved from https://utilitiesone.com/building-a-greener-future-how-environmental-engineering-is-shaping-urban-development-and-infrastructure
[4] Glassdoor. (2024). *Environmental Engineer Salaries in Canada.* Retrieved from https://www.glassdoor.ca/Salaries/environmental-engineer-salary-SRCH_KO0,22.htm
[5] Indeed. (2022). *What Is Environmental Engineering? (With Job Outlook).* Retrieved from https://ca.indeed.com/career-advice/career-development/what-is-environmental-engineering

OBJECTIVES

Upon successful completion of this program graduates will be able to:

1. Perform and interpret environmental procedures for air and water pollution control, and hazardous waste management.
2. Apply basic principles of science and engineering to environmental processes.
3. Select, evaluate, operate, calibrate, test, troubleshoot and maintain instrumentation common to the discipline.
4. Plan, design and implement environmental impact, assessment and remediation programs.
5. Understand the methods of recognition, evaluation and control of hazards to people, facilities, equipment and the environment.
6. Collect representative environmental samples, perform routine and specialized tests and interpret results, using current and relevant tools.
7. Carry out work responsibilities adhering to the standards of professional conduct and principles of professional ethics.
8. Contribute to the development, implementation and maintenance of environmental management systems.
9. An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined environmental engineering technology activities.
10. Establish and maintain a safe work environment by following and enforcing environmental and safety standards and adhering to established legislation, practices, and procedures.

CAREER OPPORTUNITIES

Graduates are prepared to take a proactive approach to all aspect of Environmental Engineering Technology and Occupational Health and Safety management. They may find employment in a wide range of environmental careers, such as:

Graduates emerge as proactive champions, ready to tackle every aspect of Environmental Engineering Technology and Occupational Health and Safety management, all while embracing the future of sustainable development. They step into a diverse array of captivating roles, from Environmental Consultants to Watershed Specialists and

Environmental Protection Officers. As Groundwater Specialists or Environmental Assessment Supervisors, they spearhead efforts toward sustainability and safety. Opportunities abound as they assume roles as Environmental Auditors, Industrial Hygienists, and more. With doors opening across sectors such as healthcare, construction, waste management, and the burgeoning fields of green energy and sustainable development, their potential for impact knows no bounds. Joining this exhilarating landscape of possibility, graduates seize the chance to make a tangible difference in their careers.

PROGRAM TRANSFERABILITY

Graduates of the Environmental Engineering Technology (Co-op) program who wish to pursue additional post-secondary studies can apply for entry with advanced standing at a number of Canadian Universities that the College has established credit transfer agreements with. Please refer to the Department of Advanced Education and Skills transfer guide, or contact your intended university or college.

Transfer Agreements:

- University of New Brunswick - Fredericton, NB
- Royal Roads University - Victoria, BC

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Environmental Engineering Technology (Co-op) program are required to obtain the following certificates of completion upon graduation:

- Power Line Hazards Awareness
- Occupational Health and Safety Committee (14 hour)
- Pleasure Craft Operators
- WHMIS 2015 (GHS)
- Transportation of Dangerous Goods
- Lock Out Tag Out
- MSI Awareness
- Asbestos Awareness (1 day)
- Standard First Aid/Heart Start (AED)
- CSA ATV Safety
- CSA Snowmobile Safety

***Students should be aware that there are additional fees and expenses associated with external certifications, as well as some field trips and tours throughout the program.**

Students will also be required to complete a number of non-credit co-op education seminars throughout the first year of the program to prepare for their co-op work placement.

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. High School

High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be chosen from:

Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
- a. Introductory Biology: BL1020, BL1021
- b. Introductory Chemistry: CH1030, CH1031
- c. Introductory Physics: PH1050, PH1051

Note: It is recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
- a. Introductory Biology: BL1025, BL1026
- b. Introductory Chemistry: CH1035, CH1036
- c. Introductory Physics: PH1055, PH1056

Note: It is recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
- a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
- b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
- c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

SPECIAL REQUIREMENTS

Because of the extensive field and laboratory exposure incorporated into this program, students will be required to obtain specialized clothing and equipment that includes a lab coat, safety glasses, graphics calculator, compass, CSA Safety Boots, CSA hardhat, rain gear, and other clothing appropriate for outdoor work.

Courses

Semester 1

Code	Title	Cr	Le	La
BL1100	Biology	4	3	2
CM1460	Writing for the Workplace	2	2	0
MA1100	Mathematics	5	4	2
EN1210	Geomatics I	1	0	2
CH1120	Chemistry	4	3	2
EN1520	Environmental Sampling	3	2	2
EN1110	Soil Fundamentals	3	2	2

Semester 2

Code	Title	Cr	Le	La
MA1140	Applied Mathematics	5	4	2
EN2300	Environmental Law	3	3	0
CH1121	Chemistry	4	3	2
EN2321	Occupational Health & Safety	3	2	2
CM2800	Oral/Written Communication Skills	3	3	0
EN3200	Environmental Impact Assessment	3	3	0
MC1850	Spreadsheet Applications	1	0	2

Semester 3

Code	Title	Cr	Le	La
WC1520	Co-op Work Term	5	5	0

Semester 4

Code	Title	Cr	Le	La
CH2715	Analytical Chemistry	4	3	3
EN1600	Env. Site Assessment I	3	2	2
EN1220	Industrial Hygiene	4	3	2
MA1670	Statistics	4	4	1
EN2410	Environmental Sustainability	2	2	0
EN3111	Environmental Engineering I	4	3	2
PR1410	Capstone Project I (Seminar)	*0	1	0

**The credit hour from PR1410 Capstone Project I (Seminar) in Semester 4 is allotted to PR1420 Capstone Project II in Semester 6.*

Semester 5

Code	Title	Cr	Le	La
EN1601	Env. Site Assessment II	4	3	2
EY2110	Ecology	4	3	2
EN3120	Environmental Engineering II	4	3	2
EN1531	Water Quality	4	3	2
EN3300	Environmental Auditing	3	2	2
PR3150	Project Management and Financial Analysis	4	4	0

Semester 6

Code	Title	Cr	Le	La
EN2545	Water and Waste Water Treatment	4	3	2
EN1230	Geomatics II (GIS)	3	2	3
PR1420	Capstone Project II	*4	3	0

The Course and Lab hours per week are based on a 15-week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Environmental Engineering Technology - Advanced Diploma

Start Date: May

Credential: Advanced Diploma

Program Length: One Year

School: Engineering Technology

Locations & Delivery Modes:

- Corner Brook - On Campus delivery

This program is currently undergoing a program review, which may result in some courses being changed, removed, and/or re-sequenced.

PROGRAM DESCRIPTION

Eco warriors.

Step into the forefront of environmental innovation with the Environmental Engineering Technology – Advanced Diploma program! Tailored to accommodate diverse backgrounds in science and engineering, this program offers a dynamic curriculum blending core topics, management courses, specialized training, and hands-on projects. This unique blend of skills will prepare you for a wide range of career opportunities and set you apart as a leader in the field.

Embark on a fast-track journey to success with this accelerated program, allowing you to earn your Environmental Engineering Technology – Advanced Diploma in just one year, building upon your existing university or college education.

Equipped with additional skills and knowledge, you'll tackle real-world environmental challenges head-on, from contaminated sites management to sustainability initiatives, and beyond. As an environmental engineering technologist, you'll lead the way in applying science, ecology, and engineering to protect our planet, unlocking your potential as an environmental guardian.

Join this in-demand program and become a steward of the environment, making a tangible difference in the world. Let's embark on this exciting journey together, shaping a greener, cleaner, and more sustainable future for generations to come!

Program Highlights

- Ideal four-semester option for those with prior university or college education
- Accommodates diverse science and engineering backgrounds, offering a comprehensive curriculum
- Trains in advanced skills in environmental assessment and project management
- Equips graduates with skills for environmental assignments like site management, water treatment, and sustainability
- Unique balance of core topics, management courses, projects, and liberal studies prepares for diverse careers
- Graduates play key role in environmental protection by applying science and engineering, prepared for roles including pollution monitoring, site assessment and project management
- Plans to pursue ECO Canada Accreditation to enhance program validation and recognition

Did you know?

- Canada’s environmental industry is booming! It's estimated to be valued at $73 billion annually, offering vast opportunities for employment and career growth[1]
- According to Statistics Canada, the demand for environmental engineering technologists is projected to increase by 12% over the next decade, significantly faster than the average for all occupations[1]
- The environmental sector in Canada employs over 314,000 people across various fields[2]
- Environmental engineering technologists play a crucial role in addressing climate change and attainment of the United Nations Sustainable Development Goals.[3]

- Pursing an advanced diploma in environmental engineering technology can substantially boost salary earnings, with an average additional cash compensation of $4,071, ranging from $1,884 to $8,798. [4]
- Environmental engineering technologists have diverse career paths, from working in government agencies and consulting firms to industries like renewable energy, mining, and manufacturing. [5]

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[1] Government of Canada. (July, 2023). *Canada's Environmental and Clean Technology Sector*. Retrieved from https://www.international.gc.ca/trade-commerce/economist-economiste/analysis-analyse/ect-etp.aspx?lang=eng
[2] Statistics Canada. *Table 36-10-0632-01 Environmental and Clean Technology Products Economic Account, employment*. Retrieved from https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610063201
[3] Utilities One. (2023) *Building a Greener Future: How Environmental Engineering is Shaping Urban Development and Infrastructure.* Retrieved from https://utilitiesone.com/building-a-greener-future-how-environmental-engineering-is-shaping-urban-development-and-infrastructure
[4] Glassdoor. (2024). *Environmental Engineer Salaries in Canada.* Retrieved from https://www.glassdoor.ca/Salaries/environmental-engineer-salary-SRCH_KO0,22.htm
[5] Indeed. (2022). *What Is Environmental Engineering? (With Job Outlook).* Retrieved from https://ca.indeed.com/career-advice/career-development/what-is-environmental-engineering

OBJECTIVES

Upon successful completion of this program graduates will be able to:

1. Perform and interpret environmental procedures for air and water pollution control, and hazardous waste management.
2. Apply basic principles of science and engineering to environmental processes.
3. Select, evaluate, operate, calibrate, test, troubleshoot and maintain instrumentation common to the discipline.
4. Plan, design and implement environmental impact, assessment and remediation programs.
5. Understand the methods of recognition, evaluation and control of hazards to people, facilities, equipment and the environment.
6. Collect representative environmental samples, perform routine and specialized tests and interpret results, using current and relevant tools.
7. Carry out work responsibilities adhering to the standards of professional conduct and principles of professional ethics.
8. Contribute to the development, implementation and maintenance of environmental management systems.
9. An ability to select and apply the knowledge, techniques, skills, and modern tools of the discipline to broadly-defined environmental engineering technology activities.
10. Establish and maintain a safe work environment by following and enforcing environmental and safety standards and adhering to established legislation, practices, and procedures.

CAREER OPPORTUNITIES

Graduates emerge as proactive champions, ready to tackle every aspect of Environmental Engineering Technology and Occupational Health and Safety management, all while embracing the future of sustainable development. They step into a diverse array of captivating roles, from Environmental Consultants to Watershed Specialists and Environmental Protection Officers. As Groundwater Specialists or Environmental Assessment Supervisors, they spearhead efforts toward sustainability and safety. Opportunities abound as they assume roles as Environmental Auditors, Industrial Hygienists, and more. With doors opening across sectors such as healthcare, construction, waste management, and the burgeoning fields of green energy and sustainable development, their potential for impact knows no bounds. Joining this exhilarating landscape of possibility, graduates seize the chance to make a tangible difference in their careers.

PROGRAM TRANSFERABILITY

Graduates of the Environmental Engineering Technology Advanced Diploma program who wish to pursue additional post-secondary studies can apply for entry with advanced standing at a number of Canadian Universities that the

College has established credit transfer agreements with. Please refer to the Department of Advanced Education and Skills transfer guide, or contact your intended university or college.

Transfer Agreements:

- University of New Brunswick - Fredericton, NB
- Royal Roads University - Victoria, BC

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Environmental Engineering Technology Advanced Diploma program are required to obtain a certificate of completion of Power Line Hazards Awareness, Occupational Health and Safety Committee (14 hour), Pleasure Craft Operators, WHMIS 2015 (GHS), Transportation of Dangerous Goods, Lock Out Tag Out, MSI Awareness, Asbestos Awareness (1 day), Standard First Aid/Heart Start(AED), CSA ATV Safety, and CSA Snowmobile Safety upon graduation.

Note: Students should be aware that additional fees and expenses apply for some of the certifications, field trips, and tours throughout the program.

ENTRANCE REQUIREMENTS

Eligibility for admission to the Environmental Engineering Technology – Advanced Diploma program requires the applicant to have a university degree in science courses to include Calculus, Statistics, Chemistry and Biology from an institution recognized by the College of the North Atlantic (OR a combination of other post-secondary and industry experience acceptable to the college as an entrance requirement).

SPECIAL REQUIREMENTS

Because of the extensive field and laboratory exposure incorporated into this program, students will be required to obtain specialized clothing and equipment that includes a lab coat, safety glasses, graphics calculator, compass, CSA Safety Boots, CSA hard hat, rain gear, and other clothing appropriate for outdoor work.

Courses

Semester 1 Intersession

Code	Title	Cr	Le	La
EN1520	Environmental Sampling	3	2	2
EN2300	Environmental Law	3	3	0
EN2321	Occupational Health & Safety	3	2	2
EN3200	Environmental Impact Assessment	3	3	0

Semester 2 Fall

Code	Title	Cr	Le	La
CH2715	Analytical Chemistry	4	3	3
EN1600	Env. Site Assessment I	3	2	3
EN1220	Industrial Hygiene	4	3	2
EN1110	Soil Fundamentals	4	3	2
EN1210	Geomatics I (Practical)	1	0	2
EN3111	Environmental Engineering I	4	3	2
PR1410	Capstone Project I (Seminar)	*0	1	0

**The credit hour from PR1410 Capstone Project I (Seminar) in Semester 2 is allotted to PR1420 Capstone Project II in Semester 4.*

Semester 3 Winter

Code	Title	Cr	Le	La
EN1601	Env. Site Assessment II	4	3	2

Code	Title	Cr	Le	La
EY2110	Ecology	4	3	2
EN3120	Environmental Engineering II	4	3	2
EN1531	Water Quality	4	3	2
EN3300	Environmental Auditing	3	2	2
PR3150	Project Management & Financial Analysis	4	4	0

Semester 4 Intersession

Code	Title	Cr	Le	La
EN2545	Water and Waste Water Treatment	4	3	2
EN1230	Geomatics II (GIS)	3	2	3
PR1420	Capstone Project II	*4	3	0

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length.

Geomatics/Surveying Engineering Technology (Co-op)

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Engineering Technology

Locations & Delivery Modes:

- Ridge Road - On Campus delivery

This program is currently undergoing a program review, which may result in some courses being changed, removed, and/or re-sequenced.

PROGRAM DESCRIPTION

Geomatics is a comprehensive discipline that uses arts, science, and technology to gather, store, process, model, analyze, and deliver spatially referenced or location information. It encompasses the fields of geodesy, Global Navigation Satellite Systems (GNSS), land surveying, hydrography, mapping, remote sensing (often called earth observation), photogrammetry, and Geographic Information Systems (GIS). Mainstream technologies, such as Google Earth, smartphones, 3D movies, and self-driving cars, are all based on geomatics technologies.

The Geomatics/Surveying Engineering Technology (Co-op) program prepares students for successful careers in their chosen branch of geomatics. Using state-of-the-art equipment and software, students acquire the skills and knowledge to excel in an ever-advancing industry.

Graduates of the program will be able to apply their skills and knowledge to any number of unique projects, including combating climate change, urban planning, constructing pipelines, operating and troubleshooting navigation systems, investigating lost property boundaries, seafloor structure installation and commissioning, and preserving tangible and intangible cultural heritage, to name just a few.

The Geomatics/Surveying Engineering Technology (Co-op) program boasts nearly a 100 percent employment rate, with graduates working all over the world and receiving competitive starting salaries ranging from $40,000 up to $100,000 annually, depending on the field and geographical location of employment. Recent graduates report immediate and sustained employment within the geomatics field.

With rapid advancements in technology from location-based mobile devices, data capture with drones or Remotely Piloted Aircraft Systems (RPAS), cloud computing, augmented and virtual reality, and 3D modelling for construction, preservation, and renovations, the need for geomatics professionals is increasing at an accelerated pace.

CAREER OPPORTUNITIES

The diverse subject matter of geomatics allows graduates of the Geomatics/Surveying Engineering Technology (Co-op) program to obtain jobs in a number of different areas, including:

- Land Surveying and Cadastral Mapping
- Municipal Design
- Construction Engineering
- Ocean Mapping and Marine Construction
- Marine Seismic Survey
- Infrastructure and Resource Management
- Utilities Management and Mapping
- Environmental Monitoring
- Oil and Gas Development
- Mining Surveying and Mapping
- Cultural Preservation

Graduates of the program may also find themselves:

- using Remotely Piloted Aircraft Systems (RPAS) and Global Navigation Satellite Systems (GNSS)for topographic mapping
- providing technical support for spatial data collection and integration for infrastructure management
- travelling the globe providing technical support
- producing 3D models
- using Geographic Information Systems (GIS) and remote sensing to provide advice on green mining projects
- providing offshore navigation and positioning for the installation of marine structures and the completion of marine seismic surveys
- conducting boundary retracement surveys for the production of legal land survey plans

Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.

Graduates who have obtained a certificate of completion from the Canadian Board of Examiners for Professional Surveyors (CBEPS) may become members of provincial survey associations, such as the Association of Newfoundland Land Surveyors (ANLS), and begin their training to become professional land surveyors. They may also become student members of the Association of Canada Lands Surveyors (ACLS) and members of Professional Surveyors Canada (PSC).

SKILL SETS ACQUIRED

Graduates of the Geomatics/Surveying Engineering Technology (Co-op) program will have employable skills in:

- Land Surveying
- Construction Surveying
- Geodetic Surveying
- Hydrographic Surveying
- Topographic Mapping
- Remote Sensing
- Photogrammetry
- Geographic Information Systems (GIS)
- Global Navigation Satellite Systems (GNSS)
- Robotic Total Station Applications
- Terrestrial and Mobile 3D Laser Scanning
- Remotely Piloted Aircraft Systems (RPAS)

ACCREDITATION

This program is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists.

The academic credentials of graduates of accredited technology programs are recognized internationally by the signatories of the Sydney Accord. This provides graduates of the program with both national and international mobility for work and/or study.

The Geomatics/Surveying Engineering Technology (Co-op) program also receives several specific exam exemptions from the Canadian Board of Examiners for Professional Surveyors (CBEPS), which establishes, assesses, and certifies the academic qualifications of individuals who apply to become professional land surveyors and/or geomatics professionals in Canada.

Graduates of the Geomatics/Surveying Engineering Technology (Co-op) program:

- are automatically eligible for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), as well as any similar association in Canada
- are eligible to further their education by completing a Bachelor of Technology (B. Tech) at Memorial University, which has an articulation agreement with the College of the North Atlantic
- can further their careers in geomatics by attending the University of New Brunswick, which awards graduates of the Geomatics/Surveying Engineering Technology (Co-op) program a limited number of credits toward a

Bachelor of Science in Engineering (BScE) in Geomatics Engineering

OBJECTIVES

Graduates of the Geomatics/Surveying Engineering Technology (Co-op) program will be able to:

1. Assemble, manage, collect, process, and interpret geomatics project data.
2. Design and establish horizontal and vertical survey networks, including error analysis and adjustments.
3. Analyze, translate, and present processed geomatics data.
4. Work in teams to plan and monitor various parts of geomatics projects.
5. Evaluate and apply geomatics equipment and techniques to complete various geomatics projects.
6. Identify and analyze physical features using various remote sensing techniques.
7. Perform various engineering surveys for design, construction, and layout.
8. Interpret, process, and analyze geomatics data to produce digital plans, drawings, and reports.
9. Correctly apply principles of reference systems and reference frames, time systems, and earth properties when performing geodetic computations and surveys.
10. Use aerial photogrammetry to produce various photogrammetric products.

CURRICULUM

General education consisting of Communications (oral or written), Mathematics, Physics, Chemistry, Electrotechnology, Computers, and Engineering Graphics.

Specific education in all aspects of Geomatics.

Practical education employing extensive field training to provide experience with instrumentation and software, through Surveying Camps and practical lab sessions.

Work exposure consisting of field experience, gained from compensated work terms, in the field of geomatics/surveying.

HANDS-ON LEARNING

The Geomatics/Surveying Engineering Technology (Co-op) program provides students with opportunities for hands-on learning through the following:

- course laboratories
- two work terms
- two field camps

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Geomatics/Surveying Engineering Technology (Co-op) program are required to obtain a certificate of completion, valid upon graduation, for the following:

- Standard First Aid/Heart Start
- Workplace Hazardous Materials Information System (WHMIS)

Additionally, students may have the option of obtaining the following certificate (when offered):

- Small Remotely Piloted Aircraft Systems (RPAS), Visual Line-of-Sight (VLOS) Advanced Operations Certificate

Students should be aware that additional fees may apply for field camp activities as well as any external certifications required throughout the program.

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. High School

High School Graduation Certificate with a 60% overall average in the following (or equivalent):

i. English (2 credits) (minimum 60%) from: 3201

ii. Mathematics (4 credits) chosen from:

Advanced: 2200, 3200 (50% minimum in each course)

Academic: 2201 (50% minimum), 3201 (60% minimum)

Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school

Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.

iii. Science (4 credits) two of which must be selected from:

Biology: 3201

Physics: 3204

Chemistry: 3202

Earth Systems: 3209

Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:

i. Math (60% MINIMUM) MA1040, MA1041

ii. Two Science courses chosen from one of the following three combinations:

a. Introductory Biology: BL1020, BL1021

b. Introductory Chemistry: CH1030, CH1031

c. Introductory Physics: PH1050, PH1051

Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:

i. Math (60% MINIMUM) MA1040, MA1041

ii. Two Science courses chosen from one of the following three combinations:

a. Introductory Biology: BL1025, BL1026

b. Introductory Chemistry: CH1035, CH1036

c. Introductory Physics: PH1055, PH1056

Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):

i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C

ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C

iii. Science from one of the following sections:

a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C

b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C

c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
ET1100	Electrotechnology	4	3	2
MA1700	Mathematics*	4	3	2
PH1100	Physics	4	3	2
EG1110	Engineering Graphics	3	2	2
CH1120	Chemistry	4	3	2
SD1170	Technology Awareness I	0	1	0

**Admission into the appropriate Mathematics course will be decided by the grade in high school math. Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from MA1700 Mathematics. Students must apply for the exemption.*

Note: Students may apply for an exemption from MA1700 provided they meet the appropriate high school level in Mathematics as noted above.

Semester 2 (Winter)

Code	Title	Cr	Le	La
CH1121	Chemistry	4	3	2
PH1101	Physics	4	3	2
MA1101	Advanced Mathematics*	5	5	0
ET1101	Electrotechnology	4	3	2
CM1401	Technical Report Writing II	3	3	0
EG1430	AutoCAD Essentials	3	2	2
SD1171	Technology Awareness II	2	1	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
SU1320	Plane Surveying I	4	3	4
EN1120	Environmental Management	3	2	2
SU1500	Cartography	3	2	2

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4 (Fall)

Code	Title	Cr	Le	La
FT1240	Surveying Field Camp	1	0	0
CM2800	Oral/Written Communication Skills	3	3	0
SU1321	Plane Surveying II	7	4	8
MA2100	Mathematics - Calculus	5	5	0
SU1360	Graphics for Geomatics Engineering Technology	3	2	2
SU2500	Photogrammetry	4	3	2

Semester 5 (Winter)

Code	Title	Cr	Le	La
MA2180	Applied Geomatics Mathematics	4	4	1

Code	Title	Cr	Le	La
SU1450	Geographic Information Systems (GIS) I	3	2	3
SU1540	Hydrography I	4	3	3
SU2330	Geodesy & Geodetic Positioning I	4	3	3
SU2540	Cadastral Surveying I	3	2	2
CP1640	Visual Basic Applications for ACAD	2	1	2

Semester 6 (Spring)

Code	Title	Cr	Le	La
WC1300	Work Term I	5	0	0

Semester 7 (Fall)

Code	Title	Cr	Le	La
CA2900	Municipal Engineering	3	2	2
SU1460	Geographic Information Systems (GIS) II	3	2	3
SU2570	GNSS and Spatial Referencing	4	3	3
SU3500	Adjustments	4	3	3
PR2890	Capstone Project I (Seminar)	0	1	0
MA3130	Advanced Geomatics Mathematics	3	3	0
GE1240	Geology for Geomatics/Surveying ET	3	2	2

Semester 8 (Winter)

Code	Title	Cr	Le	La
WC1301	Work Term II	5	0	0

Semester 9 (Spring)

Code	Title	Cr	Le	La
FT1260	Multidisciplinary Field Camp	1	0	0
PR3150	Project Management and Financial Analysis	4	4	0
PR2891	Capstone Project II	4	3	0
SU1570	Remote Sensing	3	2	2
SU3300	Geodesy & Geodetic Positioning II	4	3	3
SU2541	Cadastral Surveying II	3	2	2
SU1541	Hydrography II	4	3	3

Health and Safety Management

Start Date: September

Credential: Post Diploma

Program Length: One Year

School: Engineering Technology

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

Better Safe.

Progressive companies and organizations are constantly looking for ways in which they can reduce costs and become more competitive. They know that in the present economic climate, the human and financial costs of increased workplace incidents mean a negative factor for economic growth.

Adhering to the Occupational Health & Safety Act and Regulations, these employers are keenly aware that an opportunity exists for them to significantly improve efficiency and profitability through a reduction of losses from incidents and occupational disease. Employer due diligence requirements have been considerably expanded in the wake of the COVID-19 pandemic.

This Health & Safety Management (HSM) program utilizes a combination of engineering, physical sciences, and behavioural sciences to increase the opportunities for you to be a valuable part of reducing and eliminating losses in the workplace. The program consists of three academic terms, which may be completed through either full-time or part-time study. The third semester concentrates on providing a correlation between theory and safety project development through twelve (12) weeks of either a cooperative education work term or a work integrated safety project. With either option, learners can expect to conduct a comprehensive industry identification, analysis, and evaluation of the various stages necessary to initiate or upgrade an existing safety program.

Once you graduate and fulfill the requirements, you can choose to become a Canadian Registered Safety Professional (CRSP). This certification is offered through the Board of Canadian Registered Safety Professionals (BCRSP), an accredited national body that sets certification standards for the occupational health and safety (OHS) profession. The HSM program is listed as an eligible OHS College program for BCRSP Certification.

Those with this training find work in such roles as safety specialists, health and safety engineers, risk managers, and inspectors, and other careers in OH&S. Having this training and these certifications and standards behind you will set you up for excellence and professionalism in the workplace, where you will be a huge part of promoting safety for your organization.

It's safe to say that you will be in high demand!

Program Highlights

- Competencies mapped against the 2020 Blueprint for the Canadian Registered Safety Professionals Examination (CRSPEX)
- Prepares for the CRSPEX and, if successful, provides CRSP certification, a highly regarded designation in the industry
- May be completed through either full-time or part-time study

Did You Know?

- Increased demand for occupational health and safety professionals, particularly in the wake of the pandemic, as the Labour Market Information Council reported more than a 12% increase in occupational health and safety jobs for 2022.
- Employer due diligence requirements have been considerably expanded in the wake of the COVID-19 pandemic.

- When people feel valued, respected and satisfied in their jobs and work in safe, healthy environments, they are more likely to be more productive and committed to their work.
- Studies show that workplace injuries and illnesses cost the nation $26.8 billion a year.[1]

OBJECTIVES

Upon successful completion of the Health & Safety Management program, graduates will be able to:

1. Demonstrate comprehensive knowledge and skills required to recognize, evaluate, and control hazards to people, facilities, equipment, and the environment.
2. Design and implement programs, systems, procedures, and techniques to reduce the losses associated with incidents and occupational disease in industry, government, health care, construction, and services sectors.
3. Work cooperatively within a safety project management team to design and implement safety management principles and applications that address predefined objectives.
4. Design and conduct exercises for various levels of training for safety engineering planners and coordinators.
5. Apply health and wellness principles, and techniques, to the workplace.
6. Demonstrate applied safety fundamentals and adhere to workplace safety law & ethics.

ENTRANCE REQUIREMENTS

Applicants must have graduated with a university degree OR a minimum of a two-year college diploma from an institution recognized by College of the North Atlantic (OR a combination of other post-secondary work and industry experience acceptable to the college as an entrance requirement such as a Red Seal Journeyperson certificate with relevant industry experience).

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[1] The cost of injury in Canada - Canada.ca

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
SE1021	OHS - Loss Control	3	3	0
SE1030	Occupational Hygiene I	4	3	2
SE1010	Fire Protection	3	3	0
SE1061	Workplace Safety Law & Ethics	4	4	0
SE1091	Applied Safety Fundamentals	5	5	0
SE2321	Risk & Process Safety Management	4	4	0
SE2055	Health & Wellness	3	3	0

Semester 2 (Winter)

Code	Title	Cr	Le	La
SE2051	Emerg. Preparedness & Response	4	4	0
SE2000	Occupational Hygiene II	4	3	2
SE2065	Ergonomics	3	3	1
SE2045	Environmental Management	3	3	0
SE2070	Emerging Trends in Safety	3	3	0
SE1075	OHSMS Culture & Development	5	5	0
SE1400	Auditing OHS Systems	3	3	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
WC1250	Work Term	5	5	0
OR				
PR1430	Work Integrated Safety Project	5	5	0

Instrumentation and Controls Engineering Technology

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Engineering Technology

Locations & Delivery Modes:

- Ridge Road - On Campus delivery

PROGRAM DESCRIPTION

The International Society of Automation (ISA) defines instrumentation as "the art and science of measurement and control". It involves using and/or working with instruments used to measure, record, and control process variables (such as level, flow, temperature, and pressure). Complex process control and measurement systems are found in the oil and gas industries, chemical processing industry, food processing operations, power generation, and the pulp and paper industry. Control systems are becoming increasingly used in automating industrial processes to improve productivity, conserve entry, and reduce pollution. This has created a strong demand for trained instrumentation professionals. As our provincial industrial sector grows, instrumentation and controls continue to be an extremely important field of technology.

Graduates completing this program are automatically eligible for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), as well as any similar association in Canada.

Upon completion of this program graduates may choose to further their education by completing a bachelor degree in technology or engineering at one of several institutions that have articulation agreements with College of the North Atlantic.

ACCREDITATION

Instrumentation and Controls Engineering Technology is accredited by Technology Accreditation Canada until December 2028. Instrumentation and Controls Engineering Technology is also recognized internationally by the signatories of the Sydney accord.

Note: This program may not be suitable for applicants who do not have normal colour perception.

OBJECTIVES

As engineering technologists, graduates of this program will have the knowledge and skills that will allow them to:

1. Design, install, troubleshoot and maintain process automation field and control room devices and systems such as distributed control systems (DCS), programmable logic controllers (PLC), and emergency shutdown systems.
2. Design and program control system interfaces, human machine interfaces (HMI) and graphical interfaces.
3. Use basic engineering principles and knowledge of industrial control systems to help design the control and safety systems for an industrial process.
4. Apply principles of process control to analyze the performance of industrial processes.
5. Apply concepts of measurement and sensor selection to specify, install, configure, calibrate, troubleshoot, and maintain various process instruments commonly used in industry, including electronic transmitters, pneumatic devices, and control valves.
6. Maintain, calibrate and troubleshoot various analytical instruments and analyzer sampling systems found in industrial process.
7. Demonstrate an understanding of industry standards, best practices, and workplace procedures related to safety and professionalism.
8. Prepare technical reports and presentations for effective communications in the workplace.

CURRICULUM

General education consisting of Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrotechnology, Engineering Graphics, and Technology Awareness.

Specific education focuses on various aspects of process measurement and control, including process control system design incorporating programmable control systems (PLC / DCS / ESD), human machine interfaces (HMI), and machine control and condition monitoring. Specific emphasis is also placed on industrial process analyzers and analyzer sampling systems.

Practical education through curriculum integrated labs employing industrial equipment, techniques and practices relating to the installation, operation and maintenance of transducers, transmitters, measurement and control instruments, and microprocessor-based instrumentation.

CAREER OPPORTUNITIES

Enrolment in the Instrumentation Controls Engineering Technology program results in making a very multifaceted career choice. It prepares graduating students for opportunities in employment locally and internationally in industries such as oil and gas, chemical processing, pulp and paper, power generation, food processing, and manufacturing. Typical positions for a graduate are instrumentation technologist, technical sales/service representative, consultant, plant maintenance person, testing & commissioning technologist, instrument designer, or control systems technologist.

Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Instrumentation and Controls Engineering Technology program are required to obtain the following external certifications throughout the program:

- Workplace Hazardous Materials Information System (WHMIS)
- Standard First Aid/Heart Start

***Students should be aware that additional fees may apply to external certifications.**

Graduates of the program may be eligible to receive a "Hazardous Areas Training Certificate." This certification is industry recognized and is designed for personnel carrying out installations, inspection and maintenance of electrical apparatus in potentially hazardous explosive areas in the onshore and offshore oil and gas industries.

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. High School
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204

Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1020, BL1021
b. Introductory Chemistry: CH1030, CH1031
c. Introductory Physics: PH1050, PH1051

Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1025, BL1026
b. Introductory Chemistry: CH1035, CH1036
c. Introductory Physics: PH1055, PH1056

Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
ET1100	Electrotechnology I	4	3	2

Code	Title	Cr	Le	La
MA1700	Mathematics*	4	3	2
PH1100	Physics	4	3	2
EG1110	Engineering Graphics	3	2	2
CH1120	Chemistry	4	3	2
SD1170	Technology Awareness I	0	1	0

**Admission into the appropriate Mathematics course will be decided by the grade in high school math. Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from MA1700 Mathematics. Students must apply for the exemption.*

Note: Students may apply for an exemption from MA1700 provided they meet the appropriate high school level in Mathematics as noted above.

Semester 2 (Winter)

Code	Title	Cr	Le	La
CH1121	Chemistry	4	3	2
PH1101	Physics	4	3	2
MA1101	Advanced Mathematics*	5	5	0
ET1101	Electrotechnology	4	3	2
CM1401	Technical Report Writing II	3	3	0
EG1430	AutoCAD Essentials	3	2	2
SD1171	Technology Awareness II	2	1	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
AE1265	Analog Electronics	3	2	2
CI1313	Fabrication Techniques/Network Cabling	3	2	3
CI1360	Basic Process Automation	2	1	2
ET2100	Electro-technology	3	2	2

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4 (Fall)

Code	Title	Cr	Le	La
CR1107	Network Fundamentals	4	3	3
CI2110	Pressure Level Measurement and Control	4	3	3
DP1110	Digital Systems I (Logic)	4	3	2
MA2100	Mathematics - Calculus	5	5	0
MP2170	AC Circuits and Machines	4	3	3

Semester 5 (Winter)

Code	Title	Cr	Le	La
CE2810	Industrial Communication Systems	4	3	2
CI2230	Flow and Temperature Measurement and Control	4	3	2
DP2435	Digital Systems II	4	3	2
DP3110	PLC	4	3	3
DR2350	Engineering Graphics for Instrumentation	2	1	2
MP3170	Industrial Motor Controls	4	3	2

Semester 6 (Intersession)

Code	Title	Cr	Le	La
CE2940	HMI & SCADA	4	3	2
CI2120	Final Control Elements and Instrument Air Systems	3	2	2
PE2730	Industrial Instrumentation Practices	2	1	3

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be

adjusted to reflect the shorter semester length. Refer to course outline.

Semester 7 (Fall)

Code	Title	Cr	Le	La
CI1520	Process Analyzers I	4	3	2
CI2310	Advanced Control Strategies	4	3	3
CI3860	DCS	4	3	3
CM2800	Oral/Written Communication Skills	3	3	0
PR2740	Capstone Project I (Seminar)	*0	1	0
PR3150	Project Management and Financial Analysis	4	4	0

**The credit hour from PR2740 Capstone Project I (Seminar) in Semester 7 is allotted to PR2741 Capstone Project II in Semester 8.*

Semester 8 (Winter)

Code	Title	Cr	Le	La
FM3100	Fluid Power	3	3	1
CI3120	Safety Shutdown and Machine Monitoring Systems	4	3	2
CI3822	Process Analyzers II	4	3	3
PE2240	Hazardous Areas	3	2	2
PR2741	Capstone Project II	*4	3	0

Mechanical Engineering Technology

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Engineering Technology

Locations & Delivery Modes:

- Ridge Road - On Campus delivery

PROGRAM DESCRIPTION

Mechanical Engineering Technologists develop a diverse technical background, good "hands-on" skills, and excellent people skills. Students will be engaging in emerging trends and the latest innovations in new technologies, building design and building operations. Students will be immersed in Mechatronics, Technical Modeling, Building Operations, Mechanical Building Systems and Machine Design.

These attributes make them well suited to employment in a wide variety of industries in both field and management related roles.

Graduates completing this program are automatically eligible for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), as well as any similar association in Canada.

Upon completion of this program, graduates may choose to further their education by completing a bachelor degree in technology or engineering at one of several institutions that have articulation agreements with College of the North Atlantic.

ACCREDITATION

This program is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists.

The academic credentials of graduates of accredited technology programs are recognized internationally by the signatories of the Sydney Accord. This provides graduates of the program with both national and international mobility for work and/or study.

OBJECTIVES

Upon successful completion of the Mechanical Engineering Technology program, graduates will have the knowledge and skill that will allow him/her to:

1. Apply fundamental principles for machine design and operation.
2. Create mechanical working drawings and computer based models of mechanical systems using AutoCAD and related engineering analysis software including REVIT.
3. Assist in the design, installation, implementation, operation, maintenance, and management of power generation systems, Heating Ventilation and Air Conditioning (HVAC) systems, and general mechanical support systems which are required for petroleum production systems, petroleum refineries, processing plants, office buildings and residences.
4. Design and create components using vacuum forming, 3D printing, injection molding and laser cutting processes.
5. Program and perform maintenance on robotics for automation applications.

CURRICULUM

General education consisting of Project Management Skills (theoretical and applied), Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrotechnology, Computers, Engineering Graphics, Technology Awareness, and Student Success.

Specific education consisting of discipline-specific courses such as Mechanics, Strengths, Thermodynamics, , Machine Design, Hydraulics and Pneumatics, Economics, Engineering Management, Quality Assurance, Maintenance, Machining Process Controls and Technological Thesis (Design Project).

Practical education employing labs and shops focused on Engineering Graphics, Materials & Processes, Machine Shop Practices, and Computer Numerical Control (CNC).

CAREER OPPORTUNITIES

The broad base of competencies acquired through this program of study prepares graduates for careers in a wide variety of industries including the petroleum sector, mining, electrical power generation, food processing, manufacturing, and engineering consulting.

Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Mechanical Engineering Technology program are required to obtain the following external certifications throughout the program:
- Workplace Hazardous Materials Information System (WHMIS)
- Standard First Aid/Heart Start

***Students should be aware that additional fees may apply to external certifications.**

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. High School
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
   a. Introductory Biology: BL1020, BL1021
   b. Introductory Chemistry: CH1030, CH1031

c. Introductory Physics: PH1050, PH1051

Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:

i. Math (60% MINIMUM) MA1040, MA1041

ii. Two Science courses chosen from one of the following three combinations:

a. Introductory Biology: BL1025, BL1026

b. Introductory Chemistry: CH1035, CH1036

c. Introductory Physics: PH1055, PH1056

Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):

i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C

ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C

iii. Science from one of the following sections:

a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C

b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C

c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
ET1100	Electrotechnology I	4	3	2
MA1700	Mathematics*	4	3	2
PH1100	Physics	4	3	2
EG1110	Engineering Graphics	3	2	2
CH1120	Chemistry	4	3	2
SD1170	Technology Awareness I	0	1	0

**Admission into the appropriate Mathematics course will be decided by the grade in high school math.*
Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from MA1700 Mathematics. Students must apply for the exemption.

Note: Students may apply for an exemption from MA1700 provided they meet the appropriate high school level in Mathematics as noted above.

Semester 2 (Winter)

Code	Title	Cr	Le	La
CH1121	Chemistry	4	3	2
PH1101	Physics	4	3	2
MA1101	Advanced Mathematics*	5	5	0
ET1101	Electrotechnology	4	3	2
CM1401	Technical Report Writing II	3	3	0
EG1430	AutoCAD Essentials	3	2	2
SD1171	Technology Awareness II	2	1	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
TM1310	Technical Modeling - Mechanical Drawings	2	1	2
TM1320	Technical Modeling - 3D Modeling	2	1	2
MH1300	Building Operations I	2	2	1
SP2450	OHS Management Systems	3	3	0
SP1200	Machine Shop Practice	1	0	3

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4 (Fall)

Code	Title	Cr	Le	La
CF1100	Materials and Processes I	3	3	1
CF2100	Mechanics of Solids: Statics	3	3	1
ME1400	Mechatronics I - PLC	3	2	2
MA2100	Mathematics - Calculus	5	5	0
MH2100	Building Operations II	3	3	1
SP1730	CNC Machining I	3	3	1
TD2100	Thermodynamics	3	3	1

Semester 5 (Winter)

Code	Title	Cr	Le	La
CF1120	Materials and Processes II	3	3	1
FM2100	Fluid Mechanics	3	3	1
FM3100	Fluid Power	3	3	1
MA2130	Applied Mathematics	5	5	0
CF2511	Strength of Materials	3	3	1
MH2830	Mechanical Building Systems I - HVAC	3	3	1
TD2140	Thermodynamics	3	3	1

Semester 6 (Intersession)

Code	Title	Cr	Le	La
FM3200	Machine Design I	3	3	1
ME2400	Mechatronics II – Automation	3	2	2
FM2340	Fluid Dynamics	3	3	1

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 7 (Fall)

Code	Title	Cr	Le	La
SP1835	Applied Statistics and Quality Control	4	3	2
PR2770	Capstone Project I (Seminar)	0	1	0
CF3100	Mechanics of Solids: Dynamics	3	3	1

Code	Title	Cr	Le	La
TD3140	Heat Transfer	3	3	1
MH3350	Mechanical Building Systems II	4	4	1
CM2800	Oral/Written Communications Skills	3	3	0
SP1420	Asset Maint. & Reliability	3	2	2

Semester 8 (Winter)

Code	Title	Cr	Le	La
PR3150	Project Management and Financial Analysis	4	4	0
ME3400	Mechatronics III – Robotics	3	2	2
FM3220	Machine Design II	3	3	1
SP2370	Quality Assurance	3	3	0
SE1010	Fire Protection	3	3	0
MH4610	Mechanical Building Systems III	3	3	0
PR2772	Capstone Project II	4	3	0
TD3100	Thermodynamics	3	3	1

Mechanical Engineering Technology (Manufacturing) Co-op

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Engineering Technology

Locations & Delivery Modes:

- Ridge Road - On Campus delivery

PROGRAM DESCRIPTION

Mechanical Engineering Technologists, who complete studies focused on manufacturing, are proficient in the specification, implementation, operation, maintenance and supervision of manufacturing systems and personnel. These technologists are prepared to assume the role of decision-maker early in their careers in both the traditional and advanced manufacturing sectors. The knowledge of core mechanical engineering principles, above average problem-solving ability, and superior "hands-on" skills also make these graduates well suited to employment in related industries.

Students in this program utilize the advanced technology resources available through the College's Manufacturing Technology Center (MTC). The MTC is mandated to provide both direct and indirect support to industry through activities such as product and process prototyping.

Graduates completing this program are automatically eligible for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), as well as any similar association in Canada.

Upon completion of this program graduates may choose to further their education by completing a bachelor degree in technology or engineering at one of several institutions that have articulation agreements with College of the North Atlantic.

ACCREDITATION

This program is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists.

The academic credentials of graduates of accredited technology programs are recognized internationally by the signatories of the Sydney Accord. This provides graduates of the program with both national and international mobility for work and/or study.

OBJECTIVES
Upon the successful completion of the Mechanical Engineering Technology (Manufacturing) Co-op program the graduate will be able to:

1. Utilize Computer Aided Design and Computer Aided Manufacturing (CAD/CAM) software as per industry standards.
2. Design mechanical components/assemblies and create engineering drawings and specifications through the use of 2D and 3D CAD and Modeling software.
3. Develop electro-pneumatic and other automation systems, through hands-on practical experience with programming and operating Computer Numerical Control (CNC) equipment, Robotics, Programmable Logic Controllers (PLC's).
4. Operate Computer Integrated Manufacturing (CIM) systems drawing on the knowledge learned through core-engineering concepts of materials science, strength of materials, and machine design.
5. Apply quality assurance standards and practical quality control techniques in precision measurement.
6. Manage projects, resources and people in a supervisor role through the use of problem solving and related skills.

CURRICULUM

General education consisting of Project Management Skills (theoretical and applied), Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrotechnology, Computers, Engineering Graphics, Technology Awareness, and Student Success.

Specific education consisting of discipline specific courses such as Mechanics, Strengths of Materials, Materials and Processes, Machine Design, Hydraulics and Pneumatics, Engineering Management, Quality Assurance, and Maintenance.

Practical education employing labs and shops focused on Computer Numerical Control (CNC), Tool Design, and Computer Integrated Manufacturing.

Work exposure consisting of field experience, gained from compensated work terms, in the field of manufacturing.

CAREER OPPORTUNITIES

Career opportunities for graduates of this program exist with consulting firms, manufacturing firms, shipbuilding yards, oil & gas servicing industry, food processing plants, research institutions and government departments.

CERTIFICATIONS

In addition to formal semester courses listed in the program of studies, students in the Mechanical Engineering Technology (Manufacturing) Co-op program are required to obtain a certificate of completion in Standard First Aid/Heart Start and WHMIS, over their three-year period of studies.
***Students should be aware that additional fees may apply to external certifications.**

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. **High School**
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) minimum 60% from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.
2. **Comprehensive Arts and Science (CAS) Transition**
Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1020, BL1021
b. Introductory Chemistry: CH1030, CH1031
c. Introductory Physics: PH1050, PH1051
Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.
<u>Effective Academic Year 2025 - 2026:</u>

College Transition
College Transition Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1025, BL1026
b. Introductory Chemistry: CH1035, CH1036
c. Introductory Physics: PH1055, PH1056
Note: It is strongly recommended that College Transitions students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.
3. **Adult Basic Education (ABE)**
Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.
4. **Mature Student Requirements**
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

ARTICULATION

Graduates of Mechanical Engineering Technology (Manufacturing) Co-op may continue their studies at Memorial University of Newfoundland in the Bachelor of Technology program or may apply to Lakehead University's post diploma Bachelor of Engineering program.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CM1400	Technical Report Writing I	3	3	0
ET1100	Electrotechnology I	4	3	2
MA1700	Mathematics*	4	3	2
PH1100	Physics	4	3	2
EG1110	Engineering Graphics	3	2	2
CH1120	Chemistry	4	3	2
SD1170	Technology Awareness I	0	1	0

**Admission into the appropriate Mathematics course will be decided by the grade in high school math.*
Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in

both high school Advanced Mathematics 2200 and 3200 can be exempted from MA1700 Mathematics. Students must apply for the exemption.

Note: Students may apply for an exemption from MA1700 provided they meet the appropriate high school level in Mathematics as noted above.

Semester 2 (Winter)

Code	Title	Cr	Le	La
CH1121	Chemistry	4	3	2
PH1101	Physics	4	3	2
MA1101	Advanced Mathematics*	5	5	0
ET1101	Electrotechnology	4	3	2
CM1401	Technical Report Writing II	3	3	0
EG1430	AutoCAD Essentials	3	2	2
SD1171	Technology Awareness II	2	1	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CG1500	Work Methods and Measurement	4	3	2
TM1310	Technical Modeling - Mechanical Drawings	2	1	2
SP1200	Machine Shop Practice	1	0	3
TM1320	Technical Modeling - 3D Modeling	2	1	2

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4 (Fall)

Code	Title	Cr	Le	La
CF1100	Materials and Processes I	3	3	1
CF2100	Mechanics of Solids: Statics	3	3	1
SP2450	OHS Management Systems	3	3	0
SP1730	CNC Machining I	3	3	1
SP2131	Applied Metrology I	2	1	3
MA2100	Mathematics - Calculus	5	5	0
MA1670	Statistics	4	4	1

Semester 5 (Winter)

Code	Title	Cr	Le	La
ME1400	Mechatronics I – PLC	3	2	2
CM2800	Oral/Written Communication Skills	3	3	0
CF1120	Materials and Processes II	3	3	1
FM2100	Fluid Mechanics	3	3	1
FM3100	Fluid Power	3	3	1
SP2132	Applied Metrology II	2	1	3
SP1731	CNC Machining II	4	3	2

Semester 6 (Spring)

Code	Title	Cr	Le	La
WC1900	Work Term I	5	0	0

Semester 7 (Fall)

Code	Title	Cr	Le	La
TD2100	Thermodynamics	3	3	1
LW1500	Law & Ethics	3	3	0
PR3620	Capstone Project I (Seminar)	*0	1	0
FM3200	Machine Design I	3	3	1
ME3400	Mechatronics III – Robotics	3	2	2
CG3501	Production Planning	3	3	1

Code	Title	Cr	Le	La
DR3720	Tool Design I	3	3	1
DR3810	Advanced Processes	3	2	3

**The credit hour from PR3620 Capstone Project I (Seminar) in Semester 7 is allotted to PR3621 Capstone Project II in Semester 9*

Semester 8 (Winter)

Code	Title	Cr	Le	La
WC1901	Work Term II	5	0	0

Semester 9 (Spring)

Code	Title	Cr	Le	La
CF3100	Mechanics of Solids: Dynamics	3	3	1
SP2325	Quality Assurance	3	3	0
PR3150	Project Management & Financial Analysis	4	4	0
PR3621	Capstone Project II	4	3	0
FM3220	Machine Design II	3	3	1
SP1420	Asset Maint. & Reliability	3	2	2
DR3721	Tool Design II	3	2	2
ME2400	Mechatronics II – Automation	3	2	2

Petroleum Engineering Technology (Co-op)

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Engineering Technology

Locations & Delivery Modes:

- Ridge Road - On Campus delivery

PROGRAM DESCRIPTION

The world demand for energy is growing and the oil and gas industry will supply much of this energy for decades to come. The sustained discoveries of oil and gas along the East Coast coupled with continued oil and gas discoveries on the Grand Banks of Newfoundland and Labrador, and in the Arctic Regions, renews Canada's commitment to become self-sufficient in its fossil energy needs. As a result, the industry continues to demand highly skilled engineering technologists to fulfill many roles. The three-year TAC Accredited Petroleum Engineering Technology (Co-op) program is designed to train technologists for lucrative careers in the oil and gas industry, which is supported by the increased interest in sustainable methods of further enhancing science and technology to develop these reservoirs.

ACCREDITATION

This program is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists.

The academic credentials of graduates of accredited technology programs are recognized internationally by the signatories of the Sydney Accord. This provides graduates of the program with both national and international mobility for work and/or study.

OBJECTIVES

As a petroleum engineering technologist, the graduate will have the knowledge and skill that will allow him/her to:

1. Demonstrate the knowledge, skills and attitudes required to participate in finding solutions to sustainable Oil and Gas development.
2. Construct and interpret maps and sections using surface geology, subsurface (drill hole) geology and geophysical data.
3. Interpret topographic maps & profiles, geologic maps & sections, and seismic data to assist in land-based and offshore resource exploration and development.
4. Analyze drill cuttings, drill core, and data from open-hole & cased-hole logging tools in order to evaluate reservoir formations in terms of porosity, permeability, fluid saturation and net pay.
5. Assist in planning, designing, inspecting, supervising, and constructing oil and gas wells.
6. Assist in estimating petroleum reserves and optimizing productivity using petroleum engineering principles.
7. Select, operate, troubleshoot and maintain the equipment associated with the separation of the produced gas/oil/water fluids.

CURRICULUM

General education consisting of Project Management Skills (theoretical and applied), Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrotechnology, Computers, Engineering Graphics, Technology Awareness, and Student Success.

Specific education consisting of technical courses covering Mechanics, Fluid Mechanics, Thermodynamics, Materials and Processes, Instrumentation and Capstone Project.

Practical education employing labs and shops focused on Drilling, Production, Facilities, Reservoir and Geology.

Work exposure consisting of field experience, gained from a minimum 12 week work term which provides students the opportunity to gain valuable related work experience.

CAREER OPPORTUNITIES

Graduates of this program may obtain employment in all aspects of the petroleum industry. These opportunities include but are not limited to oil and natural gas exploration, production and processing, refining, oil and gas pipeline construction, gas utilities, as well as a variety of related activities associated with refining and transportation.

Graduates with two years of progressive work experience may be eligible to receive the designation of Professional Technologist (P. Tech) upon completion of a Professional Practice and Ethics Exam.

CERTIFICATIONS
Students in Petroleum Engineering Technology (Co-op) program will be required to complete the following safety certifications throughout their three-years of study:
- H2S Awareness
- WHMIS
- Standard First Aid/Heart Start
- Transportation of Dangerous Goods (TDG) - **during the second year of studies**.

***Students should be aware that additional fees may apply for external certifications.**

Note:
Students will also be required to complete a number of non-credit co-op education seminars throughout the program (resume writing, job search skills and interview preparation).

ENTRANCE REQUIREMENTS
Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. High School
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
   a. Introductory Biology: BL1020, BL1021
   b. Introductory Chemistry: CH1030, CH1031
   c. Introductory Physics: PH1050, PH1051

Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition
College Transition Certificate with the following courses:

i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
   a. Introductory Biology: BL1025, BL1026
   b. Introductory Chemistry: CH1035, CH1036
   c. Introductory Physics: PH1055, PH1056

Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
   a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
   b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
   c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CH1120	Chemistry	4	3	2
PH1150	Applied Physics	5	4	2
EG1110	Engineering Graphics	3	2	2
MC1850	Spreadsheet Applications	1	0	2
MA1700	Mathematics	4	3	2
CM1400	Technical Report Writing I	3	3	0
LW1540	Law, Ethics & Sustainability	3	3	0

Semester 2 (Winter)

Code	Title	Cr	Le	La
CH1121	Chemistry	4	3	2
EG1430	AutoCAD Essentials	3	2	2
MA1101	Advanced Mathematics	5	5	0
CM1401	Technical Report Writing II	3	3	0
FM2102	Fluid Mechanics	3	3	1
GE1520	Physical Geology	3	2	2
CI2250	Hydraulics	1	1	1

Semester 3 (Intersession)

Code	Title	Cr	Le	La
CF3201	Materials & Corrosion	4	3	2
GE1502	Petroleum Geology I	4	3	2
SP2455	Petroleum OHS Management	3	3	0
SE2150	Safety Certifications	0	0	0

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4 (Fall)

Code	Title	Cr	Le	La
CH2330	Petroleum Organic Chemistry	3	2	2
MA2100	Mathematics – Calculus	5	5	0
CM2800	Oral/Written Communication Skills	3	3	0
TD2100	Thermodynamics	3	3	1
GE2510	Petroleum Geology II	4	3	2
CF2545	Mechanics of Solids	3	3	1
CI1125	Process Instrumentation and Control Systems	2	2	1

Semester 5 (Winter)

Code	Title	Cr	Le	La
CH2335	Petroleum Chemistry	3	2	2
MA1670	Statistics	4	4	1
TD3140	Heat Transfer	3	3	1
PM2130	Drilling	4	3	2
PM2230	Completions	4	3	2
PM2321	Reservoir Estimates	4	3	2

Semester 6 (Spring)

Code	Title	Cr	Le	La
WT1400	Work Term	5	0	0

The Course and Lab hours per week are based on a 15 week semester. The Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 7 (Fall)

Code	Title	Cr	Le	La
PR3150	Project Management & Financial Analysis	4	4	0
PM2420	Logging and Formation Evaluation	5	4	2
PM2140	Well Planning	4	3	2
PM2520	Oil Facilities	3	3	1
PM2222	Production	3	3	1
PM2330	Reservoir Analysis	4	3	2
PR2880	Capstone Project I (Seminar)	0	1	0

The credit hour from PR2880 Capstone Project I (Seminar) in Semester 7 is allotted to PR2881 Capstone Project II in Semester 8.

Semester 8 (Winter)

Code	Title	Cr	Le	La
PR3110	Petroleum Risk Assessment	2	2	1
PM2402	Production Logging & Applications	3	2	2
PM2180	Well Control	2	1	3
PM2530	Gas Facilities & Flow Assurance	4	3	3
PM2600	Intervention	4	3	2
EN3400	Environmental Mgmt. and Protection	3	3	0
PR2881	Capstone Project II	4	3	0

School of Health Sciences

Advanced Care Paramedicine

Start Date: September

Credential: Post Diploma

Program Length: 4 Semesters

School: Health Sciences

Locations & Delivery Modes:
- Bay St. George - Blended delivery
- Prince Philip Drive - Blended delivery

PROGRAM DESCRIPTION

The provision of emergency medical services (EMS) is a unique and vital community service. Paramedics are highly skilled members of a health care team who function in the realm of EMS, initiating medical treatment for individuals in urgent and non-urgent situations. Based on sound knowledge, paramedics demonstrate rational problem-solving abilities and excellent decision-making skills. This program addresses not only the operational/procedural skills of the advanced care paramedic but also ethical and professional behaviours essential to practice, such as effective communication.

The Advanced Care Paramedicine Program is a four-semester post-diploma program offering training in advanced emergency care to Primary Care Paramedics who are presently practicing in Newfoundland and Labrador. Mental/physical fitness and healthy lifestyles are emphasized throughout the program, as paramedics must be fit to perform the requirements of the occupation.

This post-diploma program is designed with a blended delivery model and part-time schedule to promote advancement of skills from the PCP level of practice to the ACP level. This program engages students online in virtual classrooms, with on-campus labs, and clinical simulation. These paired with a robust, clinical practicum will support students in meeting the requirements for entry to practice ACP level in accordance with the National Occupational Competency Profile for Paramedics (NOCP).

Students will be required to attend three, one-week long mandatory practical sessions per semester at specific dates as well as hospital-based clinical shifts each semester. Hospital based clinical shifts will be broken down into individual shifts spread throughout the semester (semester 1 - equivalent of one-week hospitality shifts; semester 2 - equivalent of two-weeks of hospitality shifts; and semester 3 - equivalent of three-weeks of hospitality shifts).

PROGRAM OBJECTIVES

Upon successful completion of the Advanced Care Paramedicine program, graduates will be able to:
1. Perform advanced skills in respiratory, cardiac, trauma, obstetric care, paediatrics, pharmacology, and medical emergencies.
2. Meet the entry-to-practice competencies and requirements of an Advanced Care Paramedic (ACP) as defined by the National Occupational Competency Profile for Paramedics.
3. Contribute productively as a member of the health care team.
4. Use judgement and critical thinking skills to reach decisions that will best benefit the patient, and work autonomously in their areas of responsibility.
5. Use critical thinking and problem-solving skills that promote logical and independent decision-making in the provision of ACP care.

CLINICAL PLACEMENTS

Clinical placements are a required element of this program and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to speak with program faculty at the beginning of the program.

For programs with competitive admissions, clinical placements are not affected by ranking in the competitive admissions process and will be determined under institutional guidelines.

ENTRANCE REQUIREMENTS

- Completion of a paramedic diploma or certificate with successful completion of national COPR examination (PCP) or provincial equivalent
- Completion of a comprehensive entrance exam covering prerequisite PCP knowledge and skills administered by CNA as a preassessment and indicator of a student's PCP knowledge base
- Minimum of one-year experience (1,900 hours) as a Primary Care Paramedic
- Hold and maintain an active license to practice as a PCP in the province of NL for the duration of the program

Additional Entrance Requirements

- Current Basic Life Support (BLS)
- Mask Fit Testing
- Valid** Certificate of Conduct, including Criminal Record and Vulnerable Sector Check
- Students will require a clear and current Certificate of Conduct (Criminal Record and Vulnerable Sector Check) prior to clinical practicum. Applicants with a criminal offense listed on their Certificate of Conduct (Criminal Record and Vulnerable Sector Check) may be denied access to clinical placement and may be unable to complete their program.
- Immunization Record providing evidence that the applicant has received the required vaccinations/screening tests. Completing the immunization record will require physician's visits, blood tests, and a TB screening test; detailed instructions are included on the School of Health Sciences Student Information and Program Awareness Form. The applicant is responsible for ensuring that all medical requirements are fulfilled, and the immunization record complete before submission. Certain vaccinations require a series of immunizations over a period; therefore, it is essential to start the process as early as possible. The applicant is also responsible for all associated costs (vaccinations, laboratory testing, physician fees, certificate of conduct fees, etc.).

*Acceptance of the Certificate of Conduct (Criminal Record) is at the discretion of the organization in which the clinical practicum is being sought
*See the Additional Information for Health Sciences Applicants (Definitions and Regulations) section of the calendar or under the Admissions Regulations section of our website for details.

Courses

Semester 1

Code	Title	Cr	Le	La
PA3110	Advanced Care for Medical Emergencies I	9	6	6 + 1 wk clinical
PA3115	Foundations for Advanced Care	6	5	3
CM3020	Evidenced Based Practice & Oral Communications	4	4	0

Semester 2

Code	Title	Cr	Le	La
PA3220	Advanced Care for Medical Emergencies II	8	5	3 + 2 wks clinical
PA3225	Advanced Care for Special Considerations	6	5	3
PA3230	Advanced Care for Trauma	4	5	3

Semester 3

Code	Title	Cr	Le	La
PA3310	Advanced Care for Medical Emergencies III	6	5	3
PA3320	Advanced Care for Obstetrics and Pediatrics	9	6	3 + 3 wks clinical
PA3330	Interagency Relations & Introduction to Critical Care	6	5	3

Semester 4

Code	Title	Cr	Le	La
PA3410	Final Practicum	14	0	14 wks

Diagnostic Ultrasonography

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Health Sciences

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Detection is vital.

Sonography is critical in today's advancing medical field. This investigative method uses high-frequency sound waves to view and record diagnostic images of internal anatomy in real time. And like medical detectives, sonographers use their specialized training to examine the evidence and find clues to anomalies in the human body.

They provide detailed ultrasound images for Radiologists to interpret and report vital information regarding the patient for diagnosis and treatment. Ultrasound has grown to include applications in abdomen, obstetrics, gynecology, vascular and superficial structures.

With the continuously expanding applications of ultrasound in today's technologically advanced society, this makes for an exciting and challenging career. This exact, fascinating health science field has a high demand for graduates of this three-year diploma. There are diverse opportunities for you in this specialized profession, including work in hospital and clinic settings, treatment centres and health care facilities, with equipment manufacturers training others on the applications, and in post-secondary education.

As a frontline detective a typical workday will never be dull, as no two cases are the same. Your national accreditation provides you with portable skills highly sought throughout the country. And with the soaring global growth of this field, it could easily lead to work overseas.

If the distinctive features of this program catch your eye, contact us to investigate your opportunities!

Program Highlights

- Intense training to become an integral part of the healthcare team
- The program is seeking accreditation by Accreditation Canada
- Prepares you to challenge the Sonography Canada certification exam
- Sonography Canada provides portability within Canada

Did you know?

- Ultrasound is sound waves with frequencies higher than the upper audible limit of human hearing.
- Sonographers are medical detectives; they find clues to get the result. The Radiologist only sees what the Sonographer finds!
- There are no risks involved in performing or receiving an ultrasound procedure.
- The global diagnostic ultrasound market is experiencing a boom now until 2028.

The average Canadian salary is CAD 80,000 per year, with the median annual salary of CAD 64,000 per year.
https://ca.talent.com/

OBJECTIVES

Upon successful completion of this program graduates will be able to:

1. Utilize academic knowledge as outlined in the Sonography Canada Competency Profile and apply learned knowledge in clinical practice.

2. Apply critical thinking and problem-solving skills that promote competence in the performance of ultrasound procedures.
3. Communicate effectively and work collaboratively with other members of the health care team to serve patients and employers with the highest degree of competence.
4. Maintain a high level of professional conduct in the performance of all duties.

CURRICULUM

This is a 28-month program that includes a combination of training at CNA and Newfoundland and Labrador Health Services across the province. Graduates of the program are eligible to write the certification examinations set by Sonography Canada and the American Registry of Diagnostic Medical Sonographers (ARDMS). To obtain sufficient practice and confidence, students enrolled in this program must be willing to scan classmates and be willing to be scanned.

PROGRAM TRANSFERABILITY

Graduates may elect to further their studies and obtain a Bachelor of Technology degree from Memorial University of Newfoundland or a Bachelor of Sciences (Post Diploma, Human Science) from Athabasca University.

ACCREDITATION

This program is currently "Registered" for accreditation with Accreditation Canada/EQual. "Registered" status serves as an important demonstration of our commitment to providing quality education in alignment with accreditation and regulatory requirements. "Registered" status is not an accreditation status, nor does it guarantee any eventual accreditation. If you require additional information regarding our "Registered" accreditation status and endeavors and/or any potential implications this may have on your future abilities to practice as a healthcare professional, we encourage you to reach out to the Dean's office.

CERTIFICATIONS

Students must possess valid Standard First Aid with Basic Life Support (BLS) certification to be eligible for graduation from the College.

CLINICAL PLACEMENTS

Clinical placements are a required element of this program and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement.

For programs with competitive admissions, clinical placements are not affected by ranking in the competitive admissions process and will be determined under institutional guidelines.

ENTRANCE REQUIREMENTS (2024-2025)
Eligibility for consideration of admission to the Diagnostic Ultrasonography program requires the applicant to meet one of the following academic criteria:
1. High School
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or 3202 (minimum 60%)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Science (6 credits):
Biology: 2201 and 3201
Physics: 3204

Note: Starting with the 2024-2025 Academic Year intake, applicants that have completed BL3201 after September 2020, will be required to have completed both BL2201 and BL3201.
Note: CNA will not apply newly revised requirements to the disadvantage of an applicant whose high school courses were established by earlier requirements.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. English (minimum 60%): CM1060, CM1061
ii. Math (minimum 60%): MA1040, MA1041
iii. Four Science courses:
  a. Biology: BL1020, BL1021
  b. Physics: PH1050, PH1051

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. English (minimum 60%): CM1060, CM1061
ii. Math (minimum 60%): MA1040, MA1041
iii. Four Science courses:
  a. Biology: BL1025, BL1026
  b. Physics: PH1055, PH1056

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile (overall 60% average) including the following courses (or equivalent):
i. English (minimum of 60%) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (minimum of 60%) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from the following sections:
  a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
  b. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Note: Applicants with Adult Basic Education (Level III) Graduation with a different Profile (and appropriate grades) may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

Additional Entrance Requirements

- Completion of the Casper Admissions Exam.
  - The Casper Admissions Exam official score will be used as part of the points-based system to determine ranking in the competitive entry process
  - All applicants are required to complete Casper* Admissions Exam (CSP-10201 – Canadian Professional Health Sciences) as part of their application for the 2023/2024 admissions cycle. To complete Casper, visit Taking the Casper assessment - Take Casper (acuityinsights.app).

***Casper.** The Casper test comprises 14 sections of video and written scenarios. Following each scenario, you will be required to answer a set of probing questions under a time contract. The test typically takes between 90-110 minutes to complete. Each response is graded by a different rater, giving a very robust and reliable view of personal and professional characteristics important to our program. No studying is required for Casper, although you may want to familiarize yourself with the test structure at TakeAltus.com, and ensure you have a quiet environment to take the test. We strongly urge you to take advantage of the 14-section practice test, which will not only immerse you in the test environment but will also ensure you meet the technical requirements to access and complete the test.

Casper test results are valid for one admissions cycle. Applicants who have already taken the test in previous years will therefore be expected to re-take it.
Casper Test Dates 2023-2024 Application Cycle

- October 3rd, 2024
- October 10th, 2024
- November 7th, 2024

- December 5th, 2024
- January 9th, 2025
- January 21st, 2025
- February 20th, 2025
- March 4th, 2025

For a more detailed look at the Casper test, please see this video.

Additional Entrance Requirements Upon Acceptance (2024-2025)

- Valid** Certificate of Conduct, including Criminal Record and Vulnerable Sector Check.
- Students will require a clear and current Certificate of Conduct (Criminal Record and Vulnerable Sector Check) prior to clinical practicum. Applicants with a criminal offense listed on their Certificate of Conduct (Criminal Record and Vulnerable Sector Check) may be denied access to clinical placement and may be unable to complete their program.
- Immunization Record providing evidence that the applicant has received the required vaccinations/screening tests. Completing the immunization record will require physician's visits, blood tests, and a TB screening test; detailed instructions are included on the School of Health Sciences Student Information and Program Awareness Form. The applicant is responsible for ensuring that all medical requirements are fulfilled, and the immunization record complete before submission. Certain vaccinations require a series of immunizations over a period; therefore, it is essential to start the process as early as possible. The applicant is also responsible for all associated costs (vaccinations, laboratory testing, physician fees, certificate of conduct fees, etc.).
- ESL students only – one of the following:
  - IELTS: minimum overall band score of 7
  - TOEFL Score: minimum score of 94

(See the Additional Information for Health Sciences Applicants (Definitions and Regulations) section of the calendar or under the Admissions Regulations section of our website for details.)

For a more detailed look at the Casper test, please see this video.

**Acceptance of the Certificate of Conduct (Criminal Record and Vulnerable Sector Check) is at the discretion of the Newfoundland and Labrador Health Services of which clinical practicum is being sought.

COMPETITIVE ENTRY APPLICATION PROCESS - FALL 2024

Program Start Date September 2024

The competitive admissions process is points-based and includes:

View the Competitive Entry Application Process for this program

Deadline for receipt of application	March 1st 2024
Deadline for receipt of ALL supporting documentation*	March 7th 2024
Initial round of acceptances	April 30th 2024

*Documentation received after the deadline **WILL NOT** be considered

****Candidates not accepted for the intake to which they applied must re-apply for admission to future offerings. Applications WILL NOT be kept on file.**

Courses

Semester 1

Code	Title	Cr	Le	La
BL1605	Human Biology	4	3	2
CM1270	Communications in Health Care	3	3	0
HG1110	Applied Science for Allied Health	4	3	2
MA1700	Mathematics	4	3	2
PH1110	Foundational Physics	5	4	2
TM1130	Medical Terminology	3	3	0

Semester 2

Code	Title	Cr	Le	La
UL4110	Ultrasound Physics	4	4	0
UL1200	Fundamentals of Sonography	5	4	3
UL1205	Scanning I	4	0	12
UL1210	Abdomen	6	6	0

Semester 3

Code	Title	Cr	Le	La
UL1300	Scanning II	2	0	4
		+2hrs wk/ 6 weeks Clinical		
UL1305	Abdomen & Superficial Structures	5	5	0
PS1420	Healthcare Organization & Structure	3	3	0

Semester 4

Code	Title	Cr	Le	La
UL4230	Gynecology	2	2	0
UL2100	Scanning III	4	0	12
UL2105	Vascular	4	4	0
UL2111	Simulation I	3	0	8
UL2115	Cross Sectional Anatomy	2	2	0

Semester 5

Code	Title	Cr	Le	La
UL4210	Obstetrics	7	7	0
UL2200	Scanning IV	1	0	2
UL2206	Simulation II	3	0	10
HG2051	Professional Practice & Ethics	3	3	0

Semester 6

Code	Title	Cr	Le	La
UL4610	Clinical I	7	0	7 wks

Semester 7

Code	Title	Cr	Le	La
UL4611	Clinical II	15	0	15 wks

Semester 8

Code	Title	Cr	Le	La
UL4605	Clinical III	15	0	15 wks

Emergency Medical Responder to Primary Care Paramedicine Program

Start Date: September

Credential: Diploma

Program Length: 9 Semesters

School: Health Sciences

Locations & Delivery Modes:

- Prince Philip Drive - Blended delivery

PROGRAM DESCRIPTION

Provision of emergency medical services (EMS) is a unique and vital community service. Paramedics are highly skilled members of a health care team who function within the discipline of emergency and pre-hospital care. Paramedics initiate medical treatment for individuals in urgent and non-urgent situations. Based on sound knowledge, these practitioners demonstrate rational problem-solving abilities and excellent decision-making skills. This program addresses the operational/procedural skills of primary care paramedics, as well as the ethical and professional behaviours such as effective communication. Mental/physical fitness and healthy lifestyles are emphasized throughout the program, as paramedics must be fit to perform the requirements of the occupation.

The Emergency Medical Responder (EMR) to Primary Care Paramedicine (PCP) program is a 9-semester diploma program offering training to EMRs who are presently practicing in Newfoundland and Labrador. Mental/physical fitness and healthy lifestyles are emphasized throughout the program, as paramedics must be fit to perform the requirements of the occupation.

This part-time diploma program is designed with a blended delivery model and part-time schedule to promote advancement of skills from the EMR level of practice to the PCP level. This program engages students online in virtual classrooms, with on-campus labs, and clinical simulation. These paired with robust clinical experiences will support students in meeting the requirements for entry-to-practice PCP level in accordance with the National Occupational Competency Profile for Paramedics (NOCP).

Students will be required to attend all on campus laboratory sessions offered throughout the semester, the frequency and amount of time required each semester will vary based on course requirements. In addition, there are two full-time clinical placements that are mandatory in the program (Semester 6 for 3 weeks and Semester 9 for 14 weeks).

This is a challenging program that provides the student with extensive classroom and clinical/practicum experience. Graduates of this program will be prepared to work in a competent and skillful manner providing pre-hospital care in accordance with the national standards for paramedics.

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Demonstrate required skills, knowledge, and abilities, as prescribed by the Paramedic Association of Canada National Occupational Competency Profile with consistency, independence, timeliness, accuracy, and appropriateness.
2. Integrate assessment, diagnostic, and treatment procedures into the holistic management of patients in the out-of-hospital setting.
3. Use critical thinking and problem-solving skills that promote logical and independent decision-making in the provision of paramedic care.
4. Maintain a level of physical and mental health necessary to perform the bona fide occupational requirements.
5. Communicate effectively and work collaboratively with other members of the health care team to serve patients and employers with the highest degree of competence.
6. Reflect professionalism through personal deportment and public interactions.
7. Demonstrate ethical behaviour, empathy and respect for individuals.

ACCREDITATION
The *Primary Care Paramedicine (PCP)* program is accredited by Accreditation Canada until *June 2025.*

This program is currently "Accredited" with Accreditation Canada/EQual. Our "Accredited" status serves as an important demonstration of our commitment to providing quality education in alignment with accreditation and regulatory requirements. If you require additional information regarding our accreditation status and endeavors and/or any potential implications our accreditation status may have on your future abilities to practice as a healthcare professional, we encourage you to reach out to the Dean for the School of Health Sciences.

CLINICAL PLACEMENTS
Clinical placements are a required element of this program and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to contact student.placements@cna.nl.ca prior to beginning the program.

For programs with competitive admissions, clinical placements are not affected by ranking in the competitive admissions process and will be determined under institutional guidelines.

ENTRANCE REQUIREMENTS

- Completion of an Emergency Medical Responder program
- Current licensure as an Emergency Medical Responder in the province of NL
- Minimum of one-year experience (1,900 hours) as an EMR
- High School Graduation
- Letter of Support from Employer

Additional Entrance Requirements (2024-2025)

- Current Basic Life Support (BLS)
- Class 04 Driver's License (minimum)
- Valid* Certificate of Conduct, including Criminal Record and Vulnerable Sector Check
- Students will require a clear and current Certificate of Conduct (Criminal Record and Vulnerable Sector Check) prior to clinical practicum. Applicants with a criminal offense listed on their Certificate of Conduct (Criminal Record and Vulnerable Sector Check) may be denied access to clinical placement and may be unable to complete their program.
- Immunization Record providing evidence that the applicant has received the required vaccinations/screening tests. Completing the immunization record will require physician's visits, blood tests, and a TB screening test; detailed instructions are included on the School of Health Sciences Student Information and Program Awareness Form. The applicant is responsible for ensuring that all medical requirements are fulfilled, and the immunization record complete before submission. Certain vaccinations require a series of immunizations over a period; therefore, it is essential to start the process as early as possible. The applicant is also responsible for all associated costs (vaccinations, laboratory testing, physician fees, certificate of conduct fees, etc.).

*Acceptance of the Certificate of Conduct (Criminal Record) is at the discretion of the organization in which the clinical practicum is being sought.

Courses

Semester 1	Sep - Dec 2024			
Code	Title	Cr	Le	La
BL1180	Anatomy and Physiology	5	5	0
TM1130	Medical Terminology	3	3	0
CM1250	Communications in the Workplace	3	3	0

Semester 2	Jan - April 2025			
Code	Title	Cr	Le	La
PA1210	Health & Fitness I	2	1	3
PA1370	Pharmacology I	2	2	0
PA1125	EMS Basics	5	4	4

Semester 3	July - Aug 2025			
Code	Title	Cr	Le	La
PA1211	Health & Fitness II	2	1	3
PA1290	Community Paramedicine	2	1	2
HG1681	Ethics in Health Care	3	3	0

Semester 4	Sept - Dec 2025			
Code	Title	Cr	Le	La
PA1371	Pharmacology II	3	2	3
PA1230	Airway Management	2	1	3
PA1280	Cardiology	4	3	2

Semester 5	Jan - April 2026			
Code	Title	Cr	Le	La
PA1460	Medical Emergencies I	3	2	2
CM1270	Communications in Health Care	3	3	0
PA1520	Mental Health	2	2	1

Semester 6	July - Aug 2026			
Code	Title	Cr	Le	La
PA1470	Medical Emergencies II	5	4	2
PA1440	Clinical	3	0	3 wks

Prior to beginning PA1440 students in the EMR to PCP program complete PA1470

Semester 7	Sept - Dec 2026			
Code	Title	Cr	Le	La
PA2000	Traumatology	5	3	5
PA1515	Special Considerations	2	2	0
PA1415	Interagency Relations	3	2	2

Semester 8	Jan - April 2027			
Code	Title	Cr	Le	La
PA2005	Obstetrics and Pediatrics	3	2	3
PA2020	Simulation Lab	3	0	9

Semester 9	May - Aug 2027			
Code	Title	Cr	Le	La
PA2025	Practicum	14	0	14 wks

Medical Laboratory Assistant

Start Date: September

Credential: Certificate

Program Length: One Year

School: Health Sciences

Locations & Delivery Modes:

- Grand Falls-Windsor - On Campus delivery
- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Drawing on sharp skills.

Medical laboratory assistants play an essential role in healthcare. These laboratory professionals collect patient specimens, carry out pre-analytical procedures to prepare specimens for analysis and perform data entry, clerical and reception duties. As an integral member of the health care team, the medical laboratory assistant is part of the front-line laboratory staff and is often the first person with whom patients/clients interact. This requires strong communication, critical thinking and organizational/time management skills as well as professional conduct.

These are dedicated professionals, serving the health care needs of the patient with respect for an individual's diversity, dignity, values and beliefs, ensuring everyone's safety and protecting the confidentiality of patient information.

College of the North Atlantic's (CNA) Medical Laboratory Assistant program provides a quality learning environment that blends academic study and hands-on training with clinical training for those aspiring to a career in laboratory health sciences. A 36-week program, Semesters 1 and 2 (15 weeks each in duration) take place on campus and in Semester 3 you complete a six-week clinical placement at a hospital or clinic in Newfoundland Labrador. Upon graduation, you will be eligible to write the certification examination set by the Canadian Society for Medical Laboratory Science.

This certificate qualifies you for work in hospital laboratories, public health laboratories, clinics, research labs, reference labs, insurance companies, private laboratories, Canadian Blood Services and manufacturing. While this is a demanding field, it is an extremely rewarding career worth pursuing.

If you are intrigued by the science of blood, this career is for you!

Program Highlights

- Robust training to become an integral part of the healthcare community and fill the identified occupational need.
- The Medical Laboratory Assistant program is accredited by Accreditation Canada.
- You can leverage your certificate for transition into the Medical Laboratory Technologist program at CNA.
- Prepares graduates to challenge the Canadian Society of Medical Laboratory Science (CSMLS) certification exam.
- The CSMLS provides portability to most provinces and territories.

Did You Know?

- There is a rising need for this type of program across Canada.
- Today's healthcare system would not function as efficiently and effectively without the work performed by MLAs every day.
- Some 70% of all medical decisions depend on laboratory results.

OBJECTIVES
Upon successful completion of Medical Laboratory Assistant program, the graduate will:

1. Utilize academic knowledge as outlined in the Canadian Society for Medical Laboratory Science (CSMLS) competency profile and apply the learned knowledge in clinical practice.
2. Perform pre-analytical clinical laboratory procedures using appropriate equipment and instruments in accordance with established protocols.
3. Communicate and interact effectively with clients, family members, and members of the health care team.
4. Maintain a high level of professional practice, meeting legal and ethical requirements, while following established protocols, safety guidelines, and existing legislation in the performance of duty.
5. Use quality management / continuous improvement principles to investigate, evaluate, and problem solve in a rapidly changing environment.

CURRICULUM
This is a 36 week program, which includes training at the College as well as clinical placements at various hospitals/clinics throughout Newfoundland and Labrador. Semesters 1 and 2 (15 weeks each in duration) take place at the College whereas Semester 3 consists of a 6-week clinical placement. Graduates of the program will be eligible to write the certification examination set by the Canadian Society for Medical Laboratory Science.

ACCREDITATION
The *Medical Laboratory Assistant (MLA)* program is accredited by Accreditation Canada until *December 2029*.

This program is currently "Accredited" with Accreditation Canada/EQual. Our "Accredited" status serves as an important demonstration of our commitment to providing quality education in alignment with accreditation and regulatory requirements. If you require additional information regarding our accreditation status and endeavors and/or any potential implications our accreditation status may have on your future abilities to practice as a healthcare professional, we encourage you to reach out to the Dean for the School of Health Sciences

CERTIFICATIONS
Students must possess valid Standard First Aid with Cardiopulmonary Resuscitation (CPR) /Basic Life Support (BLS) certification to be eligible for graduation from the College.

CLINICAL PLACEMENTS
Clinical placements are a required element of this program and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to contact student.placements@cna.nl.ca prior to beginning the program.

For programs with competitive admissions, clinical placements are not affected by ranking in the competitive admissions process and will be determined under institutional guidelines.

ENTRANCE REQUIREMENTS (2024-2025)
At the time of application to the Medical Laboratory Assistant program, applicants MUST be completing or have completed one of the following:

1. High School
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or 3202 (minimum 60%)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Science (6 credits):
Biology: 2201 and 3201 (minimum 60% in both courses)

Chemistry: 3202 (minimum 60%)
iv. Electives (2 additional credits) chosen from any of the remaining 3000 level courses offered in the Senior High School Program.
Note: Starting with the 2024-2025 Academic Year intake, applicants that have completed BL3201 after September 2020, will be required to have completed both BL2201 & BL3201.
Note: CNA will not apply newly revised requirements to the disadvantage of an applicant whose high school courses were established by earlier requirements.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
1 English (minimum 60%): CM1060, CM1061
2 Math (minimum 60%): MA1040, MA1041
3 Four Science courses:
a. Biology: BL1020, BL1021
b. Chemistry: CH1030, CH1031

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
1 English (minimum 60%): CM1060, CM1061
2 Math (minimum 60%): MA1040, MA1041
3 Four Science courses:
a. Biology: BL1025, BL1026
b. Chemistry: CH1035, CH1036

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile (overall 60% average) including the following courses (or equivalent):
1 English (minimum of 60%) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
2 Mathematics (minimum of 60%) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
3 Science from two of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile (and appropriate grades) may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

Note: Students meeting academic entrance requirements are accepted on a first come, first served basis. Before final acceptance is granted, additional documentation must be submitted; see the Additional Information for Health Sciences Applicants section of the calendar or under the Admissions Regulations section of our website for details.

Additional Entrance Requirements (2024-2025)

- Valid** Certificate of Conduct, including Criminal Record and Vulnerable Sector Check.
- Students will require a current Certificate of Conduct (Criminal Record and Vulnerable Sector Check) prior to starting their program. Applicants with a criminal offense listed on their Certificate of Conduct (Criminal Record and Vulnerable Sector Check) may be denied access to clinical placement by the College's clinical partners and may be unable to complete their program.
- Students will need to complete a Student Pre-Placement Immunizations and Communicable Diseases Screening with their Health Care Provider. Completing the immunization record will require physician's visits, blood tests, and a TB screening test; detailed instructions are included on the Student Pre-Placement Immunizations and Communicable Diseases Screening. The applicant is responsible for ensuring that all medical requirements are fulfilled, and the screening form complete before submission. Certain vaccinations require a series of immunizations over a period; therefore, it is essential to start the process as early as possible. The applicant is

also responsible for all associated costs (vaccinations, laboratory testing, physician fees, certificate of conduct fees, etc.).

(See the Additional Information for Health Sciences Applicants (Definitions and Regulations) section of the calendar or under the Admissions Regulations section of our website for details.)

Courses

Semester 1

Code	Title	Cr	Le	La
ML1000	General Laboratory Knowledge	3	2	2
ML1010	Orientation & Medical Laboratory Skills	3	2	2
ML1025	Laboratory Calculations	3	3	0
MC1130	Computer Studies	2	2	0
TM1130	Medical Terminology	3	3	0
BL1600	Human Biology	4	3	2
HG1500	Working in Healthcare	3	3	0

Semester 2

Code	Title	Cr	Le	La
ML1030	Practical Clinical Chemistry	3	2	2
ML1040	Practical Hematology	3	2	2
ML1050	Practical Microbiology	3	2	2
ML1060	Practical Histotechnology/Cytology	3	2	2
ML1070	Specimen Collection	3	2	2
CM2201	Oral Communications	2	2	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La
ML1080	Clinical Practicum	6	0	6 wks

ML1080: 6 wks (35 hrs/wk)

Note: *In Semester 3 students will be assigned to one of the program's affiliated clinical locations.*

Medical Laboratory Technology

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Health Sciences

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Medical laboratory technologists are integral members of the health care team who perform diagnostic laboratory testing on blood, body fluids and tissues to aid the physician in the diagnosis, treatment and prevention of disease. It is a fast-paced and challenging profession that will appeal to students with a fascination for biological science. It requires manual dexterity, visual color discrimination, a keen eye for detail, organizational/time management skills and judgment/decision-making ability.

Medical laboratory technologists perform a wide array of diagnostic tests including examining bacterial cultures for identification and antibiotic sensitivity, assuring the compatibility of blood for transfusion, identifying abnormal cells, and analyzing the chemical composition of body fluids. As one of Canada's largest group of health care professionals, MLTs play a critical role in the health care system, as up to 80% of decisions related to patient diagnosis and treatment are based on laboratory test results.

This program develops not only the technical skills of the medical laboratory technologist but also the ethical and professional behaviours required of the profession. It is a challenging program that provides the student with extensive classroom, laboratory and clinical/practicum experience. Graduates will be prepared to work in a competent manner providing accurate diagnostic testing in accordance with the national standards for medical laboratory technologists.

OBJECTIVES

Upon successful completion of the Medical Laboratory Technology program, graduates will be able to:

1. Demonstrate required knowledge, skills and abilities, as prescribed by the Canadian Society for Medical Laboratory Science (CSMLS) competency profile, with timelines, accuracy and proficiency.
2. Practice and promote the principles of quality management and the efficient utilization of resources.
3. Apply critical thinking and problem-solving skills that promote competence in the performance of laboratory procedures.
4. Demonstrate research skills to constructively solve problems.
5. Communicate effectively and work collaboratively with other members of the health care team to serve patients and employers with the highest degree of competence.
6. Demonstrate a high level of professional conduct in the performance of duty.

CURRICULUM

The curriculum for this program is designed to encompass three years of training. The first three semesters are spent at the college and emphasis is placed on academic and theoretical training. During the fourth semester the student will have an introduction to the clinical application though a two week practicum at an affiliated clinical site. During the second program year an emphasis is placed on theoretical knowledge unique to the program's disciplines and application of this knowledge in a simulated laboratory environment. The programs third and final year encompasses practical training and clinical experience conducted in affiliated health care institutions.

Graduates of the program at the Prince Philip Drive Campus will be eligible to sit the certification examination set by the Canadian Society for Medical Laboratory Science (CSMLS). The CSMLS is the national professional body for medical laboratory technologists.

PROGRAM TRANSFERABILITY
Graduates may elect to further their studies and obtain a Bachelor of Technology degree from Memorial University of Newfoundland (MUN) or a Bachelor of Sciences (Post Diploma, Human Science) from Athabasca University**.**

ACCREDITATION
The *Medical Laboratory Technology (MLT)* program is accredited by Accreditation Canada until *May 2028*.

This program is currently "Accredited" with Accreditation Canada/EQual. Our "Accredited" status serves as an important demonstration of our commitment to providing quality education in alignment with accreditation and regulatory requirements. If you require additional information regarding our accreditation status and endeavors and/or any potential implications our accreditation status may have on your future abilities to practice as a healthcare professional, we encourage you to reach out to the Dean for the School of Health Sciences.

CERTIFICATIONS
Students must possess valid Standard First Aid with Cardiopulmonary Resuscitation (CPR) /Basic Life Support (BLS) certification to be eligible for graduation from the College.

CLINICAL PLACEMENTS
Clinical placements are a required element of this program and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to contact student.placement@cna.nl.ca prior to beginning the program.
For programs with competitive admissions, clinical placements are not affected by ranking in the competitive admissions process and will be determined under institutional guidelines.

ENTRANCE REQUIREMENTS (2024-2025)
At the time of application to the Medical Laboratory Technology program, applicants MUST be completing or have completed one of the following:

1. High School
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or 3202 (minimum 60%)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Science (6 credits):
Biology: 2201 and 3201 (minimum 60% in both courses)
Chemistry: 3202 (minimum 60%)

Note: Starting with the 2024-2025 Academic Year intake, applicants that have completed BL3201 after September 2020, will be required to have completed both BL2201 & BL3201.
Note: CNA will not apply newly revised requirements to the disadvantage of an applicant whose high school courses were established by earlier requirements.

2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. English (minimum 60%): CM1060, CM1061
ii. Math (minimum 60%): MA1040, MA1041
iii. Four Science courses:
Biology: BL1020, BL1021 (minimum 60%)
Chemistry: CH1030, CH1031 (minimum 60%)

Effective Academic Year 2025 - 2026:

College Transition
College Transition Certificate with the following courses:
i. English (minimum 60%): CM1060, CM1061
ii. Math (minimum 60%): MA1040, MA1041

iii. Four Science courses:
Biology: BL1025, BL1026 (minimum 60%)
Chemistry: CH1035, CH1036 (minimum 60%)

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile (overall 60% average) including the following courses (or equivalent):

i. English (minimum of 60%) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (minimum of 60%) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science:
Biology (minimum 60%) 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Chemistry (minimum 60%) 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C

Note: Applicants with Adult Basic Education (Level III) Graduation with a different Profile (and appropriate grades) may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

Additional Entrance Requirements (2024-2025)

- Completion of the Casper Admissions Exam.
  - The Casper Admissions Exam official score will be used as part of the points-based system to determine ranking in the competitive entry process
  - All applicants are required to complete Casper* Admissions Exam (CSP-10201 – Canadian Professional Health Sciences) as part of their application for the 2023/2024 admissions cycle. To complete Casper, visit Taking the Casper assessment - Take Casper (acuityinsights.app).

***Casper.** The Casper test comprises 14 sections of video and written scenarios. Following each scenario, you will be required to answer a set of probing questions under a time contract. The test typically takes between 90-110 minutes to complete. Each response is graded by a different rater, giving a very robust and reliable view of personal and professional characteristics important to our program. No studying is required for Casper, although you may want to familiarize yourself with the test structure at TakeAltus.com, and ensure you have a quiet environment to take the test. We strongly urge you to take advantage of the 14-section practice test, which will not only immerse you in the test environment but will also ensure you meet the technical requirements to access and complete the test.

Casper test results are valid for one admissions cycle. Applicants who have already taken the test in previous years will therefore be expected to re-take it.
Casper Test Dates 2023-2024 Application Cycle

- October 12th, 2023
- October 19th, 2023
- November 23rd, 2023
- December 7th, 2023
- January 10th, 2024
- January 25th, 2024
- February 22nd, 2024
- March 5th, 2024

For a more detailed look at the Casper test, please see this video.

Additional Entrance Requirements Upon Acceptance (2024-2025)

- Valid** Certificate of Conduct, including Criminal Record and Vulnerable Sector Check.
- Students will require a clear and current Certificate of Conduct (Criminal Record and Vulnerable Sector Check) prior to clinical practicum. Applicants with a criminal offense listed on their Certificate of Conduct (Criminal Record and Vulnerable Sector Check) may be denied access to clinical placement and may be unable to complete their program.
- Immunization Record providing evidence that the applicant has received the required vaccinations/screening tests. Completing the immunization record will require physician's visits, blood tests, and a TB screening test;

detailed instructions are included on the School of Health Sciences Student Information and Program Awareness Form. The applicant is responsible for ensuring that all medical requirements are fulfilled, and the immunization record complete before submission. Certain vaccinations require a series of immunizations over a period; therefore, it is essential to start the process as early as possible. The applicant is also responsible for all associated costs (vaccinations, laboratory testing, physician fees, certificate of conduct fees, etc.).

- ESL students only – one of the following:
  - IELTS: minimum overall band score of 7
  - TOEFL Score: minimum score of 94

(See the Additional Information for Health Sciences Applicants (Definitions and Regulations) section of the calendar or under the Admissions Regulations section of our website for details.)

**Acceptance of the Certificate of Conduct (Criminal Record and Vulnerable Sector Check) is at the discretion of the Health Authority of which clinical practicum is being sought.

COMPETITIVE ENTRY APPLICATION PROCESS - FALL 2024
Program Start Date September 2024
The competitive admissions process is points-based and includes:
View the Competitive Entry Application Process for this program

Deadline for receipt of application	March 1st 2024
Deadline for receipt of ALL supporting documentation*	March 7th 2024
Initial round of acceptances	April 30th 2024

*Documentation received after the deadline **WILL NOT** be considered

****Candidates not accepted for the intake to which they applied must re-apply for admission to future offerings. Applications WILL NOT be kept on file.**

Courses

Semester 1

Code	Title	Cr	Le	La
CM2201	Oral Communications	2	2	0
TM1130	Medical Terminology	3	3	0
ML1035	Immunology and Hematology	3	2	2
MA1021	Basic Laboratory Calculations	3	3	0
BL1600	Human Biology	4	3	2
ML1090	Medical Lab Knowledge	3	2	2
ML1011	Orientation to MLT	3	2	2

Semester 2

Code	Title	Cr	Le	La
BL2601	Intro to Microbiology	4	3	2
ML1335	Histology	4	3	2
CH2340	Biochemistry	3	3	0
ML1070	Specimen Collection	3	2	2
CS2311	Research Methods and Stats	2	2	0
HG2051	Professional Practice and Ethics	3	3	0

Semester 3 (Intersession)

Code	Title	Cr	Le	La (hrs)*
CH1355	Intro to Clinical Chemistry	2	0	30

Code	Title	Cr	Le	La (hrs)*
ML1213	Hematology 1	2	0	30
BL2425	Clinical Microbiology 1	2	0	30
ML1360	Histotechnology 1	2	0	30
ML1660	Clinical Practicum 1	2	0	70 / 2 wks**

Students must successfully complete all pre-requisite Semester 3 courses for ML1660 Clinical Practicum 1 in order to be eligible for this course.

Clinical Practicums in Semesters 3 and 8 will take place in a hospital-based setting.

Semester 4

Code	Title	Cr	Le	La
ML2100	Hematology 2	3	2	2
CH2253	Clinical Chemistry 1	3	2	2
BL2431	Clinical Microbiology 2	3	2	3
ML2120	Histotechnology 2	3	2	2
ML2401	Intro to Blood Banking	3	2	2
ML1140	Intro to Quality Management	2	2	0

Semester 5

Code	Title	Cr	Le	La
CH2514	Clinical Chemistry 2	4	3	2
ML2225	Hematology 3	4	3	2
BL2441	Clinical Microbiology 3	3	2	3
ML1520	Intro to Transfusion Medicine	3	2	2
ML2230	Histotechnology 3	4	3	2
PS1420	Health Care Organization and Structure	3	3	0

Semester 6 (6 weeks)

Code	Title	Cr	Le	La (hrs)*
BL3410	Clinical Microbiology Sim 1	2	0	28 hrs
CH3510	Clinical Chemistry Sim 1	2	0	28 hrs
ML2210	Hematology Sim 1	2	0	28 hrs
ML2310	Histotechnology Sim 1	2	0	28 hrs
ML2510	Transfusion Medicine Sim 1	2	0	28 hrs
ML2320	Molecular Diagnostics Sim 1	2	0	28 hrs

Semester 7

Code	Title	Cr	Le	La (wks)
BL3411	Clinical Microbiology Sim 2	3	0	3 wks
CH3511	Clinical Chemistry Sim 2	3	0	3 wks
ML2211	Hematology Sim 2	3	0	3 wks
ML2311	Histotechnology Sim 2	3	0	3 wks
ML2511	Transfusion Medicine Sim 2	3	0	3 wks

Semester 8

Code	Title	Cr	Le	La (wks)
BL4410	Microbiology Practicum	3	0	3 wks
CH4510	Clinical Chemistry Practicum	3	0	3 wks
ML3210	Hematology Practicum	3	0	3 wks
ML3310	Histotechnology Practicum	3	0	3 wks
ML3510	Transfusion Practicum	3	0	3 wks

Clinical Practicums in Semesters 3 and 8 will take place in a hospital-based setting.

Semester 9 (5 weeks)

Code	Title	Cr	Le	La
ML1160	Laboratory Pathophysiology	3	3	0

Code	Title	Cr	Le	La
ML2611	Interdisciplinary Studies	4	4	0

Notes:

Courses with 30 hrs lab to be delivered in condenses block format over a period of 5 days.

Students in the 3rd and 8th semester of the program will be assigned to one of the affiliated hospitals: Burin Peninsula Health Care Centre, Carbonear General Hospital, Central Newfoundland Regional Health Centre, Dr. G. B. Cross Memorial Hospital, Health Sciences Centre, St. Clare's Mercy Hospital, James Paton Memorial Hospital, Charles S. Curtis Memorial Hospital, Labrador Health Centre, and Western Memorial Regional Hospital. Smaller rural sites may also be utilized in Semester 3.

Medical Radiography

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Health Sciences

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Medical Radiological Technologists (MRTs) play a vital role in the diagnosis and treatment of many injuries and illnesses. At a physician's request, MRTs operate equipment that emits x-rays to produce images of a body part or system. Their work involves a wide variety of procedures and specialties, including routine general radiography, mammography, angiography, fluoroscopy, and computed tomography. Committed to providing the highest standard of care, MRTs uses professional judgment and critical thinking to reach decisions, anticipate outcomes, and respond appropriately to individual patient needs and varying contexts of practice.

This is a challenging program consisting of theory courses, psychomotor skill laboratories, and clinical practicum based courses. The program provides the student with extensive classroom and clinical experience. Graduates of this program will be prepared to work competently and skillfully, providing diagnostic imaging care per the national standards for MRT practice. Furthermore, graduates of the program will be well-positioned to challenge the national competency examination as directed through the Canadian Association of Medical Radiation Technologists.

OBJECTIVES

Upon successful completion of the Medical Radiography program, graduates will be able to:

1. Demonstrate the required skills, knowledge, and abilities, as prescribed by the Canadian Association of Medical Radiation Technologists in relation to development as a professional, communicator, collaborator, care provider, leader, scholarly practitioner, and clinical expert.
2. Contribute productively as a member of the health care team
3. Use judgement and critical thinking skills to reach decisions which will best benefit the patient, and work autonomously in their areas of responsibility
4. Use critical thinking and problem-solving skills that promote logical and independent decision-making in the provision of MRT care.
5. Communicate effectively and work collaboratively with other members of the health care team to serve patients and employers with the highest degree of competence.
6. Reflect professionalism through personal deportment and public interactions.
7. Demonstrate ethical behavior, empathy, and respect for individuals expected of an entry level-MRT.

ACCREDITATION

The *Medical Radiography (MR)* program is accredited by Accreditation Canada until *August 2025*.

This program is currently "Accredited" with Accreditation Canada/EQual. Our "Accredited" status serves as an important demonstration of our commitment to providing quality education in alignment with accreditation and regulatory requirements. If you require additional information regarding our accreditation status and endeavors and/or any potential implications our accreditation status may have on your future abilities to practice as a healthcare professional, we encourage you to reach out to the Dean for the School of Health Sciences.

PROGRAM TRANSFERABILITY

Graduates may elect to further their studies and obtain a Bachelor of Technology degree from Memorial University of Newfoundland or a Bachelor of Sciences (Post Diploma, Human Science) from Athabasca University.

CERTIFICATIONS

Students must possess valid Standard First Aid with Cardiopulmonary Resuscitation (CPR) /Basic Life Support (BLS) certification to be eligible for graduation from the College.

CLINICAL PLACEMENTS

Clinical placements are a required element of this program and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to speak with program faculty at the beginning of the program.

For programs with competitive admissions, clinical placements are not affected by ranking in the competitive admissions process and will be determined under institutional guidelines.

ENTRANCE REQUIREMENTS (2024-2025)
At the time of application to the Medical Radiography program, applicants MUST be completing or have completed one of the following:
1. High School
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or 3202 (minimum 60%)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Science (6 credits):
Biology: 2201 and 3201
Physics: 3204
Note: Starting with the 2024-2025 Academic Year intake, applicants that have completed BL3201 after September 2020, will be required to have completed both BL2201 & BL3201.
Note: CNA will not apply newly revised requirements to the disadvantage of an applicant whose high school courses were established by earlier requirements.
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate with the following courses:
1. English (minimum 60%): CM1060, CM1061
2. Math (minimum 60%): MA1040, MA1041
3. Four Science courses:
a. Biology: BL1020, BL1021
b. Physics: PH1050, PH1051
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate with the following courses:
1. English (minimum 60%): CM1060, CM1061
2. Math (minimum 60%): MA1040, MA1041
3. Four Science courses:
a. Biology: BL1025, BL1026
b. Physics: PH1055, PH1056
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with Degree and Technical Profile (overall 60% average) including the

following courses (or equivalent):
1. English (minimum of 60%) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
2. Mathematics (minimum of 60%) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
3. Science from the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Note: Applicants with Adult Basic Education (Level III) Graduation with a different Profile (and appropriate grades) may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

Additional Entrance Requirements (2024-2025)

- Completion of the Casper Admissions Exam.
  - The Casper Admissions Exam official score will be used as part of the points-based system to determine ranking in the competitive entry process
  - All applicants are required to complete Casper* Admissions Exam (CSP-10201 – Canadian Professional Health Sciences) as part of their application for the 2023/2024 admissions cycle. To complete Casper, visit Taking the Casper assessment - Take Casper (acuityinsights.app).

***Casper.** The Casper test comprises 14 sections of video and written scenarios. Following each scenario, you will be required to answer a set of probing questions under a time contract. The test typically takes between 90-110 minutes to complete. Each response is graded by a different rater, giving a very robust and reliable view of personal and professional characteristics important to our program. No studying is required for Casper, although you may want to familiarize yourself with the test structure at TakeAltus.com, and ensure you have a quiet environment to take the test. We strongly urge you to take advantage of the 14-section practice test, which will not only immerse you in the test environment but will also ensure you meet the technical requirements to access and complete the test.

Casper test results are valid for one admissions cycle. Applicants who have already taken the test in previous years will therefore be expected to re-take it.
Casper Test Dates 2023-2024 Application Cycle

- October 12th, 2023
- October 19th, 2023
- November 23rd, 2023
- December 7th, 2023
- January 10th, 2024
- January 25th, 2024
- February 22nd, 2024
- March 5th, 2024

For a more detailed look at the Casper test, please see this video.

Additional Entrance Requirements Upon Acceptance (2024-2025)

- Valid** Certificate of Conduct, including Criminal Record and Vulnerable Sector Check.
- Students will require a clear and current Certificate of Conduct (Criminal Record and Vulnerable Sector Check) prior to clinical practicum. Applicants with a criminal offense listed on their Certificate of Conduct (Criminal Record and Vulnerable Sector Check) may be denied access to clinical placement and may be unable to complete their program.
- Immunization Record providing evidence that the applicant has received the required vaccinations/screening tests. Completing the immunization record will require physician's visits, blood tests, and a TB screening test; detailed instructions are included on the School of Health Sciences Student Information and Program Awareness Form. The applicant is responsible for ensuring that all medical requirements are fulfilled, and the immunization record complete before submission. Certain vaccinations require a series of immunizations over a period; therefore, it is essential to start the process as early as possible. The applicant is also responsible for all associated costs (vaccinations, laboratory testing, physician fees, certificate of conduct fees, etc.).

- ESL students only – one of the following:
  - IELTS: minimum overall band score of 7
  - TOEFL Score: minimum score of 94

(See the Additional Information for Health Sciences Applicants (Definitions and Regulations) section of the calendar or under the Admissions Regulations section of our website for details.)

**Acceptance of the Certificate of Conduct (Criminal Record and Vulnerable Sector Check) is at the discretion of the Health Authority of which clinical practicum is being sought.

COMPETITIVE ENTRY APPLICATION PROCESS - FALL 2024
Program Start Date September 2024
The competitive admissions process is points-based and includes:
View the Competitive Entry Application Process for this program

Deadline for receipt of application	March 1st 2023
Deadline for receipt of ALL supporting documentation*	March 7th 2023
Initial round of acceptances	April 30th 2023

*Documentation received after the deadline **WILL NOT** be considered

****Candidates not accepted for the intake to which they applied must re-apply for admission to future offerings. Applications WILL NOT be kept on file.**

Courses

Semester 1

Code	Title	Cr	Le	La
BL1600	Human Biology	4	3	2
CM1270	Communications in Health Care	3	3	0
HG1110	Applied Science for Allied Health	4	3	2
MA1700	Mathematics	4	3	2
PH1110	Foundational Physics	5	4	2
TM1130	Medical Terminology	3	3	0

Semester 2

Code	Title	Cr	Le	La
CM2201	Oral Communications	2	2	0
CS2311	Research Methods and Statistics	2	2	0
MX2102	Radiographic Anatomy I	4	4	0
MX2311	Apparatus and Accessories	4	3	2
MX2415	Patient Care I	4	3	2
PS1420	Health Care Organization and Structure	3	3	0
PH2205	Radiation Physics	3	3	0

Semester 3

Code	Title	Cr	Le	La
HG2051	Professional Practice and Ethics	3	3	0
MX2105	Radiographic Anatomy II	3	3	0
MX2500	Radiation Protection and Radiobiology	3	3	0
MX1300	Digital Imaging I: CR Systems	3	2	2

Semester 4

Code	Title	Cr	Le	La
MX1620	Clinical Orientation I	0	0	3
MX2110	Radiographic Technique I	5	4	4
MX2210	Digital Imaging II: DDR Systems	4	3	2
MX2320	Introduction to CT and Specialized Imaging	3	3	1
MX2420	Radiographic Anatomy III	3	3	0
MX2430	Radiographic Image Analysis I	2	2	0

Semester 5

Code	Title	Cr	Le	La
MX1621	Clinical Orientation II	0	0	3
MX2121	Radiographic Technique II	5	4	4
MX2201	Image Recording: Quality Management	2	2	1
MX2505	CT: Imaging Procedures and Protocols	3	3	1
MX2510	Pathology for Imaging Professionals	3	3	0
MX2515	Patient Care II	4	3	2
MX2520	Radiographic Image Analysis II	2	2	0

Semester 6

Code	Title	Cr	Le	La
MX1510	Clinical Radiography I	16	0	16 wks

Semester 7

Code	Title	Cr	Le	La
MX3250	Clinical Radiography II	16	0	16 wks

Semester 8

Code	Title	Cr	Le	La
MX3260	Clinical Radiography III	16	0	16 wks

Personal Care Attendant (PCA)

Start Date: September

Credential: Certificate

Program Length: 2 Semesters (30 Weeks)

School: Health Sciences

Locations & Delivery Modes:

- Bonavista - On Campus delivery
- Burin - On Campus delivery
- Carbonear - On Campus delivery
- Clarenville - On Campus delivery
- Corner Brook - On Campus delivery
- Grand Falls-Windsor - On Campus delivery
- Happy Valley-Goose Bay - On Campus delivery
- Placentia - On Campus delivery
- Port aux Basques - On Campus delivery
- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

As integral members of the interdisciplinary healthcare team, Personal Care Attendants are responsible for providing support to clients in all aspects of daily living through companionship, physical, spiritual and psychosocial care. Through the use of classroom instruction, skills development laboratories, and supervised practicums; the PCA educational program provides learners with the necessary skills to work with clients in a variety of institutionalized settings.

OBJECTIVES

Upon successful completion of the Personal Care Attendant (PCA) program, graduates will be able to:

1. Provide holistic, client-centered care across the life-span.
2. Provide safe, competent, and ethical care that adheres to legislation, employer policies and procedures, scope of employment, educational program, evidence-informed practice, and ethical principles.
3. Adhere to workplace safety legislation, employer policies for maintaining a safe working environment, and procedures for responding to and reporting workplace safety concerns.
4. Communicate effectively with clients, families, and the health care team.
5. Respect cultural diversity of the client, family, colleague, and community.
6. Document in a clear, concise manner that is consistent with legal requirements, employer policies, and the provision of care.
7. Report pertinent information in a timely manner to appropriate health care team professionals.
8. Recognize the significance of professionalism, life-long learning, self-care, well-being, and safety in the role of the PCA.

FUTURE OPPORTUNITIES

Graduates will have potential employment opportunities to work as part of a multidisciplinary team in a variety of institutionalized health care settings within Newfoundland and Labrador.

CERTIFICATIONS

To be eligible for clinical and graduation, students must possess valid Standard First Aid and Basic Life Support (BLS) or Cardiopulmonary Resuscitation – Health Care Provider (CPR-HCP) / certification. BLS or CPR-HCP must have an in-person delivery or a blended delivery model where skills are practiced hands-on with an instructor.

In addition, students must complete on-line modules in Gentle Persuasive Approach (GPA) as well as Workplace Hazardous Materials Information System (WHMIS).

Note: Students may be expected to incur costs associated with Mask-fit testing and completion of the Standard First Aid and BLS/CPR-HCP certification and the on-line modules in GPA and WHMIS.

CLINICAL PLACEMENTS

Clinical placements are a required element of this program and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to contact student.placements@cna.nl.ca prior to beginning the program.

For programs with competitive admissions, clinical placements are not affected by ranking in the competitive admissions process and will be determined under institutional guidelines.

ENTRANCE REQUIREMENTS

Eligibility for admission to the Personal Care Attendant program requires the applicant to meet one of the following criteria:

1. **High School**

Provincial High School Graduation Certificate, possess a Grade 12 diploma or Grade 12 equivalency documentation.

2. Adult Basic Education (ABE)

Adult Basic Education (Level III)

3. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program must be at least 19 years of age at the time of application and out of school for at least one (1) year and demonstrate Grade 12 literacy and numeracy equivalency to be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

4. International Applicants – English Proficiency

Demonstrate English proficiency on the IELTS (International English Language Testing System – Academic version) with an overall score of 7.0 and scores of 7.0 speaking, 7.5 listening, 6.5 reading and 7.0 writing. For more information visit: IELTS: www.ielts.org

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

The following additional documents are required at the time of online registration. Failure to provide documents may result in not being enrolled in the program. The list includes:

1. **Current Certificate of Conduct** obtained from the Royal Newfoundland Constabulary, the Royal Canadian Mounted Police, or local provincial/municipal forces, including the "**Vulnerable Sector Check**". Documents must be within **no more than two months prior to registration**. Applicants with a criminal offence listed on their Certificate of Conduct may be denied admission.
2. **Provide two reference letters** supporting entrance into the program. References cannot be provided by family members or friends. References may be provided by individuals such as:
   - Employers
   - Teachers/instructors
   - Representative from a volunteer agency

3. **Perform 20 volunteer service** hours within the past two years. Volunteer service may include, but is not limited to:
   • Community agencies
   • School programs
   • Church groups
   • Charitable organizations
   Written verification is required for all volunteer hours.
   Note: If an applicant was unable to obtain the 20 volunteer hours; a letter indicating the extenuating circumstances must be submitted.
4. **Complete a one page written personal statement**. Personal statements must address the following:
   • Reason(s) for interest in the program
   • Personal characteristics/skills/abilities that applicants bring to the program
   • Knowledge gained from volunteer experience(s)
5. **The School of Health Science Student Information Program Awareness Form**
6. **The Newfoundland and Labrador Student Pre-Placement Immunization and Communicable Diseases Screening Form.**

Other documents maybe required depending on the clinical training sites.

Courses

Semester 1

Code	Title	Cr	Le	La
PC1120	Foundations for Practice	3	3	0
CM1170	Essentials for Communication & Documentation	3	3	0
PC1130	Workplace Safety	2	2	0
PC1141	Understanding Aging, Dementia & Dying	3	3	1
PC1145	Fundamentals I: Care Basics	6	5	3
PC1150	Clinical Practice I	4	0	4 wks

Semester 2

Code	Title	Cr	Le	La
PC1210	Basic Concepts for Medication Awareness	2	2	0
CM1215	Personal and Career Development Seminars	1	1	0
PC1220	Mental Health Concepts	2	2	0
PC1225	Fundamentals II: Body Systems Approach to Care	6	5	2
PC1230	Clinical Practice II	5	0	5 wks
PC1235	Clinical Preceptorship	3	0	3 wks

Course Lecture (Le) and Lab (La) hours per week are based on a 15 week semester. The actual lecture and lab hours during both semesters will be adjusted to account for the clinical training component.

Pharmacy Technician

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Health Sciences

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Dispensing the best care.

Pharmacy technicians are essential in the collaborative approach to patient care. Since the global pandemic, the scope of practice of pharmacy technicians has expanded, leading to improved health outcomes for patients. By communicating with patients, pharmacy technicians collect information that is used to direct clinical decision making.

With the goal of keeping the pharmacy a safe environment for staff and patients, these technicians prepare essential medicines for a range of patients, from those critically ill in hospital intensive care units to patients in the community pharmacy setting. There are also opportunities in pharmaceutical manufacturing, where their skills are in demand for the production of new and innovative medicines.

This two-year program has a strong focus on developing professionalism to benefit the student, pharmacy team members, and future patients. You will learn best practices regarding patient interactions, such as communication and ethical responsibilities. Collection of accurate medication histories using multiple sources will be learned along with effective counselling techniques to best educate patients on how to use medication devices optimally.

Technical training within the program includes proficient use of pharmacy computer systems, compounding custom medicine forms, optimizing product distribution, labelling based on specific patient needs, recording and managing drug inventory, injection training, and mixing intravenous medicines for critically ill patients. Rigorous prescription assessment will also be practiced to ensure safe dispenses for patients and to prevent medication errors.

You will learn to collaborate with pharmacists and other healthcare team members to support and promote the patient's health, well-being and lifestyle, while applying effective business principles in the pharmacy practice setting.

Pharmacy technicians need to have calculation and technical preparation skills that are highly accurate and precise. In addition, strong interpersonal skills and competence are required to operate safely within a legal and ethical framework.

If you are looking to make a difference in the lives of patients and want to provide effective and genuine care in a collaborative team-based approach – join us today!

Program Highlights

- Graduates will have the opportunity to sit for the Pharmacy Examining Board of Canada for national certification
- Learn the skills required for current scope of practice such as counselling on use of medical devices and verification of medications before release to the patient to ensure accuracy and safety
- Develop proficient prescription assessment skills to prevent medication errors
- Engage with technological tools that assist in the provision of optimal pharmaceutical care and pharmacy services

Did you know?

- Newfoundland and Labrador (NL) is a hotspot for this kind of job! The national average for an area this size is 331* employees, while there are 430 here.
- Earnings are high in Newfoundland and Labrador. The national median salary for Pharmacy technicians is $42,717, compared to $46,800 in the province.
- Job posting activity is high in Newfoundland and Labrador. The national average for an area this size is three (3*) job postings/month, while there are five (5) here in NL.

**National average values are derived by taking the national value for Pharmacy technicians and scaling it down to account for the difference in overall workforce size between the nation and Newfoundland and Labrador. In other words, the values represent the national average adjusted for region size.*

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Interact professionally and ethically with patients to establish positive working relationships that promote health outcomes.
2. Collect patient information to establish accurate medication records used to inform clinical decision making.
3. Educate patients regarding medication information and the effective use of medication devices.
4. Increase accessibility of medications to patients through transfers between pharmacies and navigation of billing issues
5. Verify dispensed medications to ensure accuracy and safety for patients.
6. Maintain inventories of medications and address product shortages
7. Assess legality of prescriptions and compare to current patient therapies to reduce risk of medication errors.
8. Compound a wide range of non-sterile and sterile medications.
9. Administer parenteral therapies such as flu and Covid vaccinations.
10. Manage workflow within the pharmacy to ensure efficient medication dispensing.
11. Support pharmacist clinical services through collection of accurate patient information.
12. Collaborate with other healthcare professionals within a patient's circle of care.

CURRICULM

This 2-year program includes a combination of training at CNA, Health Authorities and community pharmacies across the province. Graduates of this program are eligible to write both the national pharmacy technician license examination set by the Pharmacy Examining Board of Canada (PEBC) and the NLPB Registration Examination required to register as a Pharmacy Technician in Newfoundland and Labrador.

CERTIFICATIONS

Students must possess valid Standard First Aid with Basic Life Support (BLS) certification to be eligible for graduation from the College.

CLINICAL PLACEMENTS

Clinical placements are a required element of this program and students will be assigned placements at approved training sites. There is no guarantee that students will receive a placement at their preferred clinical site. All expenses associated with the completion of clinical placements will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerable Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to contact student.placements@cna.nl.ca prior to beginning the program.

ENTRANCE REQUIREMENTS

At the time of application to the Pharmacy Technician program, applicants MUST be completing or have completed one of the following:

1. High School

High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or 3202 (minimum 60%)

ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Science (6 credits):
Biology: 2201 and 3201 (minimum 60% in both courses)
Chemistry: 3202 (minimum 60%)
Note: If BL3201 was taken before September 2020, only BL3201 is required. If BL3201 was taken after September 2020 both BL2201 and BL3201 are required.
Note: CNA will not apply newly revised requirements to the disadvantage of an applicant whose high school courses were established by earlier requirements.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
1. English (minimum 60%): CM1060, CM1061
2. Math (minimum 60%): MA1040, MA1041
3. Four Science courses:
a. Biology (minimum 60%): BL1020, BL1021
b. Chemistry (minimum 60%): CH1030, CH1031

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
1. English (minimum 60%): CM1060, CM1061
2. Math (minimum 60%): MA1040, MA1041
3. Four Science courses:
a. Biology (minimum 60%): BL1025, BL1026
b. Chemistry (minimum 60%): CH1035, CH1036

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile (overall 60% average) including the following courses (or equivalent):
1. English (minimum of 60%) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
2. Mathematics (minimum of 60%) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
3. Science from the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Note: Applicants with Adult Basic Education (Level III) Graduation with a different Profile (and appropriate grades) may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

Note: ESL Pharmacy Technician program students only – must meet School of Health Sciences English proficiency as outlined below:

Test	Subtest	Pharmacy Technician
IELTS Academic	Reading	7.0
	Listening	7.0
	Speaking	7.0
	Writing	7.0

Additional Entrance Requirements Upon Acceptance

- Valid** Certificate of Conduct, including Criminal Record and Vulnerable Sector Check.
- Students will require a clear and current Certificate of Conduct (Criminal Record and Vulnerable Sector Check) prior to clinical practicum. Applicants with a criminal offense listed on their Certificate of Conduct (Criminal Record and Vulnerable Sector Check) may be denied access to clinical placement and may be unable to complete their program.
- Immunization Record providing evidence that the applicant has received the required vaccinations/screening tests. Completing the immunization record will require physician's visits, blood tests, and a TB screening test; detailed instructions are included on the School of Health Sciences Student Information and Program Awareness Form. The applicant is responsible for ensuring that all medical requirements are fulfilled, and the immunization record complete before submission. Certain vaccinations require a series of immunizations over a period; therefore, it is essential to start the process as early as possible. The applicant is also responsible for all associated costs (vaccinations, laboratory testing, physician fees, certificate of conduct fees, etc.).

(See the Additional Information for Health Sciences Applicants (Definitions and Regulations) section of the calendar or under the Admissions Regulations section of our website for details.)

Courses

Semester 1

Code	Title	Cr	Le	La
RX2100	Prescription Processing	3	2	4
RX2140	Pharmacy Fundamentals	3	3	0
BL1605	Human Biology	4	3	2
MA1021	Basic Laboratory Calculations	3	3	0
RX1110	Pharmacy Law and Professionalism	3	3	0

Semester 2

Code	Title	Cr	Le	La
RX2170	Pharmacology I	5	5	0
RX1220	Pharmaceutical Calculations	5	5	0
RX1230	Pharm Fundamental Application	4	4	0
RX1251	Pharmacy Computer Systems	3	2	3
HG2051	Professional Practice & Ethics	3	3	0

Semester 3 Intersession

Code	Title	Cr	Le	La
RX2180	Pharmacology II	5	5	0
RX1300	Compounding I - Non-Sterile	3	2	4

Semester 4

Code	Title	Cr	Le	La
CM1270	Communications in Health Care	3	3	0
RX2210	Community Pharmacy	4	3	4
RX2110	Patient Care	3	3	0
RX2240	Hospital Pharmacy	3	2	4
RX2190	Collaborative Practice in Pharmacy	3	2	3

Semester 5

Code	Title	Cr	Le	La
RX2250	Leadership and Management	3	3	0
RX2260	Compounding II – Sterile	3	2	4
RX2255	Clinical I	7	0	7 wks

RX2250 Leadership & Management and RX2260 Compounding II - Sterile will be delivered in block format (first 8 weeks

of the semester) prior to RX2255 Clinical I

Semester 6

Code	Title	Cr	Le	La
RX2310	Clinical II	7	0	7 wks

Practical Nursing

Start Date: September

Credential: Diploma

Program Length: 19 Months

School: Health Sciences

Locations & Delivery Modes:

- Bay St. George - On Campus delivery
- Burin - On Campus delivery
- Carbonear - On Campus delivery
- Clarenville - On Campus delivery
- Corner Brook - On Campus delivery
- Gander - On Campus delivery
- Grand Falls-Windsor - On Campus delivery
- Happy Valley-Goose Bay - On Campus delivery
- St. Anthony - On Campus delivery

PROGRAM DESCRIPTION

College of the North Atlantic brokers the Practical Nursing program from the Centre for Nursing Studies, delivering it in regions, outside St. John's, with a demonstrated labor market need. To access information for the offering in St. John's please refer to cns.easternhealth.ca.

This program is designed to prepare graduates to provide nursing services for clients across the lifespan in institutional and community based settings within the approved scope of practice for licensed practical nurses in Newfoundland and Labrador. It introduces the student to the role of practical nurse in promoting, protecting, restoring, maintaining and supporting the health status of individuals across the health and developmental continuum.

The program encompasses classroom work supplemented with skills lab and nursing practice components.

CLINICAL PLACEMENTS
Clinical placements are a required element of this program and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to contact student.placements@cna.nl.ca prior to beginning the program.

For programs with competitive admissions, clinical placements are not affected by ranking in the competitive admissions process and will be determined under institutional guidelines.

PN Bursary
The Province of Newfoundland and Labrador provides a Practical Nursing Bursary Program for students enrolled in the Practical Nursing program. The program provides up to a $5,000 bursary to selected students, which covers the education program costs. For more information visit the Department of Health and Community Services website.

“All students in the Practical Nursing Program must demonstrate their capacity to meet the entry-level practical nurse competencies. Please review the CLPNNL Becoming a Licensed Practical Nurse in Canada: Requisite Skills and Abilities document at www.clpnnl.ca. The purpose of this document is to provide potential practical nursing students with information on the requisite skills and abilities of a Licensed Practical Nurse.”

ENTRANCE REQUIREMENTS

Academic Admission Requirements

1. **Applicants who have followed the High School Curriculum of Newfoundland and Labrador**
To be eligible for Academic admission, you will need to successfully receive an average of 50% or more in the following 3000 level high school courses, or equivalent:
i. English 3201
ii. Mathematics - one of the following
    a. Advanced Mathematics 3200
    b. Academic Mathematics 3201
iii. Science – 4 credits in Biology or 2 credits in Chemistry
    a. Biology 2201 and 3201 OR
    b. Chemistry 3202
iv. Social Studies or Modern/Classical Language (MCL) - one of the following
    a. Social Studies 3201, or equivalent
    b. Sciences Humaines 3231
    c. Two credits at the 3000 level in Religious Studies, French or other MCL
v. Two credits in any subject area at the 3000 level

NOTE: CNA will not apply newly revised requirements to the disadvantage of an applicant whose high school courses were established by earlier requirements.

OR

Applicants in their final year of high school who will complete the graduation requirements for high school as set by the Department of Education and obtained an average of not less than 50% in 3000 level core courses as listed above may be conditionally accepted prior to the writing of final exams. This conditional acceptance will be subject to verification that the applicant has obtained an average of not less than 50% in 3000 level core courses, when final examination results are released.

2. **Applicants who have followed the High School Curriculum of other Provinces of Canada**
Applicants from other provinces of Canada shall have successfully completed graduation requirements for high school as set by the home province and obtained a passing grade in 3000 level core courses.

3. **Applicants who have followed the Adult Basic Education Program (ABE)**
Applicants shall have completed the Level III Adult Basic Education Certificate (ABE) Academic Stream as set by the Department of Education obtained an average of not less than 50% in 3000 level core courses as listed in #1 above.

4. **Applicants for Mature Student Status**
Mature student status is meant to allow individuals the opportunity to demonstrate academic potential if they have not fulfilled the admission criteria outlined previously.

A mature student is an applicant 19 years of age or older, has been away from full-time high school studies for at least two years, and can demonstrate potential for success through academic, professional or volunteer activities and other accomplishments. These candidates are expected to provide an official transcript of the highest level of education obtained.

*Meeting the mature student criteria will not guarantee admission to the Practical Nursing Program.

****Note: All applicants must follow the Application Process outlined below and must supply all documentation described therein.**

General Admission Requirements

Interviews
The College of the North Atlantic reserves the right to interview applicants in any of the admission categories.

Assessments
An applicant may be recommended to write an assessment type test.

Application Process
The number of students admitted to the Practical Nursing Program is determined annually by the provincial human resource needs for Licensed Practical Nurses (LPNs). **The application and selection process is competitive.**

Applications to the Practical Nursing Program at the College of the North Atlantic will be reviewed for admission **only** when **all** of the following have been provided **within the identified time frames**. Incorrect, incomplete and/or missing information may jeopardize an applicant's inclusion in the selection process.

- **Online** application form (and applicable fee) submitted.
- Copy of your ***official birth certificate*** **(international applicants can provide passport)**. If your current name is different than the name on the birth certificate, you must provide proof of name change (e.g., marriage certificate, etc.)
- Copy of permanent Residency Card (if applicable).
- ***Official*** high school transcript from the Department of Education or equivalency certificate.
- ***Certified copy*** of Level II (Grade 11) marks and Level III (Grade 12) first term results (for current high school students).
- ***Official transcript*** of all post-secondary courses/programs (if applicable).
- **Personal Statement** (completed on the personal statement form).
- Practical Nursing Application Supplement
- Clinical Placement Acknowledgement
- **Two references** (forms provided) *Please note that ***references from family, friends, relatives or co-workers will be deemed unsatisfactory.*** If possible, references should come from previous or current employers and/or instructors/teachers/professors. Referees must forward the Reference Form directly to the campus.
- All potential nursing students must read the College for Licensed Practical Nurses of Newfoundland and Labrador document entitled: "Becoming a Licensed Practical Nurse in Canada: Requisite Skills and Abilities" to determine their ability to meet the requirements of the program. The Skills Abilities form must be submitted confirming you have read the document found at the following link: https://www.clpnnl.ca/sites/default/files/inline-files/Requisite_Skills_and_Abilities_1.pdf

Please note: Applications will not be considered complete until the original transcript has been provided. **Photocopies and photographs are not accepted. Transcripts e-mailed directly from an educational institution will be considered official transcripts.**

Once an applicant receives a letter of acceptance, the following ***documentation must be submitted by*** **July 31st**.

- Certificate for Basic Life Support (BLS); BLS/Health Care Provider/AED; or Cardio-Pulmonary Resuscitation – Health Care Provider (CPR/HCP) **and** a certificate for Standard First Aid. **Note**: Courses have to be a direct delivery model or a blended model where skills are practiced hands on with supervision. Both to be completed after **January 1 (of the year in which studies will commence).** Annual BLS / CPR-HCP re-certification will be required in the program.
- Current Criminal Record Screening Certificate/Police Records Check and Vulnerable Sector Check in satisfactory standing (**dated no earlier than July of the year in which studies will commence**). International students can request these documents once they arrive in the province.
- Child Protection Records (may be required)
- Student Information form (regarding allergies).

Once an applicant receives a letter of acceptance, the following document must be submitted no later than September 30th.

- **Student Pre-Placement Immunization and Communicable Disease Screening** package.

SEMESTER ONE – SEPTEMBER TO DECEMBER (15 WEEKS)							
COURSE	**HOURS PER SEMESTER**						
	Simulation	**Tutorials**	**Theory**	**Labs**	**Clinical**	**Final Exams**	**Total Hours**
PN1180 Introduction to Nursing			36			2	38
PN1185 Fundamentals of Nursing Labs				28			28
PN1109 Anatomy & Physiology I		4	36			2	42
PN1130 Communication & Therapeutic Relationships			36	20		2	58
PN1125 Gerontological Nursing			36			2	38
PN1110 Introduction to Nursing Practice					80		80
TOTAL	0	4	144	48	80	8	284

SEMESTER TWO – JANUARY TO APRIL (15 WEEKS)							
COURSE	**HOURS PER SEMESTER**						
	Simulation	**Tutorials**	**Theory**	**Labs**	**Clinical**	**Final Exams**	**Total Hours**
PN1200 Mental Health Nursing			36			2	38
PN1290 Pharmacology I			22	14		2	38
PN1241 Anatomy and Physiology II		4	36			2	42
PH1251 Health Assessment			36	21		2	59
PN1215 Leadership in Nursing Practice in the Gerontological Setting					80		80
TOTAL	0	4	130	35	80	8	257

SEMESTER THREE – APRIL TO JULY (12 WEEKS)							
COURSE	**HOURS PER SEMESTER**						
	Simulation	**Tutorials**	**Theory**	**Labs**	**Clinical**	**Final Exams**	**Total Hours**
PN1300 Maternal-Child Nursing			36	4		2	42
PN1170 Medical-Surgical Nursing I			36	19		2	57
PN1360 Pharmacology II			18	12		2	32
***PN1210** Mental Health Nursing Practice					80		80
****PN1325** Maternal-Child Health Nursing Practice					72		72
PN1271 Medical-Surgical Nursing Practice I					80		80
TOTAL	0	0	90	35	160 / 152	6	291 / 283

NOTES:

***PN1210 – This course will be offered at all campuses EXCEPT Gander and Grand Falls-Windsor campuses.**
****PN1325 – This courses will be offered ONLY at Gander and Grand Falls-Windsor campuses.**

SEMESTER FOUR – APRIL TO JULY (12 WEEKS)							
COURSE	**HOURS PER SEMESTER**						
	Simulation	**Seminar**	**Theory**	**Labs**	**Clinical**	**Final Exams**	**Total Hours**
PN1330 Community Health Nursing			36			2	38
PN1380 Medical Surgical Nursing II	8		36	18		2	64
PN1305 Leadership in Nursing		2	36			2	40
***PN1210** Mental Health Nursing Practice					80		80
****PN1325** Maternal-Child Health Nursing Practice					72		72
PN1375 Medical-Surgical Nursing Practice II					80		80
TOTAL	8	2	108	18	160 / 152	6	302 / 294

NOTES:

***PN1210 – This course will be offered at all campuses EXCEPT Gander and Grand Falls-Windsor campuses.**
****PN1325 – This courses will be offered ONLY at Gander and Grand Falls-Windsor campuses.**

SEMESTER FIVE – JANUARY TO APRIL (15 WEEKS)								
COURSE	**HOURS PER SEMESTER**							
	Simulation	**Tutorials**	**Seminar**	**Theory**	**Labs**	**Clinical**	**Final Exams**	**Total Hours**
PN1400 Nursing Practice for Professional Development						160		160
PN1410 Preceptorship						280		280
PN1403 Community Health Nursing Practice	4					80		84
TOTAL	4	0	0	0	0	520	0	524

TOTAL PROGRAM HOURS								
	Simulation	**Tutorials**	**Seminar**	**Theory**	**Labs**	**Clinical**	**Final Exams**	**Total Hours**
CURRICULUM TOTALS	**12**	**8**	**2**	**472**	**136**	**992**	**28**	**1,650**

Note: Curriculum hours subject to change based on notification from the parent institution, Center of Nursing Studies.

Primary Care Paramedicine

Start Date: September

Credential: Diploma

Program Length: 68 Weeks

School: Health Sciences

Locations & Delivery Modes:

- Bay St. George - On Campus delivery
- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Provision of emergency medical services (EMS) is a unique and vital community service. Paramedics are highly skilled members of a health care team who function within the discipline of emergency and pre-hospital care. Paramedics initiate medical treatment for individuals in urgent and non-urgent situations. Based on sound knowledge, these practitioners demonstrate rational problem-solving abilities and excellent decision-making skills. This program addresses the operational/procedural skills of the primary care paramedics, as well as the ethical and professional behaviours such as effective communication. Mental/physical fitness and healthy lifestyles are emphasized throughout the program, as paramedics must be fit to perform the requirements of the occupation.

This is a challenging program that provides the student with extensive classroom and clinical/practicum experience. Graduates of this program will be prepared to work in a competent and skillful manner providing pre-hospital care in accordance with the national standards for paramedics.

OBJECTIVES

Upon successful completion of the Primary Care Paramedicine program, graduates will be able to:

1. Demonstrate required skills, knowledge, and abilities, as prescribed by the Paramedic Association of Canada National Occupational Competency Profile with consistency, independence, timeliness, accuracy, and appropriateness.
2. Integrate assessment, diagnostic, and treatment procedures into the holistic management of patients in the out-of-hospital setting.
3. Use critical thinking and problem-solving skills that promote logical and independent decision-making in the provision of paramedic care.
4. Maintain a level of physical and mental health necessary to perform the bona fide occupational requirements.
5. Communicate effectively and work collaboratively with other members of the health care team to serve patients and employers with the highest degree of competence.
6. Reflect professionalism through personal deportment and public interactions.
7. Demonstrate ethical behaviour, empathy and respect for individuals.

ACCREDITATION

The *Primary Care Paramedicine (PCP)* program is accredited by Accreditation Canada until *June 2025.*

This program is currently “Accredited” with Accreditation Canada/EQual. Our “Accredited” status serves as an important demonstration of our commitment to providing quality education in alignment with accreditation and regulatory requirements. If you require additional information regarding our accreditation status and endeavors and/or any potential implications our accreditation status may have on your future abilities to practice as a healthcare professional, we encourage you to reach out to the Dean for the School of Health Sciences.

CLINICAL PLACEMENTS

Clinical placements are a required element of this program and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to contact student.placements@cna.nl.ca prior to beginning the program.

For programs with competitive admissions, clinical placements are not affected by ranking in the competitive admissions process and will be determined under institutional guidelines.

ENTRANCE REQUIREMENTS (2024-2025)
At the time of application to the Primary Care Paramedicine program, applicants MUST be completing or have completed one of the following:
1. High School
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English: 3201 or 3202 (minimum 60%)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Three Science courses:
Biology: 2201 and 3201
Chemistry: 3202
Note: Starting with the 2024-2025 Academic Year intake, applicants that have completed BL3201 after September 2020, will be required to have completed both BL2201 & BL3201.
Note: CNA will not apply newly revised requirements to the disadvantage of an applicant whose high school courses were established by earlier requirements.
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. English (minimum 60%): CM1060, CM1061
ii. Math (minimum 60%): MA1040, MA1041
iii. Four Science courses:
Biology: BL1020, BL1021
Chemistry: CH1030, CH1031
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate with the following courses:
ii. Math (minimum 60%): MA1040, MA1041
iii. Four Science courses:
Biology: BL1025, BL1026
Chemistry: CH1035, CH1036
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with Degree and Technical Profile (overall 60% average) including the following courses (or equivalent):
i. English (minimum of 60%) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (minimum of 60%) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science :
Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile (and appropriate grades) may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

Additional Entrance Requirements (2024-2025)

- Completion of the Casper Admissions Exam.
  - The Casper Admissions Exam official score will be used as part of the points-based system to determine ranking in the competitive entry process
  - All applicants are required to complete Casper* Admissions Exam (CSP-10201 – Canadian Professional Health Sciences) as part of their application for the 2023/2024 admissions cycle. To complete Casper, visit Taking the Casper assessment - Take Casper (acuityinsights.app).

***Casper.** The Casper test comprises 14 sections of video and written scenarios. Following each scenario, you will be required to answer a set of probing questions under a time contract. The test typically takes between 90-110 minutes to complete. Each response is graded by a different rater, giving a very robust and reliable view of personal and professional characteristics important to our program. No studying is required for Casper, although you may want to familiarize yourself with the test structure at TakeAltus.com, and ensure you have a quiet environment to take the test. We strongly urge you to take advantage of the 14-section practice test, which will not only immerse you in the test environment but will also ensure you meet the technical requirements to access and complete the test.

Casper test results are valid for one admissions cycle. Applicants who have already taken the test in previous years will therefore be expected to re-take it. The Casper Test Date is ***July 21, 2024***.

For a more detailed look at the Casper test, please see this video

Additional Requirements Upon Acceptance (2024-2025)

- Current Cardiopulmonary Resuscitation (CPR) or Basic Life Support (BLS)
- Current First Aid Certificate (Standard)
- Class 05 Learner (Level 1) Driver's License (minimum)
  - **Note:** Employers may require Paramedics have a Class 04 driver's license which can be obtained through a Provincial Motor Vehicle Registration Office.
- Valid** Certificate of Conduct, including Criminal Record and Vulnerable Sector Check.
- Students will require a clear and current Certificate of Conduct (Criminal Record and Vulnerable Sector Check) prior to clinical practicum. Applicants with a criminal offense listed on their Certificate of Conduct (Criminal Record and Vulnerable Sector Check) may be denied access to clinical placement and may be unable to complete their program.
- Immunization Record providing evidence that the applicant has received the required vaccinations/screening tests. Completing the immunization record will require physician's visits, blood tests, and a TB screening test; detailed instructions are included on the School of Health Sciences Student Information and Program Awareness Form. The applicant is responsible for ensuring that all medical requirements are fulfilled, and the immunization record complete before submission. Certain vaccinations require a series of immunizations over a period; therefore, it is essential to start the process as early as possible. The applicant is also responsible for all associated costs (vaccinations, laboratory testing, physician fees, certificate of conduct fees, etc.).
- ESL students only – one of the following:
  - IELTS: minimum overall band score of 7
  - TOEFL Score: minimum score of 94

(See the Additional Information for Health Sciences Applicants (Definitions and Regulations) section of the calendar or under the Admissions Regulations section of our website for details.)

**Acceptance of the Certificate of Conduct (Criminal Record and Vulnerable Sector Check) is at the discretion of the Health Authority of which clinical practicum is being sought.

COMPETITIVE ENTRY APPLICATION PROCESS - FALL 2024
Program Start Date September 2024
The competitive admissions process is points-based and includes:
View the Competitive Entry Application Process for this program

****Candidates not accepted for the intake to which they applied must re-apply for admission to future offerings. Applications WILL NOT be kept on file.**

Courses

Semester 1

Code	Title	Cr	Le	La
BL1180	Anatomy and Physiology	5	5	0
HG1681	Ethics in Health Care	3	3	0
TM1130	Medical Terminology	3	3	0
CM1250	Communications in the Workplace	3	3	0
PA1210	Health & Fitness I	2	1	3
PA1370	Pharmacology I	2	2	0
PA1125	EMS Basics	5	4	4

Semester 2

Code	Title	Cr	Le	La
PA1460	Medical Emergencies I	3	2	2
CM1270	Communications in Health Care	3	3	0
PA1211	Health & Fitness II	2	1	3
PA1520	Mental Health	2	2	1
PA1371	Pharmacology II	3	2	3
PA1230	Airway Management	2	1	3
PA1280	Cardiology	4	3	2

Semester 3 Intersession

Code	Title	Cr	Le	La
PA1290	Community Paramedicine	2	1	2
PA1470	Medical Emergencies II	5	4	2
PA1440	Clinical	3	0	3 wks

Prior to beginning PA1440 students in the PCP program complete PA1290 and PA1470

Semester 4

Code	Title	Cr	Le	La
PA2000	Traumatology	5	3	5
PA2005	Obstetrics and Pediatrics	3	2	3
PA1515	Special Considerations	2	2	0
PA1415	Interagency Relations	3	2	2
PA2020	Simulation Lab	3	0	9

Semester 5

Code	Title	Cr	Le	La
PA2025	Practicum	14	0	14 wks

Rehabilitation Assistant (OTA and PTA)

Start Date: September

Credential: Diploma

Program Length: 9 Semesters

School: Health Sciences

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

Rehabilitation Assistants work as members of a health care team under the supervision of and in collaboration with Occupational Therapists and Physiotherapists. Rehabilitation Assistants are involved with the safe and proficient delivery of activities that have been established as a treatment plan for clients coping with temporary or permanent limitations in occupational performance and/or functional movement. The role of the Rehabilitation Assistant varies depending on the practice setting, which includes rehabilitation facilities, hospitals, long-term care facilities, community settings, and private practices. The Rehabilitation Assistant works with individuals, families, or groups, helping clients achieve optimal levels of physical, psychosocial, and/or cognitive abilities.

This part-time program is offered through distributed learning offering flexibility, collaboration, and interaction with a cohort model to minimize isolation often associated with distance education. Online courses are enhanced by laboratory sessions and structured clinical placements (nineteen weeks at 4 points throughout the program).

Graduates of this program will be equipped with the technical and theoretical skills required to work as Rehabilitation Assistants in hospitals, health centers, community organizations, rehabilitation facilities, and long-term care facilities. Rehabilitation Assistants work under the supervision of Occupational Therapists and/or Physiotherapists.

Graduates of College of the North Atlantic's Occupational Therapist Assistant or Physiotherapist Assistant Certificate program may apply to the Rehabilitation Assistant (OTA and PTA) program to receive dual certification. Graduates with one certification (OTA or PTA) from another institution are also eligible for advanced standing into the Rehabilitation Assistant program; entry point will be determined on a case-by-case basis.

PROGRAM MISSION

Fostering an educational experience that equips students with theoretical knowledge and technical skills required to work as Rehabilitation Assistants.

PROGRAM VISION

Sustaining Canada's most accessible Rehabilitation Assistant Diploma program through innovative post-secondary education strategies.

PROGRAM PHILOSOPHY

Providing a vital supporting role in the delivery of efficient and effective rehabilitation services.

OBJECTIVES

Upon successful completion of the Rehabilitation Assistant (OTA/PTA) program, graduates will be able to:

1. Apply the academic knowledge and skills outlined in the competency profiles for Physiotherapist Assistants (Canadian Physiotherapy Association) and Occupational Therapist Assistants (Canadian Association of Occupational Therapists).
2. Apply the learned academic knowledge and skills in clinical practice.
3. Apply effective communication skills and professional behaviors.

4. Perform delegated therapeutic skills safely and effectively under the supervision of an Occupational Therapist or Physiotherapist.
5. Provide the community with skilled Rehabilitation Assistants who can serve their employers and clients with the highest degree of competence.

ACCREDITATION

The Rehabilitation Assistant program at College of the North Atlantic has been accredited by the Occupational Therapist Assistant and Physiotherapist Assistant Education Accreditation Program (OTA & PTA EAP) in collaboration with Physiotherapy Education Accreditation Canada (PEAC) and the Canadian Association of Occupational Therapists (CAOT). The status of Accreditation was granted to the program on November 30, 2016 for the period until November 30, 2024.

Occupational Therapist Assistant and Physiotherapist Assistant Education Accreditation Program
Suite 26, 509 Commissioners Road West
London, Ontario
N6J 1Y5
(226) 636-0632
www.otapta.ca

CLINICAL PLACEMENTS

Clinical placements are a required element of this program and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to contact student.placements@cna.nl.ca prior to beginning the program.

ENTRANCE REQUIREMENTS

At the time of application to the Rehabilitation Assistant program, applicants MUST be completing or have completed one of the following:

1. High School

High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or 3202 (minimum 60%)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Science – (4 credits) chosen from one of:
Biology: 2201 and 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
iv. Electives (2 additional credits) chosen from any of the remaining 3000 level courses offered in the Senior High School Program.
Note: Starting with the 2024-2025 Academic Year intake, applicants that have completed BL3201 after September 2020, will be required to have completed both BL2201 & BL3201.
Note: CNA will not apply newly revised requirements to the disadvantage of an applicant whose high school courses were established by earlier requirements.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. English (minimum 60%): CM1060, CM1061
ii. Math (minimum 60%): MA1040, MA1041
iii. Two Science courses chosen from one of the following three combinations:

a. Biology: BL1020, BL1021
b. Chemistry: CH1030, CH1031
c. Physics: PH1050, PH1051
Note: It is strongly recommended that CAS students who intend to enroll in the Rehabilitation Assistant (OTA/PTA) program complete both of the Introductory Biology courses.
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate with the following courses:
i. English (minimum 60%): CM1060, CM1061
ii. Math (minimum 60%): MA1040, MA1041
iii. Two Science courses chosen from one of the following three combinations:
a. Biology: BL1025, BL1026
b. Chemistry: CH1035, CH1036
c. Physics: PH1055, PH1056
Note: It is strongly recommended that College Transition students who intend to enroll in the Rehabilitation Assistant (OTA/PTA) program complete both of the Introductory Biology courses.
3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with Degree and Technical Profile (overall 60% average) including the following courses (or equivalent):
i. English (minimum of 60%) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (minimum of 60%) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile (and appropriate grades) may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Students meeting academic entrance requirements are accepted on a first come, first served basis. Before final acceptance is granted, additional documentation must be submitted; see the Additional Information for Health Sciences Applicants section of the calendar or under the Admissions Regulations section of our website for details.

Additional Requirements Upon Acceptance (2024-2025)

- Valid** Certificate of Conduct, including Criminal Record and Vulnerable Sector Check.
- Students will require a current Certificate of Conduct (Criminal Record and Vulnerable Sector Check) prior to starting their program. Applicants with a criminal offense listed on their Certificate of Conduct (Criminal Record and Vulnerable Sector Check) may be denied access to clinical placement by the College's clinical partners and may be unable to complete their program.

- Students will need to complete a Student Pre-Placement Immunizations and Communicable Diseases Screening with their Health Care Provider. Completing the immunization record will require physician's visits, blood tests, and a TB screening test; detailed instructions are included on the Student Pre-Placement Immunizations and Communicable Diseases Screening. The applicant is responsible for ensuring that all medical requirements are fulfilled, and the screening form complete before submission. Certain vaccinations require a series of immunizations over a period; therefore, it is essential to start the process as early as possible. The applicant is also responsible for all associated costs (vaccinations, laboratory testing, physician fees, certificate of conduct fees, etc.).

(See the Additional Information for Health Sciences Applicants (Definitions and Regulations) section of the calendar or under the Admissions Regulations section of our website for details.)

Courses

Semester 1

Code	Title	Cr	Le	La
TA1150	Intro to Musculoskeletal Anatomy	4	3	2
TM1130	Medical Terminology	3	3	0
CM1270	Communications in Health Care	3	3	0

Semester 2

Code	Title	Cr	Le	La
TA1142	Orientation to Rehabilitation	5	4	1 wk
PS1420	Health Care Organization and Structure	3	3	0
TA1395	Anatomy & Physiology for Rehabilitation Assistants	4	3	2

Semester 3

Code	Title	Cr	Le	La
TA2221	Communication Disorders in Rehabilitation	2	2	0
HG1300	Professional Practice	3	3	0
TA1601	Introduction to Clinical Skills	2	1	3

Semester 4

Code	Title	Cr	Le	La
TA1612	Advanced Clinical Skills	3	2	3
TA1231	Human Movement and Kinesiology	4	3	2
TA2140	Disease, Injury, and Intervention I	4	4	0

Semester 5

Code	Title	Cr	Le	La
TA1701	Clinical Placement I	2	0	2 wks
TA2141	Disease, Injury and Intervention II	4	4	0
TA2521	Mental Health Concepts and Techniques	2	2	0

Semester 6

Code	Title	Cr	Le	La
TA2685	Therapeutic Skills I for PTA	5	4	3

Semester 7

Code	Title	Cr	Le	La
TA2751	Clinical Placement II for PTA	5	0	5 wks
TA2671	Therapeutic Skills I for OTA	5	4	3
HG1681	Ethics in Health Care	3	3	0

Semester 8

Code	Title	Cr	Le	La
TA2150	Community Rehabilitation and Wellness for the Older Adult	3	3	0
TA2615	Therapeutic Skills II for the Rehabilitation Assistant (OTA and PTA)	6	5	4
TA2741	Clinical Placement II for OTA	5	0	5 wks

Semester 9

Code	Title	Cr	Le	La
TA2710	Clinical Placement III for the Rehabilitation Assistant (OTA and PTA)	6	0	6 wks

Respiratory Therapy

Start Date: September

Credential: Diploma

Program Length: Three Years

School: Health Sciences

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Respiratory therapists are healthcare professionals who contribute to the diagnosis and management of cardiorespiratory disorders, providing such services as cardiopulmonary resuscitation, ventilator management, oxygen and aerosol therapy, patient assessment and evaluation, and diagnostic services including pulmonary function testing. Most respiratory therapists work in hospitals, neonatal nurseries, operating rooms, intensive care units, general wards, pulmonary function labs, and emergency departments. Respiratory therapists may also work in community settings such as homecare, asthma clinics, research, and medical equipment sales and service. Respiratory therapists require good judgement, excellent interpersonal skills, and the ability to maintain their composure in critical medical situations.

Respiratory Therapy (RT) is a challenging comprehensive three-year program featuring two years of classroom, laboratory, clinical simulation, and clinical practicum exposure followed by one year of clinical education in an affiliated clinical site. Program topics include anatomy and physiology, microbiology, applied sciences, pharmacology, pathophysiology, mechanical ventilation, cardiopulmonary diagnostics, and neonatal respiratory care. Clinical application courses in years 1 and 2 utilize simulation and clinical site visits to facilitate theory integration and transition to the third and final year. The clinical phase will consist of 37 weeks of training conducted at approved training facilities within the provincial Regional Health Authorities. The RT program develops the technical skills and professional behaviours required for graduates to work competently as an integral member of the health care team.

Furthermore, program graduates will be well-positioned to challenge the national competency examination as directed through the Canadian Board for Respiratory Care. After completing this exam, they will be eligible to register with the Newfoundland and Labrador Council of Health Professionals.

OBJECTIVES

Upon successful completion of the Respiratory Therapy program, graduates will be able to:

1. Demonstrate the knowledge, skills, and abilities outlined in the National Alliance of Respiratory Therapy Regulatory Bodies (NARTRB) National Competency Framework (NCF) with timeliness, accuracy, and proficiency.
2. Practice and promote the principles of quality management and the efficient utilization of resources.
3. Apply critical thinking and problem-solving skills that promote competence in the performance of respiratory therapy procedures
4. Demonstrate a high level of professional conduct in the performance of duty.
5. Communicate effectively and work collaboratively with other health care team members to serve patients and employers with the highest degree of competence.

ACCREDITATION

The *Respiratory Therapy (RT)* program is accredited by Accreditation Canada until *June 30, 2028.*
This program is currently “Accredited” with Accreditation Canada/EQual. Our “Accredited” status serves as an important demonstration of our commitment to providing quality education in alignment with accreditation and regulatory requirements. If you require additional information regarding our accreditation status and endeavors and/or any potential implications our accreditation status may have on your future abilities to practice as a healthcare professional, we encourage you to reach out to the Dean for the School of Health Sciences.

PROGRAM TRANSFERABILITY
Graduates may elect to further their studies and obtain a Bachelor of Technology degree from Memorial University of Newfoundland or a Bachelor of Science (Post-Diploma, Human Science) from Athabasca University.

Graduates may also pursue further studies in the areas of Anesthesia Assistant, Cardiovascular Perfusion, or Polysomnography.

CERTIFICATIONS
Students must possess a valid Standard First Aid with Cardiopulmonary Resuscitation/Basic Life Support (CPR or BLS) certification to be eligible for graduation from the College.

CLINICAL PLACEMENTS
Clinical placements are a required element of this program and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to contact student.placements@cna.nl.ca prior to beginning the program.

For programs with competitive admissions, clinical placements are not affected by ranking in the competitive admissions process and will be determined under institutional guidelines.

ENTRANCE REQUIREMENTS (2024-2025)
At the time of application to the Respiratory Therapy program, applicants MUST be completing or have completed one of the following:
1. High School
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English 3201 or 3202 (minimum 60%)
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Three Science courses:
Biology: 2201 and 3201
Chemistry: 3202
Note: Starting with the 2024-2025 Academic Year intake, applicants that have completed BL3201 after September 2020, will be required to have completed both BL2201 & BL3201.
Note: CNA will not apply newly revised requirements to the disadvantage of an applicant whose high school courses were established by earlier requirements.
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. English (minimum 60%): CM1060, CM1061
ii. Math (minimum 60%): MA1040, MA1041
iii. Four Science courses
Biology: BL1020, BL1021
Chemistry: CH1030, CH1031
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate with the following courses:
i. English (minimum 60%): CM1060, CM1061
ii. Math (minimum 60%): MA1040, MA1041
iii. Four Science courses
Biology: BL1025, BL1026
Chemistry: CH1035, CH1036

3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with Degree and Technical Profile (overall 60% average) including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1104A, 1104B, 1104C, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
iii. Science
Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
Note: Applicants with Adult Basic Education (Level III) Graduation with a different Profile (and appropriate grades) may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

Additional Entrance Requirements (2024-2025)
- Completion of the Casper Admissions Exam.
  - The Casper Admissions Exam official score will be used as part of the points-based system to determine ranking in the competitive entry process
  - All applicants are required to complete Casper* Admissions Exam (CSP-10201 – Canadian Professional Health Sciences) as part of their application for the 2023/2024 admissions cycle. To complete Casper, visit Taking the Casper assessment - Take Casper (acuityinsights.app).

*__Casper.__ The Casper test comprises 14 sections of video and written scenarios. Following each scenario, you will be required to answer a set of probing questions under a time contract. The test typically takes between 90-110 minutes to complete. Each response is graded by a different rater, giving a very robust and reliable view of personal and professional characteristics important to our program. No studying is required for Casper, although you may want to familiarize yourself with the test structure at TakeAltus.com, and ensure you have a quiet environment to take the test. We strongly urge you to take advantage of the 14-section practice test, which will not only immerse you in the test environment but will also ensure you meet the technical requirements to access and complete the test.

Casper test results are valid for one admissions cycle. Applicants who have already taken the test in previous years will therefore be expected to re-take it.
Casper Test Dates 2023-2024 Application Cycle

- October 12th, 2023
- October 19th, 2023
- November 23rd, 2023
- December 7th, 2023
- January 10th, 2024
- January 25th, 2024
- February 22nd, 2024
- March 5th, 2024

For a more detailed look at the Casper test, please see this video.

Additional Requirements Upon Acceptance (2024-2025)
- Valid** Certificate of Conduct, including Criminal Record and Vulnerable Sector Check.
- Students will require a current Certificate of Conduct (Criminal Record and Vulnerable Sector Check) prior to starting their program. Applicants with a criminal offense listed on their Certificate of Conduct (Criminal Record and Vulnerable Sector Check) may be denied access to clinical placement by the College's clinical partners and may be unable to complete their program.
- Students will need to complete a Student Pre-Placement Immunizations and Communicable Diseases Screening with their Health Care Provider. Completing the immunization record will require physician's visits, blood tests, and a TB screening test; detailed instructions are included on the Student Pre-Placement Immunizations and Communicable Diseases Screening. The applicant is responsible for ensuring that all medical requirements are fulfilled, and the screening form complete before submission. Certain vaccinations require a series of immunizations over a period; therefore, it is essential to start the process as early as possible. The applicant is

also responsible for all associated costs (vaccinations, laboratory testing, physician fees, certificate of conduct fees, etc.).

- ESL students only – one of the following:
  - IELTS: minimum overall band score of 7
  - TOEFL Score: minimum score of 94

(See the Additional Information for Health Sciences Applicants (Definitions and Regulations) section of the calendar or under the Admissions Regulations section of our website for details.)

*Acceptance of the Certificate of Conduct (Criminal Record) is at the discretion of the organization in which the clinical practicum is being sought.

COMPETITIVE ENTRY APPLICATION PROCESS - FALL 2024

Program Start Date September 2024

The competitive admissions process is points-based and includes:

View the Competitive Entry Application Process for this program

Deadline for receipt of application	March 1st 2024
Deadline for receipt of ALL supporting documentation*	March 7th 2024
Initial round of acceptances	April 30th 2024

*Documentation received after the deadline **WILL NOT** be considered

****Candidates not accepted for the intake to which they applied must re-apply for admission to future offerings. Applications WILL NOT be kept on file.**

Courses

Semester 1

Code	Title	Cr	Le	La
CM1270	Communications in Health Care	3	3	0
TM1130	Medical Terminology	3	3	0
RT1160	Respiratory Mathematics	3	3	0
BL1605	Human Biology	4	3	2
RT1100	Introduction to Respiratory Therapy	4	3	3
HG1110	Applied Science for Allied Health	4	3	2
RT2305	Pharmacology	3	3	0

Semester 2

Code	Title	Cr	Le	La
CS2311	Research Methods and Statistics	2	2	0
RT1120	Cardiopulmonary Physiology	4	4	0
RT1130	Cardiopulmonary Patho I	4	4	0
RT2460	RT Techniques	4	3	3
BL2601	Intro to Microbiology	4	3	2
CM2201	Oral Communications	2	2	0

Semester 3 Intersession (7 weeks)

Code	Title	Cr	Le	La
RT1140	Airway Management I	4	3	3
RT1150	Clinical Application I	2	1	3
HG2051	Professional Practice & Ethics	3	3	0

Semester 4

Code	Title	Cr	Le	La
RT2110	Airway Management II	3	2	3
RT2120	Mechanical Ventilation I	4	3	3

Code	Title	Cr	Le	La
RT2470	Neonatal Respiratory Care	4	3	2
RT2130	Clinical Application II	2	1	3
RT2140	Cardiac Diagnostics	4	3	2
RT2150	Cardiopulmonary Patho II	3	3	0

Semester 5

Code	Title	Cr	Le	La
RT2320	Anesthesia	4	4	0
RT2160	Mechanical Ventilation II	4	3	3
RT2170	Pulmonary Diagnostics	4	3	3
RT3430	Clinical Application III	2	1	3
RT2180	Neonatal Clinical Application	2	1	3
HG1681	Ethics in Health Care	3	3	0
RT2240	Cardiopulmonary Resuscitation	3	2	2

Semester 6 Intersession (7 weeks)

Code	Title	Cr	Le	La
RT2190	Mechanical Ventilation III	2	2	1
PS1420	Health Care Organization and Structure	3	3	0
RT2251	Clinical Application IV	4	2	6

Semester 7

Code	Title	Cr	Le	La
RT3000	Practicum I	15	0	15 wks

Semester 8

Code	Title	Cr	Le	La
RT3010	Practicum II	15	0	15 wks

Semester 9 Intersession (7 weeks)

Code	Title	Cr	Le	La
RT3020	Practicum III	7	0	7 wks

Veterinary Technician

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Health Sciences

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

Creature comfort.

Veterinary technicians play a vital role in the health and well-being of animal patients. They work alongside veterinarians in the care of animals, providing emergency and routine care. These activities may include preventive medicine, nutrition support, dentistry and various laboratory procedures.

There has been a huge increase in demand for veterinary care since the COVID-19 pandemic and a predicted critical future shortage of veterinary capacity in Canada. [1]

With this two-year diploma, you will have the opportunity to combine a love of animals with the technical skills to build a career that brings your patients – and you – great comfort. You will study pharmacology, radiography, laboratory testing, animal nursing, surgery and anesthesia. While the focus will be on cats, dogs and other common pets, you will also learn about veterinary care for horses, cattle, birds and other exotic species.

Building trust and rapport with another living creature is a privilege and a joy, particularly when you take part in their healing and help them thrive. Helping beloved family pets have longer, healthier lives takes care and dedication, and the rewards are endless. It may not be all puppies and kittens every day – as lizards and snakes deserve love too! You never know what adventure awaits you from the animal world.

With 16 areas of specialization after graduation, this dynamic and fast-paced career provides substantial growth opportunities. Consider this exciting and fulfilling profession for your life's work.

Program Highlights

- The program is seeking accreditation through the Canadian Veterinary Medical Association (CVMA); upon successful accreditation graduates are eligible to write the Veterinary Technician National Exam (VTNE) for greater portability across Canada and the United States
- Students develop skills in anesthesia, pharmacology, x-ray, laboratory testing, surgical assistance and nursing

Did You Know?

- Earnings for this type of job are higher in Newfoundland and Labrador than the national median salary - $49,130, compared to $43,265 nationally.
- According to an occupational search (EMSI), for both Newfoundland and Labrador and across Canada, there has been a growing demand for these highly qualified professionals over the past 10 years, with an expected additional 12.2% increase by 2028.
- The month of October is dedicated to recognizing Registered Veterinary Technicians and the role they plan in veterinary medicine.

OBJECTIVES
Upon successful completion of this program, graduates will be able to:

1. Perform basic patient examinations and collect data on vital signs.
2. Restrain and manage animals in clinical situations.
3. Prepare and administer medications and pharmaceuticals as prescribed by a veterinarian.
4. Prepare anesthetic delivery systems, induce anesthesia, and monitor patients under anesthesia.
5. Prepare and maintain the surgical area and assist during surgical procedures.
6. Perform dental prophylactic procedures.
7. Produce standard diagnostic images.
8. Collect and process samples for diagnostic laboratory work.
9. Perform common veterinary diagnostic tests, such as blood chemistries, differentials, cultures, and sensitivities.
10. Perform basic veterinary practice management including computer applications.
11. Counsel clients on a variety of topics surrounding animal care.

CURRICULUM
The curriculum for the Veterinary Technician program is spread over two years. In the first semester, students will explore the field of Veterinary Technician and gain the background knowledge required for success. Semesters 2 & 3 introduce clinically relevant skills, including large animals, preparing students for the second year, which focuses on advanced skills. The second year develops dental and surgical skills, with the addition of exotics and lab animals . The final semester is an 8-week clinical placement at veterinary facilities.

Classes and laboratory sessions for this program may take place Monday - Friday in the afternoon/early evening.

Graduates of the program will be eligible to sit the Veterinary Technician National Exam (VTNE) certification examination set by the American Association of Veterinary State Board and then register with the Eastern Veterinary Technician Association (EVTA).

ACCREDITATION
This program will seek accreditation through the Canadian Veterinary Medical Association (CVMA).

CERTIFICATIONS
Students must possess valid Standard First Aid with Cardiopulmonary Resuscitation (CPR) certification to be eligible for graduation from the College.

CLINICAL PLACEMENTS
Clinical placements are a required element of this program, and students will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee that students will receive their preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

Students require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Students with an unclear Certificate of Conduct are advised to contact student.placements@cna.nl.ca prior to beginning the program.

For programs with competitive admissions, clinical placements are not affected by ranking in the competitive admissions process and will be determined under institutional guidelines.

ENTRANCE REQUIREMENTS

At the time of application to the Veterinary Technician program, applicants MUST be completing or have completed one of the following:

1. High School

High School Graduation Certificate with a 60% overall average in the following (or equivalent):

i. English 3201 or 3202 (minimum 60%)

ii. Mathematics (4 credits) chosen from:

Advanced: 2200, 3200 (50% minimum in each course)

Academic: 2201 (50% minimum), 3201 (60% minimum)

iii. Science (all courses below are required):

Biology: 2201 and 3201 (60% minimum in each course)

Chemistry: 3202 (60% minimum)

Note: If BL3201 was taken before September 2020, only BL3201 is required. If BL3201 was taken after September 2020 both BL2201 and BL3201 are required.

Note: CNA will not apply newly revised requirements to the disadvantage of an applicant whose high school courses were established by earlier requirements.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:

i. English (minimum 60%): CM1060, CM1061

ii. Math (minimum 60%): MA1040, MA1041

iii. Four Science courses

Biology (minimum 60%): BL1020, BL1021

Chemistry (minimum 60%): CH1030, CH1031

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:

i. English (minimum 60%): CM1060, CM1061

ii. Math (minimum 60%): MA1040, MA1041

iii. Four Science courses

Biology (minimum 60%): BL1025, BL1026

Chemistry (minimum 60%): CH1035, CH1036

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile (overall 60% average) including the following courses (or equivalent):

i. English (minimum of 60%) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C

ii. Mathematics (minimum of 60%) 1104A, 1104B, 1104C, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

iii. Science from the following sections:

Biology (minimum 60%) 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C

Chemistry (minimum 60%) 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C

Note: Applicants with Adult Basic Education (Level III) Graduation with a different Profile (and appropriate grades) may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

Additional Entrance Requirements

- Volunteer/work experience
  - Applicants who have volunteer and/or work experience with animas may complete a "Confirmation of Volunteer/Work Experience" form. The following table contains Information on types of volunteer/work information

Volunteer Experience (can be paid or unpaid)	Work Experience (can be paid or unpaid)	Other (will be considered on a case-by-case basis, can be paid or unpaid)

-Cleaning and housekeeping duties in animal facilities -Therapy dog programs -Training service dogs -Caring for and working with animals that are not your pet -Moving animals in and out of housing (cages/kennels) -Farm hand duties directly related to animals (not medical)	-Restraining and handling for clinical procedures -Professional grooming -Regular involvement in the medical care of animals that are not your pets - Part-time or full-time work in a veterinary clinic that involves direct animal contact -Primary responsibility for animals in an animal day care setting	-Fundraising and public awareness events supporting animals -Fostering animals that are not your own

  - Applicants are not required to have volunteer or work experience in order to apply but the experience will be considered in competitive ranking (see completive entry application process for more details)
- ESL students only – one of the following:
  - IELTS: minimum overall band score of 7
  - TOEFL Score: minimum score of 94

Additional Requirements Upon Acceptance

- Valid *Certificate of Conduct, including Criminal Record. Students will require a clear and current Certificate of Conduct (Criminal Record) prior to clinical practicum.
  - Applicants with a criminal offense listed on their Certificate of Conduct (Criminal Record) may be denied access to clinical placement and may be unable to complete their program.
- Rabies vaccination, required upon acceptance to the program. Students must be willing to complete rabies vaccination series. This must be completed before the end of the first month of classes. Students without rabies vaccinations will not be able to complete the program. Students are responsible for all associated costs.

*Acceptance of the Certificate of Conduct (Criminal Record) is at the discretion of the organization in which the clinical practicum is being sought.

COMPETITIVE ENTRY APPLICATION PROCESS - FALL 2024

Program Start Date is September 2024

The competitive admissions process is points-based and includes:

View the Competitive Entry Application Process for this program

Deadline for receipt of application	March 1st, 2024
Deadline for receipt of ALL supporting documentation*	March 7th 2024
Initial round of acceptances	April 30th 2024

*Documentation received after the deadline **WILL NOT** be considered

****Candidates not accepted for the intake to which they applied must re-apply for admission to future**

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[1] EXPANDING VETERINARY MEDICINE CAPACITY IN CANADA 2022-2032 (canadianveterinarians.net)

Courses

Semester 1

Code	Title	Cr	Le	La
BL1070	Anatomy and Physiology	4	3	2
CH1080	Chemistry and Microbiology	3	2	2
MA1055	Pharmacological Math	3	3	0
TM1150	Medical Terminology	3	3	0
VT1100	Behaviour and Ethics	2	2	0
VT1105	Introduction to Veterinary Technician Practice	4	3	4
VT1110	Immunology and Genetics	3	3	0

Semester 2

Code	Title	Cr	Le	La
VT1200	Pharmacology and Physio	4	4	0
VT1205	Diagnostic Imaging I	4	3	3
VT1210	Parasitology	3	2	2
VT1215	Hematology	3	2	2
VT1220	Hospital & Office Management	4	4	0
VT1225	Clinical Nursing	3	2	3

Semester 3 Intersession

Code	Title	Cr	Le	La
VT1300	Large Animal Medicine	3	2	2
VT1305	Nutrition	3	3	0
VT1310	Anesthesia I	3	3	0
VT1315	Virology and Bacteriology	3	2	2

Semester 4

Code	Title	Cr	Le	La
VT2105	Advanced Nursing Skills I	3	2	3
VT2110	Anesthesia II	3	2	2
VT2115	Clinical Pathology I	4	3	2
VT2120	Surgical Skills	3	2	4
VT2125	Exotics and Lab Animals	3	2	3
VT2130	Diagnostic Imagining II	3	2	3

Semester 5

Code	Title	Cr	Le	La
VT2205	Clinical Pathology II	3	2	2
VT2210	Surgery and Anesthesia	3	2	4
CM2215	Client Relation Communication	3	3	0
VT2220	Dental Procedures	4	3	4
VT2225	Advanced Nursing Skills II	3	2	3
VT2230	Urinalysis and Mycology	3	2	2

Semester 6 Intersession

Code	Title	Cr	Le	La
VT2300	Clinical Placement	8	0	8 wks

X-Ray Skills for Medical Laboratory Technologists

Start Date: September

Credential: Post Diploma

Program Length: 4 Semesters

School: Health Sciences

Locations & Delivery Modes:

- Online - Asynchronous delivery

PROGRAM DESCRIPTION

The picture of health.

This specialized X-ray program is unlike any other. If you are a graduate of the Medical Laboratory Technology program working in your field, this is an opportunity to augment your skill set. This program can unlock exciting new challenges and diversity in your career – making you even more employable in today's medical world.

X-rays, as a medical advance, has been in existence for quite some time; in fact, because of its amazing applications in imaging, it is often referred to as the most useful medical advancement in history1. Despite incredible technological advancements in imaging, X-rays remain the most common form of imaging used by medical professionals today.

This four-semester post diploma program enhances the practice of medical laboratory technology with a practice subset of medical radiation technology. The program emphasizes a practical approach to developing the knowledge and skills necessary to perform a limited scope of general radiography. You will learn how to interpret requisitions from requesting physicians, provide quality patient care and operate sophisticated radiation emitting devices to produce images of the skeletal, digestive, respiratory and urinary systems.

Along with theory of X-ray production, equipment use and image optimization, you will also study radiographic anatomy, positioning techniques and radiation safety and quality procedures. Theoretical learning is supplemented by practical clinical exposure during the second semester.

The third semester concentrates on providing a correlation between theory and patient care through seven (7) weeks of intensive simulation procedures. You will then advance to a 16-week clinical radiography placement where you will participate in work-integrated learning under the direct supervision of a registered medical radiography technologist.

With this experience, combined with theoretical and practical concepts and, following attainment of clinical competence, you will be ready to practice as an entry-level Combined Laboratory and X-Ray (CLXT) Technologist!

Program Highlights

- Qualifications to work in both laboratory and X-ray fields
- Two clinical placements and one on-campus simulation course
- Practice within the standards of the Combined Laboratory and X-Ray Technologist (CXLT) Scope of Practice NL

Did You Know? [1]

- X-rays are electromagnetic energy waves that act similarly to light rays, but at wavelengths approximately 1,000 times shorter than those of light.
- X-rays are the oldest and most useful medical technology..
- X-rays have been used in the art world to examine paintings, where rough sketches and even other paintings are found beneath a visible surface. They reveal the integrity of priceless artifacts, such as ancient Egyptian mummies or fossils, without damaging them.

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[1] Fun facts about radiology - Reina Imaging

PROGRAM OBJECTIVES

Upon successful completion of the X-Ray Skills for Medical Laboratory Technologists program, students will be able to:

1. Practice within the standards of the Combined Laboratory and X-Ray (LX) Technologist Scope of Practice NL.
2. Operate general diagnostic imaging equipment and correctly position patients to produce quality images that assist in diagnosis.
3. Follow radiation protection practices and legislation to minimize risk to patients, staff and visitors.
4. Maintain and assess radiographic, accessory, and image processing equipment for quality assurance and mitigation of potential risks.
5. Provide general patient care, assessments, and transfers as needed.
6. Practice independent judgment and critical thinking in the performance of duties.
7. Perform administrative and clerical duties using computer technology while ensuring compliance with legal, quality and privacy standards.

CLINICAL PLACEMENTS

Clinical placements are a required element of this program, and you will be assigned placements at approved training sites. Additional sites may be considered in consultation with program faculty. There is no guarantee you will receive your preferred placement. All expenses associated with the completion of clinical placement will be the responsibility of the student.

You will require a clear Certificate of Conduct (Criminal Record Check and Vulnerability Sector Check) to be permitted into a clinical placement. Those with an unclear Certificate of Conduct are advised to contact student.placements@cna.nl.ca prior to beginning the program.

ENTRANCE REQUIREMENTS

Entrance requirements for the X-Ray Skills for Medical Laboratory Technologists program are as follows:

- Graduation from an accredited program in Medical Laboratory Technology
- MLT Certification and membership with the Canadian Society for Medical Laboratory Science (CSMLS)
- Employed at a Regional Health Authority within the province of Newfoundland and Labrador as a Medical Laboratory Technologist and sponsored by the employer

Courses

Semester 1

Code	Title	Cr	Le	La
LX1110	X-Ray Physics & Radiation Protection	4	4	0
LX1010	Apparatus & Accessories	3	3	0
LX1020	Radiographic Anatomy & Pathology	4	4	0

Semester 2

Code	Title	Cr	Le	La
LX1100	Digital Imaging & Quality Management	6	6	0
LX1050	Radiographic Technique	6	6	0
LX2000	Clinical I	0	0	4 hr/wk

Semester 3

Code	Title	Cr	Le	La
LX1060	Patient Care & Safety	2	2	0
LX1070	Simulated Practical Radiography	5	0	7 wks

Semester 4

Code	Title	Cr	Le	La
LX1080	Clinical Radiography	16	0	16 wks

School of Industrial Trades and Natural Resources

Aircraft Maintenance Engineering Technician

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Gander - On Campus delivery

PROGRAM DESCRIPTION

Airworthy.

With some four billion people flying commercially each year, safety is the top priority for airlines. That means that this job makes you one of the most valuable technicians in the world.

Airworthiness pertains to the ability of an aircraft to complete necessary functions in a safe and efficient manner so that it can take to the sky, stay there and reach its destination. This requires going through every facet of the plane to ensure it is able to fly and safely perform before the pilot even considers taking the craft to the air. It means having those repair designs approved, passing necessary certifications to have passengers on board and permission to occupy the designated air space. When these and the environmental protection requirements are met, a certificate of airworthiness is issued by the civil aviation authority where the aircraft is registered. Then you're ready for take off.

This is a career with great responsibility and great reward. According to the Government of Canada labour market stats, salaries can reach over $50 an hour. And this program can get you there.

With us, you'll train in inspection, maintenance, and repair of aircraft and aircraft components. Some of the duties you'll undertake include troubleshooting and repair for fixed wing aircraft and helicopters, and aircraft systems and avionics, ground handling and routine inspection for aviation safety and airworthiness, and power plant and structural repairs.

You'll have the chops and the certifications to work on anything from airliners to helicopters to fighter jets. There are no boring days at work here. In this crucial role, your senses are honed, your concentration is absolute, and time at work really does fly.

It's time to embark upon your exciting new career. Apply now!

Program Highlights

- Attain three Aircraft Maintenance Engineer licenses: M1-Small aircraft, M2- Large aircraft and E-Avionics
- Accreditation by Transport Canada - meets the basic training requirements for the Aircraft Maintenance Engineer's license categories "M1", "M2" and "E"
- Transport Canada-granted 21-month experience credit towards the 48 months required, and credit for having completed the required knowledge exams
- Qualify to write an exam in Aircraft Maintenance Regulations to acquire an Aircraft Maintenance Engineer's license.

Did you know?

- According to international independent subject matter experts, global civil aircraft production revenues are forecasted to return to their 2019 pre-pandemic levels by 2024, one year earlier than initially forecasted.
- In 2021, the Canadian aerospace industry contributed over $24B in GDP and close to 200,000 jobs to the Canadian economy.
- About 13,100 openings for aircraft and avionics equipment mechanics and technicians are projected each year.
- Overall employment of aircraft and avionics equipment mechanics and technicians is projected to grow 6% from 2021 to 2031.

[1] Aircraft Maintenance Technician in Canada | Wages - Job Bank
[2] State of Canadian Aerospace Industry (canada.ca)

OUTCOMES

Upon successful completion of this program graduates will be able to:

1. Exhibit safety practices in the aviation industry.
2. Exhibit skills and knowledge required to work in the aircraft maintenance field.
3. Apply related knowledge that supports technical training.
4. Exhibit professional behaviors expected in the aircraft industry
5. Meet the requirements for three Aircraft Maintenance Engineer licenses: M1-Small aircraft, M2- Large aircraft and E-Avionics

ACCREDITATION

This program is accredited by Transport Canada as meeting the basic training requirements for the Aircraft Maintenance Engineer's license categories "M1", "M2" and "E". Transport Canada also grants qualified graduates a 21-month experience credit towards the 48 months required and credit for having completed the required knowledge exams. After successful completion of this program and the required work experience, apprentices qualify to write an exam in Aircraft Maintenance Regulations to acquire an Aircraft Maintenance Engineer's license.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation Certificate with a 60% average in eight level 3000 credits, or equivalent, including Mathematics (4 credits) chosen from:

i. Advanced: 2200, 3200 (50% minimum in each course)

ii. Academic: 2201 (50% minimum), 3201 (60% minimum)

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with MA1040 (Math Fundamentals 1) and MA1041 (Math Fundamentals II) OR clearing High School course deficiencies through Comprehensive Arts and Science (Transition) individual courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with MA1040 (Math Fundamentals 1) and MA1041 (Math Fundamentals II) OR clearing High School course deficiencies through College Transition individual courses.

3. Adult Basic Education

Adult Basic Education (Level III) Graduation with a Degree and Technical Profile (or Business Related College Profile), including the following courses (or equivalent):

i. Mathematics: 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B and 3101C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses, including those outlined above, have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Fixed wing airlines
- Helicopter operators
- Rotary commercial airlines
- Aircraft manufacturers
- Repair and overhaul companies
- Private operators
- Flying schools
- Government departments

Courses

Semester 1

Code	Title	Hrs
MA1070	Structural Repair Shop Mathematics	30
MA1072	Aircraft Maintenance Mathematics	30
GM1165	Maintenance and Service	53
GM1140	Standard Workshop Practices	53
AF1130	Aircraft Structures & Materials	53
PE1100	Basic Electronics	53
PT1020	Reciprocating Engines	53
PE1140	Basic AC Electronics	53
PE1200	Basic Aircraft Electrical Systems	53
TS1530	Standard First Aid	14

Semester 2

Code	Title	Hrs
PH1300	Physics for Aircraft Maintenance	60
PE2100	Analog Electronics	53
GM1320	Aircraft Weight & Balance	24
GM1420	Non-Destructive Testing	29
AV1220	Aircraft Instruments I	53
AS1200	Aerodynamics and Flight Controls	53
GM1550	Maintenance Regulations	53
AS2520	Reciprocating Engine Fuel Metering	53
AV1320	Aircraft Communication Equipment	53
TS1550	WHMIS	6

Semester 3

Code	Title	Hrs
AS1300	Hydraulic and Pneumatic Systems	53
AF1240	Aircraft Structural Repair	53
DP1840	Motors, Generators & Starting Systems	53
AS1310	Aircraft Landing Gear System	53

Semester 4

Code	Title	Hrs
EG1160	Technical Graphics	60
PT2120	Reciprocating Engine Systems	53
AS2130	Aircraft Systems	53
PT2210	Turbine Engine Maintenance	53
AF1270	Composite Materials	53
AV2220	Aircraft Instruments II	53
AV2120	Basic Navigation I	53
PE2135	Aircraft Electrical Systems	53

Semester 5

Code	Title	Hrs
CM2161	Communication Essentials	36
PE2140	Digital Electronics	53
AV2225	Avionic Systems Installation	53
AS2230	Propellers and Systems	53
PT2240	Turbine Engine Systems	53
AV3110	Monitoring and Digital Systems	53
AF2200	Corrosion Control	53
RW3140	Rotary Wing Aircraft	53

Semester 6

Code	Title	Hrs
RW3141	Rotary Wing Aircraft Systems	55
AV2310	Major Communications Radio Install	55
AV2320	Auto Flight	55
PT2121	Reciprocating Engine Overhaul	55

Aircraft Structural Repair Technician

Start Date: September

Credential: Certificate

Program Length: One Year

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Gander - On Campus delivery

PROGRAM DESCRIPTION

Riveting work.

Meticulous detail, integrity of the materials and the dedication of the technician make for the safety required by law for any aircraft before it leaves the ground. Damage assessment, repairs, overhaul and modifications, along with inspection of all components of the aircraft structure – inside and out – ensures they are safe to fly.

A structural repair technician's day-to-day tasks usually involve working with tools and equipment such as drills, riveters and hydraulic presses. They may also be required to carry out repair work on composite and metal structures, as well as inspect avionics systems and components.

There is a great opportunity in this field, with just one year of investment. The emphasis in the Aircraft Structural Repair Technician program is on the structure of multiple aircraft, and how to assess, repair or replace various components. This involves using specialized equipment and techniques and gaining familiarity with a variety of materials used in the construction of aircraft (wood, fabric, sheet metal and composite materials).

You will learn to identify the stresses acting on aircraft structures to determine the urgency of repair when damaged. You will become familiar with sheet metal forming processes, materials, fasteners, and equipment. You will perform special metal treatment processes and repair forgings and extrusions as per manufacturer's specifications. Your skills will extend to applying advanced composite fabrication techniques, identifying advanced composite structural damage, completing a full damage assessment, and performing effective structural repairs as per Canadian Aviation Regulatory or aircraft manufacturer's standards.

This program is recognized by Transport Canada and awards you credit toward the Aircraft Maintenance Engineer's licence in Structural Repair. In one year, you'll be en route to your new career! Or stay with us for another and set a course toward an occupation as Aircraft Maintenance Engineering Technician.

Either way, this is your entry point into the exciting aircraft repair industry. Get ready to board!

Program Highlights

- Build on this program and set a course toward an occupation as Aircraft Maintenance Engineering Technician
- Accredited by Transport Canada as meeting the basic training requirements for the Aircraft Maintenance Engineer's license category "S"
- Transport Canada grants qualified graduates a 10-month experience credit towards the 36 months required and credit for having completed the required knowledge exams
- After successful completion of this program and the required work experience, apprentices qualify to write an exam in Aircraft Maintenance Regulations to acquire an Aircraft Maintenance Engineer's

Did you know?

- On average, the salary range in this career is about $53,000 per year, but can reach some $95,000, according to Indeed.com.[1]
- According to international independent subject matter experts, global civil aircraft production revenues are forecasted to return to their 2019 pre-pandemic levels by 2024, one year earlier than initially forecasted.

- In 2021, the Canadian aerospace industry contributed over $24B in GDP and close to 200,000 jobs to the Canadian economy.

[1] Aircraft Structural Repair Technician Jobs (with Salaries) 2023 | Indeed.com Canada

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OUTCOMES

Upon successful completion of this program graduates will be able to:

1. Develop techniques, standards and practices of structural repair that conforms to Transport Canada guidelines for the occupation.
2. Provide a broad overview of aircraft maintenance and repair functions with specific emphasis on safety practices in the industry.
3. Apply safe work practices and personal protection.
4. Meet the requirements to become an Aircraft Maintenance Engineer category "S" - Structural Repair.
5. Exhibit strong and logical troubleshooting skills
6. Apply related knowledge and skills to complement and support technical training
7. Exhibit professional attitudes and behavior required within the aviation industry

ACCREDITATION

This program is accredited by Transport Canada as meeting the basic training requirements for the Aircraft Maintenance Engineer's license category "S. Transport Canada also grants qualified graduates a 10-month experience credit towards the 36 months required and credit for having completed the required knowledge exams. After successful completion of this program and the required work experience, apprentices qualify to write an exam in Aircraft Maintenance Regulations to acquire an Aircraft Maintenance Engineer's license.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Aircraft repair stations
- Aircraft manufacturing facilities
- Composite fabricators
- Composite repair stations
- Helicopter service centers
- Helicopter overhaul facilities
- Regional and national airlines

Courses

Semester 1

Code	Title	Hrs
MA1070	Structural Repair Shop Mathematics	30
GM1140	Standard Workshop Practices	53
AF1130	Aircraft Structures & Materials	53
GM1550	Maintenance Regulations	53
AF1240	Aircraft Structural Repair	53
GM1160	Maintenance and Plumbing	53
AF1400	Specialized Processes and Fixtures	57
AF2110	Aircraft Maintenance Fundamentals	57
TS1550	WHMIS	6
TS1530	Standard First Aid	14

Semester 2

Code	Title	Hrs
EG1160	Technical Graphics	60
SD1710	Job Search Techniques	15
AF1500	Windshields, Windows and Lenses	53
AF1270	Composite Materials	53
AF1340	Advanced Composite Materials	57
GM1600	Structural Damage/Repair and Assembly	68
GM1210	Corrosion Control	58
AF1220	Aircraft Structures, Wood, Fabric, Tubular	74

Semester 3

Code	Title	Hrs
AF1250	Aircraft Stress Skin Repair	60
GM1525	Sheet Metal Fabrication	120

Auto Body and Collision Technician

Start Date: September

Credential: Certificate

Program Length: 34 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

This red seal program is designed to assist you in developing sufficient basic skills and knowledge to enter the labor force as an apprentice Mechanic in Auto Body and Collision. Some of the duties include:

- Repair and replace vehicle structures and body parts
- Remove and install interior and exterior finishes
- Hammer out dents, buckles and other defects
- Operate soldering equipment and plastic filler
- Remove damaged fenders, panels and grills
- Weld replacement parts
- Straighten frames and underbodies
- File, grind, mask and tape body surfaces in preparation for painting

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Use tools and equipment.
3. Determine the type of paint; plan refinishing system; remove, prepare, seal and mask; apply coatings to vehicle.
4. Demonstrate correct use of chemicals within the shop environment.
5. Compute cost estimates for completing repairs.
6. Manage customer needs, complaints, questions and special challenges.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
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Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES
Graduates may find employment in the following areas:

- Body Shops
- Frame Shops
- Garages and Dealerships
- Service Stations

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
AB1600	Trade Related Documents	12
AB1610	Safety	12
AB1620	Tools and Equipment	45
AB1630	Fasteners and Adhesives	12
AB1641	Vehicle Construction	16
AB1651	Pre/Post Repair Vehicle Inspection	12
AB1660	Metallurgy	30
AB1671	Cutting and Heating	30
AB1680	Gas Metal Arc Welding (GMAW[MIG])	45
AB1690	Resistance Spot Welding	15
AB1701	Metal Working I (Mild Steel)	55
AB1711	Body Fillers and Abrasives	40
AB1721	Corrosion Protection	40
AB1734	Surface Preparation (Cleaning, Stripping and Masking)	73
AB1760	Moveable Glass and Hardware	30
AB1780	Cleaning and Detailing	30
AB1790	Upholstery, Trim and Hardware	30
AB1801	Refinishing I	75
AB1811	Batteries	10
AB1820	Primers, Surfacers & Sealers	40
AB2811	Non-Structural Components	60
AB2950	Plastic and Composite Panels and Components	42
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1241	Auto Body and Collision Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24

Code	Title	Hrs
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12
OT1220	Workplace Exposure	60

A certificate from College of the North Atlantic will be awarded upon successful completion of entry level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Automotive Service Technician

Start Date: September

Credential: Certificate

Program Length: 35 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Bay St. George - On Campus delivery
- Gander - On Campus delivery
- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

This red seal program provides training in adjusting, testing and repairing engines, steering systems, braking systems, drive trains, vehicle suspensions, electrical systems and air conditioning systems, and do wheel alignments. Some of the duties include:

- Repair, rebuild and service specific parts
- Diagnose using testing equipment
- Dismantle and reassemble damaged parts
- Prepare scheduled maintenance
- Interact and advise customers

Note: This program may not be suitable for applicants who do not have normal color perception.

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Diagnose and repair engine systems.
3. Diagnose and repair engine support systems.
4. Diagnose and repair vehicle management systems.
5. Diagnose and repair drive line systems.
6. Diagnose and repair electrical systems and components.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C

ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based

550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
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If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES
Graduates may find employment in the following areas:

- Garages
- Service Stations

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
SV1105	Safety in the Shop	12
SV1165	Hand Tools	30
SV1177	Shop Tools & Equipment	24
SV1188	Fasteners, Tubing and Fittings	14
SV1158	Service Information Systems & Trade Related Documents	16
SV1217	Tire Wheels and Hubs	24
SV1552	Body Components, Accessories and Trim	20
SV1256	Suspension I	48
SV1228	Steering Systems	64
SV1642	Brake Systems I (Non-ABS)	60
SV1132	Introduction to Electrical and Electronic Principles	90
SV1377	Batteries	18
SV1287	Drive Shafts and Axle Shafts	30
SV1306	Engine Principles (Gasoline and Diesel)	90
SV1600	Ignition Systems	30
SV1387	Introduction to Starting Systems	30
SV1396	Introduction to Charging Systems	30
SV1311	Introduction to Cooling Systems	30
SV1197	Lubrication and Fluids Servicing	24
SV1691	Introduction to Accessory Drive Systems	18
SV1681	Preventative Vehicle Maintenance Inspections (PMI)	24
SV1700	Hybrid Systems I	24
SV1125	Gaskets, Seals and Bearings	30
WD1301	Oxy-Fuel Welding/Cutting	30
SV1710	Gas Metal Arc Welding GMAW [MIG]	30
SV2282	Pre Delivery Inspection	18
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1221	Automotive Service Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Baking and Pastry Arts

Start Date: September

Credential: Certificate

Program Length: One Year

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Bay St. George - On Campus delivery

PROGRAM DESCRIPTION

This red seal eligible program gives you great hands on skills in both baking and pastry, including cakes, tortes, cookies, frozen and cream-based desserts. It provides the foundation for a career as a lead baker or pastry chef. The courses empower students by exploring baking and ingredient theory while gaining a greater understanding of the craft. This program will challenge your artistic side by expanding your capability in the design and creation of specialized baked goods. You will work in real bakery environments where you gain experience in production of baked goods consistent with industry standards. Some of the duties include:

- Weighing, measuring and mixing ingredients according to recipes
- Cutting and forming dough, prepare fillings
- Using ovens to bake products
- Decoration of baked goods
- Stock selection and rotation ingredients and supplies
- Developing support skills as an independent Baker
- Healthy Baking

OBJECTIVES

Upon successful completion of the Baking and Pastry Arts program, graduates will be able to:

1. Prepare yeast-raised products to include breads and yeast-leavened pastries to include laminated doughs, breakfast pastries and leavened cakes.
2. Prepare a variety of cakes, fillings and icings to include chemical and mechanical leavening techniques.
3. Prepare a variety of egg and dairy-based products, fried baked goods, and a variety of pastry products to include but not limited to meringue, fritters, and pies.
4. Identify, select and demonstrate the use of various chocolates and sugar and the common uses for the decoration processes.
5. List and explain the application of mixes and other convenience products pertaining to the baking process.
6. Describe and apply the principles of nutrition to maximize nutrient retention in baking preparation.
7. Apply communication, workplace, computer, and mathematic technical skills in simulated and real-world environments.
8. Complete the Competency and Task requirements for Baker National Occupational Analysis (NOA).

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Specialty shops
- Hotels
- Restaurants
- Bakery manufactures
- Self employed

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program must be at least 19 years of age at the time of application and out of school for at least one (1) year to be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
BA1000	Health and Safety	18
BA1105	Food Safety and Sanitation	6
BA1010	The Professional Baker	15
AM1101	Math Essentials	42
BA1015	Baker Tools and Equipment	15
BA1020	Weights and Measures	10
BA1025	Baking Methods and Principles	30
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
BA1030	Bread Products	60
BA1035	Cakes I	60
BA1040	Cookies	60
MA1095	Baking & Pastry Arts Math	30

Semester 2

Code	Title	Hrs
BA1050	Artisan Breads	60
BA1055	Cakes II	60
BA1061	Pastry, Fillings and Creams	105
BA1070	Advanced Pastries	45
BA1075	Creams, Custards, Fillings & Dessert Sauces	30
BA1095	Chocolate and Sugar	60
BA1085	Laminate Dough	45
CM2161	Communication Essentials	36

Semester 3 Intersession

Code	Title	Hrs
BA1080	Dietary Baking	45
BA1100	Workplace Exposure Baking and Pastry Arts	90
AP1102	Introduction to Apprenticeship	12
BA1090	Frozen Desserts	45

Carpenter

Start Date: September

Credential: Certificate

Program Length: 36 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Carbonear - On Campus delivery
- Clarenville - On Campus delivery
- Happy Valley-Goose Bay - On Campus delivery
- Port aux Basques - On Campus delivery

PROGRAM DESCRIPTION

This red seal program offers training in the use of hand and power tools in residential and commercial construction in accordance to National Building Codes. Some of the duties include:

- Read and interpret blueprints, drawings and sketches
- Calculate requirements and specifications
- Prepare layouts
- Use measuring tools
- Cut, shape and assemble and join materials
- Build and install foundations, floor beams, subfloors, walls and roof systems
- Install doors, stairs, moldings and hardware trims
- Operate hand and portable power tools
- Utilize various construction products
- Complete construction projects for stairs, concrete, floors, walls and roofs

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Use tools and equipment safely.
3. Interpret drawings and specifications.
4. Solve problems and keep a construction project on schedule.
5. Use various types of scaffolding.
6. Apply National Building Code standards and energy efficient concepts

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C

ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature

Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

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Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment on the following areas:

- General contractor
- Custom woodworking shops
- Building suppliers
- Residential and commercial construction
- Industrial Maintenance

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
AJ1111	Carpentry Fundamentals	74
AJ1121	Rigging	30
AJ1160	Blueprint Reading	45
AJ1170	Residential Estimating	30
AJ1201	Layout & Footings	80
AJ1211	Wall Forms	80
AJ1221	Floor and Wall Framing	90
AJ1231	Exterior Finish	60
AJ1310	Roof Fundamentals	80
AJ1410	Interior Fundamentals	60
AJ1501	Interior Trim	60
AJ1601	Stair Fundamentals	60
AJ1760	Chain Saw Safety	4
AJ2420	Post and Beam	30
AJ2430	Scaffolding	45
HE1620	Powerline Hazards	4
LA1100	Confined Space Awareness	6
LA1110	Fall Protection Awareness	6
CAR155	Concrete	12
CAR225	Deck Layout and Framing	9
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1131	Carpenter Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15

Code	Title	Hrs
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Commercial Driver

Start Date: September

Credential: Certificate

Program Length: 13 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Bay St. George - On Campus delivery

PROGRAM DESCRIPTION

This program offers training in the safe and effective operation of Tandem trucks and Tractor Trailer units. Some of the duties include:

- Perform preventive maintenance, defensive driving, and fuel conservation
- Deliver cargo and materials
- Interpret and communicate instructions through dispatch
- Maintain a truck log and keep records of transported materials
- Clean, inspect and service vehicle
- Perform trailer operations and demonstrate defensive driving skills
- Perform pre, post and on route inspections

The program also offers certification in the Transportation of Dangerous Goods (TDG), Air Brakes (9A), WHMIS, First Aid, Powerline Hazards and Professional Driver Improvement Course (PDIC). There will be classroom, yard, off and on and highway training with low student to instructor ratios.

Students successfully completing the program qualify for a Class 1 license with Class 3 and 9A endorsements.

OUTCOMES

1. Demonstrate defensive driving techniques, proper economical vehicle operation, and emergency procedures.
2. Demonstrate knowledge of types of trucks, power trains, engines, drive lines, brake systems, tires and trailers.
3. Demonstrate techniques to drive on course roads, through town and on the Trans Canada Highway.
4. Demonstrate knowledge of proper freight handling procedures and methods of preparing and handling documentation connected with transfers of cargo and monies.
5. Demonstrate safe work practices and personal protection.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C

ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 – 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

Additional Entrance Requirements

1. Driver's License and Medical
You must possess an unrestricted Class 5 driver's license for one (1) year.

Upon acceptance to the program, you must provide the following additional documentation:
i. A Motor Registration Division - Medical Examination Report with a vision test completed by a doctor.
ii. A Driving Abstract record showing no more than four (4) demerit points.

Government of Newfoundland and Labrador - Digital Government and Service NL | Motor Registration Division Online Appointments

Upon starting the program, students will be required to complete a commercial written test successfully. Once completed you will be issued a permit by the Department of Motor Registration Division that allows you to be instructed by a licensed commercial driver in preparation for a Class 03 license.

EMPLOYMENT OPPORTUNITIES
Graduates may find employment in the following areas:
- Trucking companies
- Manufacturing and distribution companies
- Retail outlets
- Moving companies

Courses

Courses

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
DV1100	Commercial Driver Essential Skills	18
DV1110	Commercial Driver Orientation	6
DV1120	Codes and Regulations	12
DV1130	Vehicle Operation Safety	12
DV1140	Logbook (Hours of Service)	11
DV1210	Trip Planning	12
DV1230	Engine and Drivetrain Principles	6
DV1240	Tires, Rims and Wheels	6
DV1260	Trailer Coupling	6
DV1270	Tractor Trailer Operations-In the Yard	85
DV1280	Tractor Trailer Operation-On the Road	135
DV1290	Preventive Maintenance	4
DV1300	Trailers	4
DV1310	Safe Load and Securement	12
DV1320	Driver Health and Nutrition	4
DV1330	Professional Driver Improvement for Commercial Drivers	6
HE1600	Air Brakes	15
HE1620	Powerline Hazards	4
HE1630	Transportation of Dangerous Goods	6

Construction/Industrial Electrician

Start Date: September

Credential: Certificate

Program Length: 37 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Burin - On Campus delivery
- Carbonear - On Campus delivery
- Corner Brook - On Campus delivery
- Happy Valley-Goose Bay - On Campus delivery
- Labrador West - On Campus delivery
- Seal Cove - On Campus delivery
- St. Anthony - On Campus delivery

PROGRAM DESCRIPTION

This red seal program offers training in how to install, alter and maintain electrical systems that are designed to provide heat, light, power, control, signals or fire alarms for all types of buildings and structures. Some of the duties include:

- Read and interpret electrical, mechanical and architectural drawings
- Determine code specifications for writing layouts
- Cut, thread, bend, assemble and install conduits
- Position, maintain and install distribution and control equipment
- Safely test circuits to ensure integrity

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Use and maintain tools and equipment.
3. Analyze electrical theory and its application to lighting, power and control equipment.
4. Interpret instructions given in plans and specifications pertaining to electrical installations.
5. Demonstrate problem solving skills involving electrical systems.
6. Conduct trouble shooting to maintain electrical systems and equipment.

Note: This program may not be suitable for applicants who do not have normal color perception.

ENTRANCE REQUIREMENTS
Eligibility for admission requires the applicant to meet one of the following academic criteria:
1. **High School**
High School Graduation
2. **Adult Basic Education**
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. **Comprehensive Arts and Science (CAS) Trades**
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate

4. **Mature Student Requirements**
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Residential electrical companies
- Industrial electrical companies
- Mining
- Pulp and Paper
- Oil and gas

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1520	WHMIS	6
TS1530	Standard First Aid	14
ER1101	Hoisting, Lifting and Rigging	18
ER1105	Access Equipment	12
ER1112	Tools and Equipment	15
ER1140	DC Theory	30
ER1151	Series and Parallel DC Circuits	45
ER1161	Introduction to the Canadian Electrical Code	24
ER1170	Voltage Drop & Power Loss	30
ER1180	Single Phase Theory	60
ER1190	Three Phase Theory	30
ER1202	Drawings, Schematics & Specifications	30
ER1212	Electrical Drawings and Schematics	30
ER1221	Conduit, Tubing and Fittings	30
ER1231	Conductors and Cables	30
ER1242	Fundamental Wiring	60
ER1250	Protective Devices	30
ER1262	Transformers	60
ER1271	Single Phase Service Entrance	30
ER1281	Three Phase Service Entrance	30
ER1341	Fire Alarms	20
ER1371	Distribution Equipment	17
ER1411	Safety	30
ER1570	Grounding and Bonding	6
ER1580	Job Planning	6
ER1590	Introduction to Communication and Trade Documentation	6

Code	Title	Hrs
ER2001	Raceways, Wireways and Busways	30
ER2011	Lighting Systems and Controls	25
ER2022	Single-Phase Motors	30
ER2134	Communication Systems	20
ER2142	Security Systems	10
ER2351	Electric Surface Heating Systems	15
ER2391	Fiber Optics	18
ELE120	Support Components	6
ELE130	Mentoring I	6
OT1150	Work Term	80
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1161	Electrician Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Cook

Start Date: September

Credential: Certificate

Program Length: 34 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Bay St. George - On Campus delivery
- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

This red seal program provides training in the preparation and presentation of a variety of food for a variety of groups. Some of the duties include:

- Estimate food requirements using menus
- Retrieve food from storage and suppliers
- Wash, peel and cut vegetables
- Prepare, season and cook foods
- Evaluate nutritional values and sanitation standards

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Develop menus.
3. Practice and maintain sanitary standards.
4. Develop production procedures.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Hotels
- Restaurants
- Catering firms
- Cafeterias
- Health care institutions
- Specialty food outlets
- Work camps

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
CK1000	The Professional Cook	15
CK1050	Food Presentation	12
CK1101	Health and Safety	18
CK1107	Personal Hygiene and Kitchen Sanitation	10
CK1115	Kitchen Tools and Equipment	10
CK1120	Weights and Measures	10
CK1126	Basic Cooking Methods and Principles	30
CK1130	Receiving and Storage	10
CK1147	Pulses, Grains and Nuts	18
CK1150	Pastas and Dumplings	10
CK1156	Stocks and Glazes	24
CK1165	Soups	30
CK1177	Principles of Meat Cooking and Handling	30
CK1178	Poultry	60
CK1188	Seafood	30
CK1195	Salad and Salad Dressings	35
CK1204	Sandwiches	20
CK1210	Dairy Products	30
CK1226	Breakfast Cookery and Eggs	30
CK1231	Introduction to Baking	18
CK1237	Bread Products	24
CK1241	Pies, Tarts, Flans and Fillings	30
CK1254	Basic Cakes and Quick Breads	30
CK1256	Cookies	20
CK1290	Fish	30
CK1310	Vegetables and Fungi	30
CK1320	Fruits	12
CK1340	Potatoes	30
CK1350	Sauces	30
CK1450	Beef and Pork	60
MENT-700	Mentoring I	6
OT1230	Workplace Exposure	60

Code	Title	Hrs
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1151	Cook Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Culinary Management

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Prince Philip Drive - On Campus delivery

Note:

Applicants who have either a certificate, diploma, post/advanced diploma or degree in the area of Cooking, plus a minimum of 320 hrs of work experience, may apply directly to year 2 (Semester 5).

PROGRAM DESCRIPTION

Serving up excellence.

As an international melting pot of language, culture and foods, Canada is one of the most exciting places in the world to explore cuisines. Diverse ethnic, traditional and fusion foods offer stimulating experiences to thrill the palate.

Growing trends are advancing modern cuisine, authentic and exotic pub hubs, nutritional aspects of food, and the local sourcing of ingredients. The world of specialized and locally prepared food is exploding in popularity.

What an exciting time to be in culinary management! Our own province is riding the peak of this movement, as renowned food critics and chefs come to taste for themselves the unique fare our restaurants have to offer. The success of these restaurants and this industry have firmly placed Newfoundland and Labrador on the map for high value-added culinary production.

CNA culinary graduates have fed this growing industry with high-quality and accredited professionals for decades. Now, we're complementing the main course with business related skills to navigate challenges encountered in the culinary world. Professionalism, human resources management, and business management are some examples of skillsets developed to improve success in the kitchen. Because success depends on team work, efficient cost controls, and creativity to maximize the use of food culinary experts are now expected to utilize a broader range of skills.

With new and innovative food preparation techniques, cooks are incorporating food science in their kitchens and experimenting with modernist cuisine. With us, you will be exposed to new technologies in cooking equipment that includes automated computerized ovens, blast chillers, immersion circulators, thermal mixers and smart kitchens. This program addresses the increased emphasis on using local and fresh foods and explores trends such as farm-to-fork, international cuisine, sustainable sourcing, artisanal baking, charcuterie and preserving products through traditional processes.

You'll gain an understanding of local sourcing, including how food is produced, and the challenges associated with obtaining food while promoting conservation and sustainability. This program includes training in food and beverage pairing, advanced baking, sugar work, butchering, catering and event planning, among other vital components of this field. You will also gain knowledge in health-focused areas such as dietary requirements, allergies and intolerances, and effectively demonstrate creative ways to mitigate the impact of these constraints on production.

Creativity, a keen sense of taste and smell, interest in precision work and a good memory for details are key attributes for this career. You will be required to remember and apply cooking methods and adapt them in accordance with available supplies and dietary restrictions. You must be able to work independently and as part of a team, have good organizational skills and have the ability to multi-task to work effectively. Other important abilities include solid mathematical, communication and customer service skills. You need to be versatile enough to assist with any task that needs doing within the kitchen.

We have seasoned, award-winning instructors who will mentor you in all you need to know about culinary composition and flavor compatibility and building the perfect dishes from scratch.

If you have an appetite for this exciting career, we're taking orders now!

Program Highlights

- Aligns with the requirements of the Atlantic Apprenticeship Curriculum Standard (AACS), and National Occupational Analysis (NOA) under the guidance of the Immigration, Population Growth and Skills (IPGS).
- Gives you the option to pursue apprenticeship through additional work experience and completion of advanced blocks of training.
- Trains cooks with advanced and specialized skills, facilitating movement to other positions such as kitchen managers, executive chefs, banquet managers, food service administrators and coordinators, general managers, owners, or food editors.
- Prepares you for work in the hospitality and tourism sector – restaurants, hotels, resorts, catering establishments, country clubs and cruise ships, as well as for remote camps, offshore and seniors complexes.
- Examines cooking holistically; specific areas of study include butchery, botany, chemistry and thermodynamics, visual presentation, food safety, human nutrition and international history.

Did you know?

- Following a record year in 2021, the Canadian food and beverage (F&B) industry is expected to grow by more than 11% by the end of 2025.
- According to the Government of Newfoundland and Labrador, tourism has grown to contribute over $1 billion to the provincial economy, with the F&B services industry accounting for 54% of all jobs in tourism.
- The rising demand for organic, natural and fresh foods among consumers due to rising health awareness is the major factor expected to enhance the demand for the F&B market.
- Cooking stimulates all five senses with the interaction of placement, colours, scents and flavours, making it a remarkable form of art.
- The F&B industry is one of the most essential components of several economies across the world – the 2020 global food and beverage market size was estimated to be $7 trillion.

OUTCOMES

Upon successful completion of this program, graduates will be able to:

1. Demonstrate safety and sanitation practices in the culinary industry.
2. Exhibit advanced skills and knowledge required to perform culinary techniques.
3. Apply the related knowledge and skill in culinary subjects which complement and support the practical training.
4. Execute professional behaviors to become successful in the culinary industry.
5. Perform ethical and sustainable food preparation practices.
6. Employ new, local, and international techniques in the art of cooking.
7. Apply managerial techniques to navigate business and human resources challenges in the culinary industry.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C

ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Eligibility for direct admission to Year 2 - Semester 5 of the Culinary Management program requires the applicant to meet the following academic criteria:

1. Cook or Culinary graduate:
Applicants must have graduated from a recognized College or University with a certificate, diploma, post/advanced diploma or degree in the area of Cooking.

2. Minimum of 320 hours work experience as a Cook

Courses

Year 1

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
CK1000	The Professional Cook	15
CK1050	Food Presentation	12
CK1101	Health and Safety	18
CK1107	Personal Hygiene and Kitchen Sanitation	10
CK1115	Kitchen Tools and Equipment	10
CK1120	Weights and Measures	10
CK1126	Basic Cooking Methods and Principles	30
CK1130	Receiving and Storage	10
CK1147	Pulses, Grains and Nuts	18
CK1150	Pastas and Dumplings	10
CK1156	Stocks and Glazes	24
CK1165	Soups	30
CK1177	Principles of Meat Cooking and Handling	30
CK1178	Poultry	60
CK1188	Seafood	30
CK1195	Salad and Salad Dressings	35
CK1204	Sandwiches	20
CK1210	Dairy Products	30
CK1226	Breakfast Cookery and Eggs	30
CK1231	Introduction to Baking	18

Code	Title	Hrs
CK1237	Bread Products	24
CK1241	Pies, Tarts, Flans and Fillings	30
CK1254	Basic Cakes and Quick Breads	30
CK1256	Cookies	20
CK1290	Fish	30
CK1310	Vegetables and Fungi	30
CK1320	Fruits	12
CK1340	Potatoes	30
CK1350	Sauces	30
CK1450	Beef and Pork	60
OT1230	Workplace Exposure	60
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1151	Cook Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

Year 2

Semester 4 (Summer)

Code	Title	Hrs
OJ2335	Workplace Integration	320

Semester 5 (Fall)

Code	Title	Hrs
CA2120	Butchery I	45
CA2125	Meat and Poultry I	90
CA2130	Seafood I	45
CA2135	Charcuterie I	30
CA2140	International Cuisine I	45
CA2145	Saucier I	30
CA2150	Pastry Arts I	60
CA2160	Nutrition for Culinary	45
CA2170	TrainCan BASICS.fst	15

Semester 6 (Winter)

Code	Title	Hrs
CA2230	Butchery II	60
CA2235	Meat and Poultry II	90
CA2240	Seafood II	45
CA2245	Charcuterie II	30
CA2250	Saucier II	30
CA2255	Pastry Arts II	60
CA2260	Cost Control	30
CA2155	Menu Planning	30
CA2265	Cuisine of Canada	45

Semester 7 (Spring)

Code	Title	Hrs
CA2310	International Cuisine II	45
CA2315	Garde Manger	45
CA2325	Food and Beverage Pairing	30
CA2330	Holistic Assessment	30
CA2340	Culinary Business Management	30

Hairstylist

Start Date: September

Credential: Certificate

Program Length: 37 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Bay St. George - On Campus delivery
- Gander - On Campus delivery

PROGRAM DESCRIPTION

This red seal program offers training in how to cut and style hair to suit their clients face and lifestyle. Some of the duties include:

- Cut, trim, color, wave and style hair, wigs and hairpieces
- Shave, trim and shape beards and moustaches
- Suggest appropriate hairstyles
- Maintain supplies and equipment
- Self-educate on new hairstyles and fashions

Note: This program may not be suitable for persons with allergies and/or respiratory problems. Anyone with either of these conditions should check with a doctor to determine medical suitability.

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Use and maintain tools and equipment.
3. Demonstrate the skills required to style, cut and color hair.
4. Prepare clients for services.
5. Perform reception duties.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C

ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based

550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES
Graduates may find employment in the following areas:

- Hair salons
- Hair shows
- Sales representative

Courses
Level 1 Pre-employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
HT1000	Safety-Related and Hygienic Functions	12
HT1010	Tools and Equipment	9
HT1020	Client Service Preparation	12
HT1030	Communication Techniques	6
HT1040	Front Desk	18
HT1050	Business Fundamentals I	12
HT1130	Hair and Scalp Analysis and Response	30
HT1140	Shampoo and Condition Hair	6
HT1230	Wet Hair Styling I	18
HT2230	Wet Hair Styling II	18
HT1240	Dry Hair Finishing and Styling I	24
HT2240	Dry Hair Finishing and Styling II	30
HT1305	Hair Cutting	202
HT1325	Facial and Nape Hair Services	24
HT1505	Colouring	150
HT1535	Lightening	90
HT2250	Chemical Waving	42
HT2260	Chemical Relaxing	18
HT2270	Colour Correction	60
HT2280	Extensions, Wigs and Hairpieces	12
HT2290	Face and Nape Services	3
HT2295	Mentoring Techniques	6
HT2050	Business Fundamentals II	12
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1380	Hairstylist Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12
OJ1500	Workplace Exposure	90

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding

employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Heating Systems Technician

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Seal Cove - On Campus delivery

PROGRAM DESCRIPTION

This program is designed to prepare you for employment in the residential and commercial heating industry. Some of the duties include:

- Read blueprints and interpret drawings or specifications.
- Design heating system components and assemble components using hand and power tools.
- Install components such as thermostats, motors, piping and safety devices, and connect to fuel supply, ventilation and electrical systems.
- Test installed units and adjust controls for proper functioning, troubleshoot and repair malfunctioning oil burners, gas appliances, solid-fuel appliances, geo- thermal and air source heat pumps, and their controls.
- Troubleshoot and repair malfunctioning hydronic and forced air heating systems.
- Install and maintain alternate energy sources, combination and solar units.
- Perform scheduled maintenance on heating systems and their components.

OUTCOMES

1. Use and maintain tools, materials and equipment required for the maintenance and installation of heating systems (oil, gas, electric, heat pumps and solid fuels).
2. Test and adjust residential hydronic and forced air heating systems.
3. Design and install residential hydronic and forced air heating systems.
4. Interpret trade blueprints and electrical and system schematics.
5. Recognize hazards and employ good safety practices.
6. Demonstrate with confidence the knowledge and skills required for an entry level apprentice.
7. Install, maintain, service and troubleshoot heating appliances (wood, oil, electric, geothermal and air source heat pumps, and gas).
8. Recognize alternative energy application potential in the heating industry.
9. Employ energy efficiency and promote green technologies.
10. Pursue further skills and knowledge required to gain other trade related certifications.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C

ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1

Code	Title	Hrs
TS1510	Occupational Health & Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
OM1010	Workplace Safety	6
HE1631	Transportation of Dangerous Goods	6
HE1610	Professional Driver Improvement Course	15
HE1621	Powerline Hazards	6
OM1130	Tools & Equipment	45
OM1141	House as a System	30
OM1152	Trade Practice	18
OM1231	Soldering, Flaring & Threading Pipe	18
OM1330	Electricity I (Principles of Electricity)	30
OM1341	Electricity II (Electrical Devices & Ignition Systems)	42
OM1121	Print Reading & Sketching	12
CM2161	Communication Essentials	36
AM1101	Math Essentials	42

Semester 2

Code	Title	Hrs
OM1242	Fuel Storage Tanks	12
OM1252	Fuel Delivery Systems	24
OM1321	Combustion & Burner Air Handling Devices	30
OM1471	Chimneys, Venting & Draft Control	18
OM1635	Ventilation & Exhaust Systems	60
OM1441	Controls & Wiring	54
OM1645	Electric Furnaces & Boilers	90
AM1251	Oil Heat System Math Fundamentals	42
MC1062	Computer Essentials	15
OHT120	Basic Hoisting, Rigging and Lifting	9
OHT125	Access Equipment	6
OHT180	Mentoring I	3

Semester 3

Code	Title	Hrs
OM1665	Design & Analysis	60

Code	Title	Hrs
OM1603	Hydronic Heating Systems I	30
OM1622	Warm Air Furnaces	24

Semester 4

Code	Title	Hrs
OM1632	Domestic Hot Water Heaters	12
OM1685	Solar Heating	30
OM1696	Solid Wood Heating Systems	60
OM1705	Gas Heating	90
SV1111	Ozone Depleting Substances	6
OM1676	Air Source Heat Pumps	120
SD1761	Workplace Essentials	24
AP1102	Introduction to Apprenticeship	12
OM1790	Low Pressure Steam Systems	12

Semester 5

Code	Title	Hrs
OM1715	Geothermal Heating	90
OT1240	Workplace Exposure	90

Heavy Duty Equipment Technician/Truck and Transport Mechanic

Start Date: September

Credential: Certificate

Program Length: 37 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Bay St. George - On Campus delivery
- Happy Valley-Goose Bay - On Campus delivery
- Placentia - On Campus delivery

PROGRAM DESCRIPTION

This red seal program is designed to provide you with the skills and knowledge required for employment in the field of Heavy Duty Equipment Technician/Truck and Transport Mechanic. Some of the duties include:

- Interpret work orders and technical manuals
- Maintain, clean and lubricate equipment
- Diagnose faults and malfunctions
- Adjust, repair or replace defective parts
- Performance test repaired equipment
- Follow manufactures specifications and legislated regulations

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Use and maintain tools and equipment.
3. Diagnose and repair engines and engine support systems.
4. Diagnose and repair steering, suspension and brake systems.
5. Diagnose and repair hydraulic and pneumatic systems.
6. Write service reports and record analysis

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years of age or older, and have been out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment. If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES
Graduates may find employment in the following areas:

- Repair shops
- Maintenance companies
- Transportation companies
- Construction companies

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
SV1101	Safety	30
SV1111	Ozone Depleting Substances	6
SV1121	Gaskets and Seals	5
SV1131	Electrical and Electronic Principles	55
SV1141	Introduction to Hydraulics	30
SV1151	Service Information Systems	25
SV1166	Tools and Equipment	30
SV1191	Fasteners, Tubings, Hoses and Fittings	30
SV1190	Lubrication and Fluid Servicing	30
SV1201	Start, Move and Park Vehicle	5
SV1211	Tires, Rims and Wheels	25
SV1249	Introduction to Suspension Systems	15
SV1261	Vehicle Hydraulic Brake Systems	60
SV1271	Basic Air Brake Systems	60
SV1281	Drive Lines	25
SV1301	Cutting, Heating and Welding	30
SV1303	Engine Principles	45
SV1310	Cooling Systems	30
SV1331	Intake and Exhaust Systems	25
SV1361	Diesel Fuel Supply Systems	25
SV1370	Batteries	15
SV1379	Introduction to Starting and Charging Systems	18
SV1401	Gauges	11
SV1451	Steering Systems	30
SV1452	Gears	12
SV1491	Conventional Lighting Circuits	15
SV1501	Wiring Harnesses and Accessories	15
SV1800	Hoisting and Lifting	15
SV1810	Preventative Maintenance	5
SV1820	Bearings	6
SV1830	Metallurgy	5
SV2299	Introduction to Track Type Undercarriages	15
SV2391	Reservoirs, Coolers and Filters	15

Code	Title	Hrs
SV2491	Pneumatic Systems	20
SV2661	Electronic Ignition Systems	30
SV2669	Introduction to Heating, Ventilation and Air Conditioning HVAC	15
SV2689	Introduction to Frames and Chassis	6
SV2731	Cab Components	9
SV2779	Introduction to Hitches and Couplers	6
WD2290	Shielded Metal Arc Welding	15
WD2330	MIG Welding	30
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1370	Heavy Duty and Truck Transport Math Fundamentals	42
CM2161	Communications Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Heavy Equipment Operator

Start Date: September

Credential: Certificate

Program Length: 22 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Bay St. George - On Campus delivery
- Placentia - On Campus delivery
- St. Anthony - On Campus delivery

PROGRAM DESCRIPTION

This program provides training in the safe and effective operation of Heavy Duty Earth Moving Equipment. Some of the duties include:

- Explore the operation of heavy equipment
- Perform preventative maintenance
- Develop skills necessary to become proficient in the use of the following heavy equipment

EQUIPMENT CATEGORIES

- Dozer
- Front End Loader
- Grader
- Tandem Dump Truck
- Off-Highway Dump Truck
- Tractor-Loader-Backhoe (TLB)
- Excavator

OUTCOMES

1. Demonstrate knowledge of machine capabilities and industry expectations.
2. Develop servicing procedures and techniques to maximize the life span of construction equipment.
3. Demonstrate skills in basic machine maneuvering, control and operation in work simulated projects.
4. Demonstrate knowledge of standards for road construction as well as other municipal projects.
5. Demonstrate safe work practices and personal protection.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C

ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time

of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Upon enrollment into the program, students who are selecting Tandem Dump Truck must provide the following additional documentation:

i. An unrestricted Class 5 driver's license for one (1) year.
ii. A Motor Registration Division - Medical Examination Report with a vision test completed by a doctor.
iii. A Driving Abstract record showing no more than four (4) demerit points.

Government of Newfoundland and Labrador - Digital Government and Service NL | Motor Registration Division Online Appointments

Upon starting the program, students will be required to complete a commercial written test successfully. Once completed you will be issued a permit by the Department of Motor Registration Division that allows you to be instructed by a licensed commercial driver in preparation for a Class 03 license.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- General contractors
- Paving companies
- Pipeline companies
- Logging
- Mining
- Landscaping

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1520	WHMIS	6
TS1530	Standard First Aid	14
HE1110	Safety	12
HE1102	Equipment Operation Safety	15
HE1130	Heavy Equipment Certification Requirements	6
HE1601	Air Brakes	15
HE1140	Tools and Equipment	4
HE1160	Hoisting and Rigging	19
HE1170	Survey Indicators	9
HE1121	Slopes and Grades	9
HE1180	Methods of Approach for Worksite Job Planning	4
HE1190	Trade Related Documents	12
HE1210	Drawings and Plans	4
HE1220	Soil Fundamentals	4

Code	Title	Hrs
HE1202	Scheduled and Preventative Maintenance	45
HE1230	Pre- and Post-Operational Inspections	12
HE1240	Troubleshooting and Basic Repairs	8
HE1250	Transportation of Equipment	10
HE1260	Environmental Protection	8
HE1611	Introduction to Professional Driver Improvement (PDIC)	6
HE1621	Powerline Hazards	6
HE1631	Transportation of Dangerous Goods	6
OL1605	Traffic Control Person	6
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1171	Heavy Equipment Operator Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

Three courses from the following:

Code	Title	Hrs
HE1502	Dozer	80
HE1512	Grader	80
HE1522	Tractor-Loader-Backhoe (TLB)	80
HE1532	Front End Loader	80
HE1542	Tandem Dump Truck	80
HE1552	Off-Highway Dump Truck	80
HE1562	Excavator	80

Industrial Mechanic (Millwright)

Start Date: September

Credential: Certificate

Program Length: 37 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Corner Brook - On Campus delivery
- Labrador West - On Campus delivery
- Placentia - On Campus delivery

PROGRAM DESCRIPTION

This red seal program offers the training required to become a mechanic for stationary industrial machinery. Some of the duties include:

- Read and interpret diagram, schematics and service manuals
- Operate rigging equipment and dollies to move equipment
- Fit, align, attach and connect: bearings, gears, shafts, motors, couplings and belts
- Test, align and adjust equipment
- Perform predictive and operational maintenance
- Employ vibration analysis
- Service and repair hydraulic, pneumatic and programmable logic controls
- Perform tack welds

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Use and maintain tools and equipment.
3. Interpret drawings, plans, and be able to layout and develop projects according to specifications.
4. Perform assigned tasks following quality and production standards required in industry.
5. Plan for installation and maintenance of components and systems.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Mining
- Forestry
- Oil and gas
- Private companies
- Manufacturing
- Government maintenance departments

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
MS1230	Hand Tools	20
MW1240	Portable Power Tools	20
MW1251	Blueprint Reading and Sketching	15
MW1261	Equipment Assembly Blueprints	15
MW1270	Mechanical Installation Blueprints	15
MW1281	Schematics Advanced	15
MW1291	Rigging	30
MW1450	Drills, Taps and Reamers	30
MW1461	Measuring and Layout	54
MW1621	Metal Lathe	60
MW1630	Milling Machines	40
MW1470	Piping Components	30
MW1511	Power Metal Saws	15
MW1521	Pedestal Grinders	15
MW1530	Bearings	40
MW1541	Fasteners	9
MW1550	Metallurgy	30
MW1580	Static and Dynamic Seals	30
MW1591	Couplings and Clutches	20
MW1360	Shafts and Shaft Alignment	20
MW1610	Belt and Chain Drive Systems	45
MW1640	Gear Drive Systems	50
MW1650	Lubrication Practices	20

Code	Title	Hrs
MW1670	Non-positive Displacement Pumps	40
MW1690	Positive Displacement Pumps	50
MW1730	Electrical Fundamentals	30
MW2150	Hydraulics I	30
WD1330	Oxy-Fuel Welding	30
MW2122	Plasma Arc Cutting	6
OT1151	Workplace Exposure	80
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1181	Industrial Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Instrumentation and Control Technician

Start Date: September

Credential: Certificate

Program Length: 34 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Seal Cove - On Campus delivery

PROGRAM DESCRIPTION

This red seal program involves automation in the production of various commodities. Complex process control and measurement systems such as those found in the oil and gas industry, chemical plants, food processing operations, and the pulp and paper industry require sensitive and accurate instruments. Some of the duties include:

- Repair, maintain, calibrate, adjust and install industrial measuring and controlling instrumentation
- Ensure plant machinery is safe and operating correctly
- Regulate water flow and air quality
- Monitor and calibrate instruments
- Read and interpret circuit diagrams, blueprints and schematics
- Inspect, test, diagnose faults
- Write maintenance reports
- Repair, calibrate components and instruments
- Perform schedule preventative maintenance
- Observe safe repair procedures according to regulated standards

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Interpret drawings, codes, standards and government regulations.
3. Use tools and measuring equipment.
4. Conduct new installations.
5. Use and maintain analyzers
6. Use and maintain various types of field mounted equipment.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C

ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Hydro Power Generation
- Mining, Petrochemical, and Natural Gas
- Industrial and Commercial Manufacturing
- Industrial Construction
- Industrial Instrument Servicing
- Pulp and Paper Processing

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
ER1111	Tools and Equipment	45
ER1140	DC Theory	30
ER1151	Series and Parallel DC Circuits	45
ER1170	Voltage Drop and Power Loss	30
ER1390	Safety	30
ER1201	Drawings, Schematics and Specifications	30
ER1420	Introduction to Pressure Measurement and Calibration	70
ER1430	Flow Measurement	110
ER1440	Level and Density Measurement	50
ER1450	Temperature Measurement	60
ER1460	Wireways, Conduit, Electrical Metallic Tubing (EMT) and Fittings	15
ER1490	Material Handling Equipment	15
ER1500	Communication and Trade Documentation	9
ER1510	Conductors and Cables	30
ER1520	Tubing and Piping Systems	30
ER1530	Introduction to Fluids	25
ER1711	Signal Transmission Systems	30
ER1733	Electronics (Circuits and Components)	90
ER2470	Pneumatic Supply Systems I	25
ER2480	Pneumatic Supply Systems II	25
ICT145	On-Off Control Devices	30
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1191	Instrumentation and Control Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24

Code	Title	Hrs
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of entry level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Machinist

Start Date: September

Credential: Certificate

Program Length: 37 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Placentia - On Campus delivery

PROGRAM DESCRIPTION

This red seal program is designed to train individuals in the knowledge, skills, and experience necessary to set up and operate precision metal cutting and grinding machines such as lathes, milling machines, drills, shapers, boring mills and grinders. A variety of equipment is used to manufacture, install, operate, adjust and repair machine tools and other machines in common use. Duties of a machinist include: study specifications, charts, drawings or sample parts to determine the machining operating to be performed, calculate dimensions and tolerances, and prepare working sketches if necessary, set up and operate tools, which may be computer numerically controlled, to perform precision machining operations. Work could either be in job shops or production jobs. In job shops, you will make a wide variety of repair parts for different types of machinery and industrial equipment in different situations. In production shops, you will produce parts using mass production methods including CNC machining and other tools.

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Interpret specifications, charts, drawings or sample parts to determine the machining operation required.
3. Select workplace materials.
4. Calculate dimensions and tolerances, and prepare sketches if necessary.
5. Set up and operate tools.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:
1. High School
High School Graduation
2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate
3. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
4. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate
5. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Manufacturing
- Mining
- Aviation
- Machine shops
- Pulp and Paper
- Private shops

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health & Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
MW1190	Machine Shop Safety	15
MW1230	Drawings and Specifications II	37
MW1370	Basic Layout	15
MW1381	Hand and Power Tools	30
MW1390	Hand Threading and Reaming	30
MW1762	Precision Measurement	35
MW1772	Drawings and Specifications I	40
MW1782	Cutting Fluids, Coolants and Lubricants	15
MW1791	Machinable Materials	9
MW1802	Angular Measurement	30
MW1841	Hoisting, Lifting and Rigging	15
MW1852	Drills and Drill Presses	45
MW1861	Introduction to Conventional Lathes	45
MW1872	Basic Conventional Lathe Operation	70
MW1881	Conventional Lathe Drilling, Boring, Reaming, Tapping and Die Threading	30
MW1900	Taper Turning	30
MW1912	Basic Threading	60
MW1921	Introduction to Milling Machines	72
MW1942	Job Planning	25
MW1945	Mentoring	6
MW1951	Reciprocating Machines	45
MW2061	Computer Numerical Control (CNC) Machine Tools	15
MW2071	Computer Numerical Control Operation I	45
MW2082	Mechanical Components	15
MW2123	Oxy-Fuel Cutting and Welding	30
MW2301	Power Sawing Equipment	30

Code	Title	Hrs
MW2311	Introduction to Grinding and Abrasives	20
MW2321	Heat Treatment I	20
MW2341	Reconditioning	15
MW2370	Material Testing	15
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1400	Machinist Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Marine Cook

Start Date: September

Credential: Certificate

Program Length: 41 Weeks

School: Natural Resources and Industrial Trades

Locations:

- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

This 41-week program prepares students for a career as a Marine Cook, working on a seafaring vessel. Students are required to complete all aspects of the program curriculum as well as the Marine Emergency Duties (MED) certification, and a 30-day sea service that involves working in the galley on an offshore vessel.

Upon completion of the training, students are required to pass two final examinations, the theory (written) portion and the practical application component, that are a requirement of Transport Canada's Marine Safety Branch. Graduates can then apply to Transport Canada for Ship's Cook certification.

In addition to a Certificate in Marine Cooking, graduates earn certificates in Marine Advanced First Aid, Security Awareness Training for Seafarers with Designated Security Duties, and BS-STCW95.

OUTCOMES

As a graduate of the Marine Cook program, graduates will have the knowledge and skills that will allow them to:

1. Plan menus ensuring nutritional needs are met.
2. Order food and kitchen supplies for crew, with plan for duration of voyage.
3. Make optimum use of food supplies and manage inventory, reducing waste while offering high quality, and nutritious meal plans.
4. Prepare high quality foods ensuring meal service in a timely manner.
5. Offer a variety of foods to administer to food preferences, cultural desires, allergies, and other dietary needs.
6. Maintain the quality and safety of food in preparation, service, and storage.
7. Know that a well-fed crew is a productive crew.
8. Maintain galley equipment and tools in a safe and hygienic manner.
9. Participate in vessel related duties according to the requirements of ship.

ENTRANCE REQUIREMENTS
Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education
Adult Basic Education (Level III) Graduation with a Degree and Technical Profile (or Business Related College Profile), including the following courses (or equivalent):
i. Mathematics: 1102A, 1102B, 1102C, 2102A, 2102B, 2102C, 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses, including those outlined above, have been completed.
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate

4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

ADDITIONAL ENTRANCE REQUIREMENT:
A medical, by a Transport Canada-approved Marine Medical Examiner is required for admission into the program.

ACCREDITATION
The Marine Cook program has been accredited with Transport Canada since January 2008.

CERTIFICATIONS
In addition to the formal semester courses listed in the program of students, students in the Marine Cook program are required to obtain certifications in the following areas:

- BS - STCW95
- Marine Advanced First Aid
- Security Awareness Training for Seafarers with Designated Security Duties

Note: Students should be aware that additional fees and expenses apply for these certifications.

EMPLOYMENT OPPORTUNITIES
Graduates may find employment opportunities on government regulated vessels and private vessels. Examples of areas with a need for Marine Cooks include the marine industry, tourism, and the military.

Courses

Semester 1

Code	Title	Hrs
MA1085	Culinary Math	60
TS1520	WHMIS	6
MO1100	Orientation to Professional Cooking	15
MO1110	Canadian Food Safety	12
MO1113	Sanitation & Safety	18
MO1340	Tools & Equipment	18
MO1130	Receiving & Storage	10
MO1120	Basic Cooking Methods	30
MO1230	Food Presentation	15
MC1062	Computer Essentials	15
MO1140	Vegetables, Mushrooms & Fruits	40
MO1302	Legumes, Gains, Pasta & Dumplings	30
MO1170	Potatoes	30
MO1306	Dairy Products	12
MO1330	Marine Safety & Security Certifications	90
CM2161	Communication Essentials	36

Note: Students should be aware that additional fees and expenses apply for the certifications covered in MO1330 Marine Safety and Security Certifications. Students will be required to hold valid Certifications prior to MO1360 Sea Service.

Semester 2

Code	Title	Hrs
MO1180	Stocks & Soups	30
MO1185	Sauces & Glazes	42
MO1200	Poultry Handling and Preparation	45
MO1220	Fish & Shellfish	40
MO1190	Meat Handling & Preparation	90

Code	Title	Hrs
MO1160	Breakfast Cookery	30
MO1240	Salads & Salad Dressings	30
MO1250	Sandwiches	20
MO1304	Cultural Cooking	30
MO1301	Hors d'Oeuvres	18
MO1350	Nutrition	12
MO1370	Menu Planning & Costing	20
SD1761	Workplace Essentials	24

Semester 3

Code	Title	Hrs
MO1260	Orientation to Baking	30
MO1270	Yeast Products	24
MO1280	Pies & Pastries	30
MO1290	Quick Breads	24
MO1310	Desserts	24
MO1320	Cookies & Squares	24
MO1300	Cakes & Icings	24
MO1380	Marine Cooking Theory Exam	6
MO1390	Marine Cooking Practical Exam	18
MO1360	Sea Service	30 days

Mobile Crane Operator

Start Date: September

Credential: Certificate

Program Length: 25 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Bay St. George - On Campus delivery

PROGRAM DESCRIPTION

This red seal program exposes you to the safe and efficient operation of Mobile Cranes. Some of the duties include:

- Become proficient in the use of 50-ton Lattice Boom Crawler, 30 Rough Terrain, 20- and 18-ton Boom Truck
- Perform safe operations and routine maintenance for mobile cranes
- Proficiently assemble and disassemble mobile cranes

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Assess site hazards.
3. Operate equipment safely.
4. Recognize and evaluate conditions which are potentially hazardous to safe operation.
5. Interpret and apply load charts, rigging procedures and related documentation.
6. Interpret and apply visual and audio communication.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C

ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Additional Entrance Requirements:

1. Driver's License and Medical
You must possess an unrestricted Class 5 driver's license for one (1) year.

Upon acceptance to the program, you must provide the following additional documentation:
i. A Motor Registration Division - Medical Examination Report with a vision test completed by a doctor.
ii. A Driving Abstract record showing no more than four (4) demerit points.

Government of Newfoundland and Labrador - Digital Government and Service NL | Motor Registration Division Online Appointments

Upon starting the program, students will be required to complete a commercial written test successfully. Once completed you will be issued a permit by the Department of Motor Registration Division that allows you to be instructed by a licensed commercial driver in preparation for a Class 03 license.

EMPLOYMENT OPPORTUNITIES
Graduates may find employment in the following area:

- Oil Field Industries
- Construction
- Industrial
- Mining
- Cargo
- Railways

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
MB1041	Shop Fundamentals for Mobile Crane Operators	60
MB1050	Introduction to Lift Planning	6
MB1055	Introduction to Rigging	6
MB1060	Introduction to Crane Components	6
MB1065	Crane Systems	6
MB1070	Mobile Crane Maintenance	45
MB1075	Specialty Crane Operations	6
MB1101	Mobile Crane Operation Safety	75
MB1130	Mobile Crane Operations	60
MB1140	Mobile Lattice Boom Cranes	60
MB1150	Mobile Hydraulic Boom Cranes	60
MB1250	Class 3 Driver's License for Mobile Crane Operators	90
MB1080	Mentoring	4
MB1261	Rigging for Mobile Crane Operators	60
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1341	Hoisting Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Non-Destructive Testing Technician

Start Date: September

Credential: Certificate

Program Length: 37 Weeks

School: Natural Resources and Industrial Trades

Locations:

- Port aux Basques - On Campus delivery

PROGRAM DESCRIPTION

Integrity in practice.

This technical field is critical across many industries to test the quality of manufactured materials to ensure the safety of the public and those performing the work in those industries.

Non-destructive testing (NDT) technicians are employed to accurately test items for potential flaws or failures using various NDT test methods such as liquid penetrant inspection, magnetic particle inspection, ultrasonic testing and radiography testing. They use these techniques to evaluate the properties of a material, component, structure, or system for flaws or welding defects without causing damage to the original part.

That is the advantage of this type of testing – the pieces being tested are left undamaged by the process and allows for an item to be repaired or replaced if problems are found. It is a very accurate method of inspection and provides a cost-effective way to ensure the integrity – and therefore safety – of the item before a malfunction occurs. With Canada's stringent safety standards, companies are seeking out trained NDT technicians to enhance their quality assurance measures.

Through our Non-Destructive Testing Technician program, you will build the skills in high demand across industries such as manufacturing, construction, automotive, energy and aerospace. If you are detail-oriented, have excellent dexterity and mechanical skills and embrace the idea of physically demanding work, this program will prepare you for a productive, rewarding career.

With a commitment to excellence and innate pride in your work, you will help make the world a safer place.

Program Highlights

- Prepares you to write the National Exams that are required by the Canadian General Standards Board
- Enhances your versatility in industry as you are trained in 4 core NDT fields including liquid penetrant inspection, magnetic particle inspection, ultrasonic testing and radiography testing
- Provides radiation safety training as required by national training standards

Did You Know?

- The Global Non-destructive Testing (NDT) Market is expected to reach approximately USD 23 billion expanding at a CAGR of around 6%, during the forecast period, 2020 – 2026.[1]
- There is a global shortage of certified and skilled technicians to operate the advanced machinery for this testing
- There is a surging demand for NDT Technicians in the Aerospace and Oil & Gas industries

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[1] Non-Destructive Testing (NDT) Market Size, Share | Report 2020 - 2026 (dataintelo.com)

OUTCOMES

1. Perform Liquid Penetrant Inspection.
2. Perform Magnetic Particle Inspection.
3. Carry out Ultrasonic Inspection.
4. Carry out Radiographic Inspection.
5. Demonstrate knowledge of Quality Assurance, Control Documentation and Reporting Systems for various industrial sectors.
6. Develop attitudes conducive to the successful application of skills on the job.
7. Develop an awareness and concern for good safety practices in the work place.
8. Develop academic skills and knowledge in mathematics, communications, and science.
9. Distinguish among various properties of metals with respect to their impact on NDT methods.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
ND1010	Intro to Non-Destructive Testing	30
MA1081	Math Fundamentals for NDT	45
PH1010	Science for NDT	60
ND1130	Materials and Processes	60

Code	Title	Hrs
ND1210	Magnetic Particle Testing II	80
ND1110	Penetrant Testing Level II	60
WD1290	SMAW for NDT	30
CM2161	Communication Essentials	36

Semester 2

Code	Title	Hrs
MC1062	Computer Essentials	15
DR1770	Basic Drawing and Sketching for NDT	30
ND1510	Radiation Safety and CEDO	60
ND1410	Industrial Radiography I	90
ND1411	Industrial Radiography II	90
SD1761	Workplace Essentials	24
ND1310	Industrial Ultrasonics I	120

Semester 3

Code	Title	Hrs
SP2355	QA/QC for NDT	45
ND1311	Industrial Ultrasonics Level II	120

Plumber

Start Date: September

Credential: Certificate

Program Length: 34 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Bonavista - On Campus delivery

PROGRAM DESCRIPTION

This red seal program prepares you to install and repair pipes, fixtures and other plumbing equipment for water distribution and waste water disposal in residential, commercial and industrial buildings. Some of your duties include:

- Read blueprints, drawings and specifications for plumbing systems
- Examine water supply networks, waste and drainage systems
- Install, repair and maintain domestic, commercial or industrial fixtures and systems
- Connect, bead, thread and join pipes
- Leak test utilizing air and water

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Plan work activity.
3. Use and maintain hand and portable power tools and equipment.
4. Interpret plans and specifications and prepare layouts and working drawings.
5. Prepare components and fixtures according to specifications and assume responsibility for the end product.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment. If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Construction contractors
- Plumbing repair shops

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
PF1020	Job Site Safety	9
PF1340	Tools and Equipment	75
PF1350	Blueprint I (Basic Residential)	30
PF1360	Blueprint II (Advanced Residential/Light Commercial)	30
PF1370	Rigging	39
PF1380	Introduction to Fuel Brazing and Cutting	45
PF1390	Pipe and Tubing Fundamentals	15
PF1401	Steel Piping	60
PF1410	Copper Piping	45
PF1425	Plastic Piping	75
PF1440	Piping Valves	30
PF1451	Hydronic Heating	69
PF1610	Cast Iron Piping	18
PF1620	Non-Metallic Piping	6
PF1630	Water Service	6
PF1640	Hot and Cold Water Supply	30
PF1650	Hot Water Storage Tanks and Heaters	18
PF1660	Water Treatment Systems	6
PF1670	Residential Sanitary Drainage	60
PF1680	Residential Venting	45
PF1691	Storm Systems	13
PF1700	Commercial Drainage, Waste and Venting I	21
PF1710	Residential Appliances, Fixtures and Trim	30
PF1720	Rural Waste Disposal	15
PF1731	Introduction to Electric Welding	24
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1261	Plumber Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Power Engineering Technology

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Natural Resources & Industrial Trades

Locations & Delivery Modes:

- Corner Brook - On Campus delivery

PROGRAM DESCRIPTION

Power Engineers, Power Plant Operators, Boiler Operators and Stationary Engineers, are some of the descriptions that summarize a technically skilled professional who may be responsible for the safe operation and maintenance of equipment such as pumps, gas compressors, generators, motors, boilers, steam turbines, air conditioning systems, heat exchangers and refrigeration equipment.

This program is intended to prepare the student for entrance into the Power Engineering field at the 4th Class level after successful completion and meeting *SOPEEC requirements for the first year of the program and entrance into the Power Engineering field at the 3rd Class level after successful completion and meeting **SOPEEC requirements for the second year of the program.

*Upon successful completion of the **first year** program requirements a student **is** eligible to make application to the Department of Immigration, Population Growth, and Skills (IPGS) for review and approval to write examinations towards 4th Class Power Engineering certification. Students will be required to complete the practical requirements and utilize the Practicum Guide endorsed by the IPGS.

Upon successful completion of the **second year program requirements a student **is** eligible to make application to the Department of Immigration, Population Growth, and Skills (IPGS) for review and approval to write examinations towards 3rd Class Power Engineering certification. Students will be required to complete the practical requirements and utilize the Practicum Guide endorsed by the IPGS.

This program includes a 6-week on the job training experience that students will be able to complete the practical requirements. Graduates of the program are expected to work in varying temperatures, environments, confined spaces, may be required to perform climbing, use hand and power tools, various specialty testers, and perform preventative maintenance of the equipment.

OBJECTIVES

As graduates of the Power Engineering Technology program, graduates will have the knowledge and skills that will allow him/her to:

1. Demonstrate the practical skills necessary for a 4th Class, Power Engineer.
2. Develop and practice proper safety procedures.
3. Demonstrate problem solving skills and good work practices.
4. Utilize essential skill training to enhance their career experience and opportunities.
5. Gain knowledge of control documentation and reporting systems in Power Engineering environments.
6. Prepare for a provincial examination in Power Engineering 4th Class part "A" and "B".
7. Demonstrate the practical skills necessary for a 3rd Class, Power Engineer.

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Power Engineering Technology Diploma program are required to obtain a certificate of completion in the following upon graduation:

1. Introduction to Confined Space
2. Introduction to Fall Arrest & Protection
3. Introduction to Lock-out – Tag-out
4. Standard First Aid/Heart Start
5. WHMIS
6. Introduction to Newfoundland and Labrador Health & Safety Act

Students should be aware that additional fees may apply for external certifications.

Students will also be required to complete one-day non-credit educational seminars throughout the program in on the job training for the full-time Diploma program. This includes resume writing, job search, interview preparation and professionalism at the worksite.

ENTRANCE REQUIREMENTS

NOTE:
Students who have valid 4th Class Certification and who meet the academic entrance requirements for the Power Engineering Technology program listed below may apply for entry into year two of the program.

If students have a 4th Class Certification and do not meet the academic requirements of the Power Engineering Technology program listed below may apply as a mature student and complete the appropriate CAAT testing, may apply as a mature student or complete courses in our College Transition program to meet the academic requirements they are deficient in.

Eligibility for admission to the Power Engineering Technology Program requires the applicant to meet one of the following four academic criteria:

1. High School

High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Science: (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3. **Note that it is recommended that students considering the Power Engineering program should complete High School Physics.**

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1020, BL1021
b. Introductory Chemistry: CH1030, CH1031
c. Introductory Physics: PH1050, PH1051
Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.
Effective Academic Year 2025 - 2026:

College Transition
College Transition Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1025, BL1026
b. Introductory Chemistry: CH1035, CH1036
c. Introductory Physics: PH1055, PH1056
Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Municipal buildings
- Provincial buildings
- Federal buildings
- Health care institutions
- Educational institutions
- Manufacturing
- Mining
- Fishery
- Pulp and Paper
- Oil and Gas

Courses

Note: Courses are delivered sequentially in modular format.

Semester 1 (Fall)

Code	Title	Cr	Hrs
PW1112	Mechanics & Dynamics	2	30
PW1113	Phys. & Chem. Thermodynamics	2	30
PW1114	Canada Power Eng. Leg. & Reg.	2	30
PW1115	Intro to Plant & Fire Safety	2	30
PW1116	Plant Operation & Environment	2	30
PW1117	Mat. Science & Welding Tech.	2	30
PW1118	Fluid Handling Technology	1	15
PW1119	Electro-Technology Concepts	2	30
PW1122	Energy Plant Inst. & Controls	2	30
PW1123	Industrial Communications	1	15
PW1124	Introduction to Boiler Designs	2	30
PW1125	Elements of Boiler Systems	3	45
PW1126	Power Ops. & Maint. Lab I	6	100

Semester 2 (Winter)

Code	Title	Cr	Hrs
PW1201	Lubrication & Bearings	2	30
PW1202	Pumps and Compressors	2	30
PW1203	Boiler Safety Devices	2	30
PW1204	Plant Operation & Management	2	30
PW1205	Energy Plant Maintenance	2	30
PW1206	Water Treatment	2	30
PW1207	Prime Movers & Heat Engines	1	15
PW1208	Plant Auxiliary Systems	2	30
PW1209	Compress. & Absorption Refrig.	3	45
PW1211	HVAC for Facility Operators	1	15
PW1212	Bldg. Enviro - Systems & Ctrol.	3	45
PW1213	Ind. Plant Configurations	3	45

Semester 3 (Intersession)

Code	Title	Cr	Hrs
PW1302	Power Ops. & Maint. Lab II	6	100

*An exit option exists after the **first year** for students who successfully complete their studies, practicum and fulfill all SOPEEC requirements.*

*Upon successful completion of Year One of the Power Engineering Technology Program, students **are** eligible to make application to the Department of Immigration, Population Growth and Skills for review and approval to write examinations towards 4th Class Power Engineering certification.*

*Prior to advancing onto the **second year** of the Power Engineering program students must have successfully completed year one and have obtained their 4th Class Power Engineering Certificate.*

Semester 4 (Fall)

Code	Title	Cr	Hrs
PW2100	Applied Mathematics	3	45
PW2110	Applied Science	3	45
PW2111	Ind. Drawings, Leg. & Codes	2	30
PW2112	Code Calculations - ASME Section 1	2	30
PW2113	Fuels, Combust & FG Analysis	2	30

Code	Title	Cr	Hrs
PW2114	Piping, Valves & Traps	3	45
PW2115	Electrical Theory & Calc.	3	45
PW2116	Instrumentation & Control	2	30
PW2117	Safety & Fire Prevention	1	15
PW2118	Boiler Designs	2	30
PW2119	Power Ops. & Maint. Lab III	6	100

Semester 5 (Winter)

Code	Title	Cr	Hrs
PW2200	Boilers & Furnace Operation	3	45
PW2201	Boiler Water Treatment	2	30
PW2202	Pumps, Welding & P. Vessels	3	45
PW2203	Steam Turbines & Auxiliaries	2	30
PW2204	Gas Turbines, Cogen, & IC Engines	3	45
PW2205	Compressors	2	30
PW2206	Refrigeration Aux. & Operation	2	30
PW2207	Heat Exch. & Wastewater Treat.	2	30
PW2208	Plant Maintenance & Admin	1	15
PW2209	Power Ops. & Maint. Lab IV	6	100

Semester 6 (Intersession)

Code	Title	Cr	Hrs
PW2300	On the Job Training (minimum of 6 weeks)	5	240

*Upon successful completion of Year Two of the Power Engineering Technology Program, students **are** eligible to make application to the Department of Immigration, Population Growth, and Skills for review and approval to write examinations towards 3rd Class Power Engineering certification.*

Power Sports Technician

Start Date: September

Credential: Certificate

Program Length: 36 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Bay St. George - On Campus delivery

PROGRAM DESCRIPTION

This program is designed to enable you to learn the knowledge and skills associated with the repair and maintenance of recreational equipment such as snowmobiles, ATVs, motorcycles, personal water craft and outboard motors, and fuel-powered tools such as chainsaws and lawnmowers. Some of the duties include:

- Review and interpret work orders and technical manuals
- Inspect engines, motors and other mechanical components using test devices
- Diagnose and isolate faults
- Repair or replace components using hand tools
- Performance test repaired equipment
- Perform scheduled maintenance and advise customers on repair cost

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Use and maintain tools and equipment.
3. Interpret schematics and wiring diagrams.
4. Identify major engine components.
5. Maintain and repair lubricant systems.
6. Maintain and repair light duty engines.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5.International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based

550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES
Graduates may find employment in the following areas:

- Rental dealerships
- Recreational dealerships
- Independent garages
- Service stations
- Repair shops
- Manufacturing companies

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
TS1191	Shop Fundamentals	120
TS1220	Precision Measurement	30
WD1250	Oxy-Fuel Cutting and Heating	30
WD1320	Gas Metal Arc Welding	30
MP1440	Electrical and Electronic Basic Principles	90
SR1120	Service Information Systems	30
SR1131	Engine Operations	30
SR1140	Lubrication Systems	45
SR1221	Small Equipment Engines	60
SR1230	Small Equipment Starting and Charging Systems	75
SR1240	Ignition Systems	60
SR1320	Gasoline Engine Air and Fuel Delivery Systems	30
SR1330	Gas Injection Systems	60
SR1340	Carburetted Fuel Systems	60
SR1420	Small Equipment Cooling Systems	45
SR1145	Introduction to Heating and Air Conditioning Systems	30
SR1431	Emission Control Systems	30
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1361	Power Sport Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

Powerline Technician

Start Date: September

Credential: Certificate

Program Length: 35 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Happy Valley-Goose Bay - On Campus delivery
- Seal Cove - On Campus delivery
- St. Anthony - On Campus delivery

PROGRAM DESCRIPTION

This red seal program will prepare you to build and repair overhead and underground power lines used to conduct electricity from generating plants to the customer. Some of the duties include:

- Erect and maintain steel, wood or concrete poles, towers and guy wires
- Install, maintain and repair overhead and underground powerlines, cables, insulators, lighting arrestors and switches
- Repair or replace transformers and street lighting
- Splice, solder and insulate conductors
- Diagnose power distribution and transmission faults

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Interpret occupational documents.
3. Use and maintain tools and equipment.
4. Use and maintain electrical distribution systems and their equipment.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. Driver License
Applicants are required to have a valid Class 05 license prior to acceptance into the Powerline Technician Program.

Notes: Driver License and Endorsements
a) A NL Air Brake endorsement (9A) may be required to operate some vehicles within the program and upon employment.
b) Employers may seek graduates who can obtain a Class 03 License. NL Motor Vehicle Regulations requires a valid Class 05 for a minimum of 12 months prior to applying for a Class 3 license.

EMPLOYMENT OPPORTUNITIES
Graduates may find employment in the following areas:

- Utility companies
- Private contractors

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
ER1140	DC Theory	30
ER1151	Series and Parallel DC Circuits	45
OL1250	Access Equipment	6
OL1130	Power and Energy	6
OL1140	Inductance and Capacitance	10
OL1150	Transmission Systems	5
OL1160	Steel Structure Climbing	6
OL1170	Job Planning	6
OL1180	AC Theory	6
OL1190	AC Circuits	24
OL1240	Series and Parallel Circuits	10
OL1602	Traffic Control	8
OL1631	Safety	14
OL1641	On and Off Road Equipment	10
OL1681	Tools and Equipment	40
OL1691	Pole Climbing	30
OL1701	Drawings, Schematics and Specifications	15
OL1714	Single-Phase Circuits	10
OL1715	Distribution Lines	30
OL1721	Conductors and Cables	30
OL1725	Overhead Distribution Structures	240
OL1741	Sagging Conductors	10
OL1751	Tree Trimming	6
OL1771	Aerial Devices and Hydraulics	30
OL1781	Transmission Structures	5
OL1791	Grounding and Bonding	30
OL1811	Transformers	30
OL1835	Overhead Distribution Systems	30
OL1851	Rigging, Hoisting and Lifting	30
PTN-165	Communication Lines	9
PTN-140	Introduction to Live-Line Methods	12
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1271	Powerline Technician Math Fundamentals	42

Code	Title	Hrs
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12
OT1161	Workplace Exposure	60

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Refrigeration and Air Conditioning Mechanic

Start Date: September

Credential: Certificate

Program Length: 37 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Ridge Road - On Campus delivery

PROGRAM DESCRIPTION

This red seal program offers training in planning, preparing and laying out any cooling system or heat-cooling system that is used in a residential, commercial, institutional or industrial refrigeration setting. Some of the duties include:

- Install and start up refrigeration and air cooling systems
- Service, repair and replace refrigeration and air conditioning piping and components
- Interpret blueprints and verbal instruction
- Assemble and install refrigeration and air conditioning components
- Install and calibrate controls
- Perform leak detection, record keeping and performance test

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Interpret mechanical and architectural drawings, acts, codes, standards, legislation, and service and operating manuals.
3. Use and maintain tools and equipment.
4. Arrange for refrigeration and air conditioning installation and maintenance.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation

2. Adult Basic Education

Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:

i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C

ii. Science 3101, 3102, 3103

3. Comprehensive Arts and Science (CAS) Trades

Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5.International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates will find employment in the following areas:

- Installation companies
- Service companies

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
RF1290	Ozone Depletion Substances	6
RF1181	Trade-Related Documentation and Work Organization	12
RF1190	Residential and Commercial Compressors	48
RF1161	Safety	12
RF1611	Air Movement and Indoor Air Quality	30
RF1810	Blueprints, Drawing and Specifications	30
RF1171	Tools and Equipment	36
RF1211	Piping, Tubing, Soldering and Brazing	42
RF1221	Refrigeration Fundamentals	90
RF1241	Refrigerants, Gases and Oils	42
RF1251	Valves and Accessory Devices	30
RF1262	Leak Testing, Evacuation and Charging	36
RF1271	Electrical Fundamentals	60
RF1281	Motor Fundamentals	42
RF1321	Control Fundamentals	24
RF1331	Air Conditioning Fundamentals	18
RF1341	Hoisting, Lifting, Rigging and Access/Egress Equipment	18
RF1351	Pressure Enthalpy Diagrams and System Analysis	24
RF1361	Compressor Fundamentals	30
RF1371	Condensers	24
RF1381	Evaporators	24
RF1390	Metering Devices	30
RF1401	Refrigerant Flow Controls and Accessory Devices	30
RF1451	Refrigeration Air Conditioning Installation	112
RF1481	Control Circuits and Wiring Diagrams	54
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1291	Refrigeration Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Renovation Technician

Start Date: September

Credential: Certificate/Diploma

Program Length: 68 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Clarenville - On Campus delivery

Note:

Applicants who have either a certificate, diploma, post/advanced diploma or degree in the area of Carpentry, plus a minimum of 180 hrs of work experience, may apply directly to year 2 (Fall 2024).

PROGRAM DESCRIPTION

This two year diploma program will provide students with hands on experience and knowledge pertaining to the world of home and light commercial building renovation. Building systems, efficient building techniques, energy conserving systems, sustainable building approaches, estimating and project management are some of the topics students of the Renovation Technician program will cover.

Graduates will have the skills required to work in a variety of residential and commercial building construction settings focusing on renovation projects. Students will learn to recognize hazardous materials and the need for proper waste disposal strategies, as well as proper use of both non-renewable and renewable energy sources.

Students in the Renovation Technician program will receive a Certificate for Carpenter upon completion of the Carpenter Entry Level courses in Semesters 1, 2 and 3, providing an opportunity to register as a first-year carpenter apprentice. A Diploma in Renovation Technician will be awarded for completion of all courses listed in Semesters 1 through 6.

OUTCOMES

1. Practice safety work procedures.
2. Manage a renovation project as it relates to core and sub trade practices.
3. Demonstrate problem solving skills, good work practices, strong communication skills, and utilize practical hands on experience gained directly from job placements in industry.
4. Perform with carpenter skills and knowledge in construction techniques related to building sciences, green technologies, waste management, estimation/budgeting and scheduling.
5. Solve problems with associated trades in the areas of electrical, HVAC, plumbing, painting, plastering, masonry and drafting.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical College Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate

Effective Academic Year 2025 - 2026:

Trades Bridging

Trades Bridging Certificate

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Eligibility for direct admission to Year 2 of the Renovation Technician program requires the applicant to meet the following criteria:

1. Applicants must have graduated from a recognized College of University with a certificate, diploma, post/advanced diploma or degree in the area of Carpentry.
2. Minimum of 180 hours of carpentry work experience.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- General contractors
- Commercial contractors
- Private contractors

Courses

Semester 1 - Fall

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
AJ1221	Floor and Wall Framing	90
AM1101	Math Essentials	42
HE1620	Powerline Hazards	4
AJ1160	Blueprint Reading	45
AJ1111	Carpentry Fundamentals	74
AJ1201	Layout & Footing	80
AJ1211	Wall Forms	80
AM1001	Introduction to Skills for Success	9

Semester 2 - Winter

Code	Title	Hrs
AJ1410	Interior Fundamentals	60
SD1761	Workplace Essentials	24
AJ1501	Interior Trim	60
CM2161	Communication Essentials	36
AJ2430	Scaffolding	45

Code	Title	Hrs
AJ1310	Roof Fundamentals	80
AJ1760	Chainsaw Safety	4
LA1110	Fall Protection Awareness	6
AM1131	Carpenter Math Fundamentals	42
AJ1231	Exterior Finishes	60
LA1100	Confined Space Awareness	6
MC1062	Computer Essentials	15

Semester 3 - Intersession

Code	Title	Hrs
AJ1121	Rigging	30
CAR155	Concrete	12
AJ2420	Post and Beam	30
CAR225	Deck Layout and Framing	9
AJ1601	Stair Fundamentals	60
AP1102	Introduction to Apprenticeship	12
AJ1170	Residential Estimating	30

Semester 4 - Summer

Code	Title	Hrs
OJ1860	Job Placement I	180

Prior Learning Assessment Recognition (PLAR) exemptions are available for this course subject to evidence of suitable work experience. A minimum of 180 hours work experience as a Carpenter is required to be exempted from OJ1860.

Semester 5 - Fall

Code	Title	Hrs
RV1250	Renovators Basic Plumbing	30
RV1260	Renovators Basic Electrical	30
RV1160	Renovation I	30
RV1161	Renovation II	30
RV1170	Basement Renovations	30
RV1200	Green Renovating	30
RV1320	Foundation Systems	30
RV1350	Flooring	45
RV1230	Project Manager I	40
RV1101	Decks and Fences	45
RV1231	Project Manager II	40

Semester 6 - Winter

Code	Title	Hrs
RV1300	Residential Estimating II	30
RV1360	Special Trim	40
RV1341	Cabinet Layout/Design	60
RV1270	Renovators Basic HVAC	30
RV1400	Demolition and Waste Management	30
RV1120	Building Systems	30
RV1140	Accommodated Construction	30
OJ1861	Job Placement II	180

Prior Learning Assessment Recognition (PLAR) exemptions are available for this course subject to evidence of suitable work experience.

Steamfitter/Pipefitter

Start Date: September

Credential: Certificate

Program Length: 35 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Clarenville - On Campus delivery

PROGRAM DESCRIPTION
This red seal program offers training in repairing and maintaining pipe and steam systems. Some of the duties include:

- Determine required pipe and tools necessary to complete a layout and sequence of tasks
- Create detail sketches for pipe and equipment fabrication and installation
- Measure, cut, thread, groove, bend, assemble and install metal, plastic and fiberglass pipes, valves and fittings and join sections
- Perform performance leak tests and pipe securement
- Perform maintenance and replacement of worn components
- Perform pipeline construction
- Safely layout, assemble, fabricate, maintain and repair piping systems
- Perform blueprint reading for piping and tubing
- Perform maintenance on low pressure steam and heating and cooling systems

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Use and maintain tools and equipment.
3. Perform common installation processes.
4. Plan lifts.
5. Hoist loads.
6. Install high and low pressure process steam systems.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Construction contractors
- Manufacturing Plants
- Utility Companies
- Oil and Gas Refineries
- Industrial Plants
- Pulp and Paper Mills
- Thermal and Steam Generating Plants
- Chemical Plants

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
PF1340	Tools and Equipment	75
PF1365	Blueprint Interpretation	60
PF1370	Rigging	39
PF1380	Introduction to Fuel Brazing and Cutting	45
PF1390	Pipe and Tubing Fundamentals	15
PF1400	Steel Piping	90
PF1410	Copper Piping	45
PF1421	Plastic Piping	43
PF1440	Piping Valves	30
PF1450	Hydronic Heating I	60
PF1541	Low Pressure Steam	96
PF1550	Pipe Template Development	75
PF1560	Pipe Layout and Fitting Fabrication	72
PF1571	Introduction to Electric Welding and Cutting	60
PF2711	Pipe and Tube Bending	21
STM100	Safety	12
STM135	Bracket, Support, Hanger, Guides and Anchor Fabrication	12
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42
AM1390	Steamfitter Pipefitter Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP
Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Trades Bridging

Start Date: September

Credential: Certificate

Program Length: 2 Semesters

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Happy Valley-Goose Bay - On Campus delivery

PROGRAM DESCRIPTION

This program is intended for students who would like to improve their employability skills and/or who are lacking either the academic courses or the required grades to meet the admission requirements for entry into most CNA Industrial Trades programs. The Trades Bridging program also provides a valuable "refresher" for mature students who have been away from education, training and/or the workforce for some time.

Semester 1 contains courses that enable students to form a foundational understanding of Industrial Trades and develop their fundamental academic skills. **Semester 2** further develops academic skills while empowering the student to enter two Industrial Trade areas where they will learn, practice, and strengthen their confidence and competence in these areas.

Students in the Trades Bridging program will be provided the opportunity to gain a wide range of knowledge and skills in preparation for further post-secondary training and/or employment in a trades environment. In addition to courses in English, mathematics, and science, students will participate in courses ranging from Standard First Aid to introductory courses investigating trades such as Carpenter, Electrician, and Heating Systems Technician. For example, the certification course covering Fall Protection and Confined Spaces provide students with the opportunity to develop safe working skills necessary for successful learning in specific Industrial Trades programs. Graduates of Trades Bridging will qualify for admission into the vast majority of the Industrial Trade programs or for admission into the College Transition program.

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Explore pathways to enter Industrial Trades programs at College of the North Atlantic (CNA).
2. Demonstrate an awareness of the occupations in industrial trades and program options at CNA.
3. Acquire introductory skills, knowledge, and competencies in industrial trades.
4. Explore provincial and national industrial trade labour market information, trends, and projections.
5. Demonstrate practical hands-on experience in a variety of industrial trade training environments.
6. Conduct career planning and job searches to advance employability skills.
7. Demonstrate academic skills, particularly in the areas of English, mathematics, and science.
8. Employ learning habits and strategies needed to succeed in post-secondary programs

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet the following academic criteria:

1. High School Graduation, or equivalent; OR

2. Students must be 19 years of age at the commencement date of the program, and have a minimum of Grade 9 completion, or equivalent.

3. Applications who do not meet the education prerequisites for this program, are 19 years at the time of application, and out of school for at least one year may be considered on an individual basis under the Mature Student requirements; for more information regarding Mature Student requirements please refer to Procedure AC-102-PR Admission.

4. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into

regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission

Courses

Semester 1

Code	Title	Hrs
MA1030	Mathematics I	60
CM1020	English I	75
SI1020	Science	60
TS1520	WHMIS	6
TS1530	Standard First Aid	14
SD1020	Orientation to Trades Bridging	12
TI1000	Trades Profiles	30
TS1510	Occupational Health and Safety	6
AM1001	Introduction to Skills for Success	9
SD1761	Workplace Essentials	24
TI1010	Job Search Workshop	15
MC1062	Computer Essentials	15
TI1020	Certifications	52
AJ1000**	Introduction to Carpenter	25
ER1000***	Intro Const/Indus Electrician	25
OM1020****	Intro to Heating Systems Tech	25

Semester 2

Code	Title	Hrs
MA1031	Mathematics II	60
CM1021	English II	75
SD1350	Portfolios	8
AP1102	Introduction to Apprenticeship	12
AJ1020**	Carpenter	120
AJ1760**	Chain Saw Safety	4
AJ1025**	Aerial Work Platforms – Scissors	8
AJ1030**	Aerial Work Platforms – Boom	8
ER1010***	Const/Indus Electrician	134
HE1621***	Powerline Hazards	6
OM1025****	Heating Systems Technician	134
HE1631****	Transportation of Dangerous Goods	6

Note:
Trade Legend
**Carpenter
***Construction/Industrial Electrician
****Heating Systems Technician

Welder

Start Date: September

Credential: Certificate

Program Length: 36 Weeks

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Burin - On Campus delivery
- Corner Brook - On Campus delivery
- Labrador West - On Campus delivery
- Placentia - On Campus delivery
- Prince Philip Drive - On Campus delivery

PROGRAM DESCRIPTION

This red seal program offers training in joining and severing metals in beams, girders, vessels, piping and other metal components that make metal parts used in construction and manufacturing plants, and weld parts, tools, machines and equipment. Some of the duties are:

- Develop patterns in given layouts, blueprints and work orders
- Clean and check for defects and shape component parts
- Examine blueprints and work orders
- Perform welding of various metals

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Interpret drawings and develop layout patterns for projects.
3. Use and maintain tools and equipment.
4. Follow required codes, specifications and standards.
5. Employ various welding methods using SMAW, GMAW, FCAW and GTAW

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into

regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:

- Machine shops
- Fabrication plants
- Garages
- Production plants
- Shipyard
- Oil and Gas

Courses

Level 1 Pre-Employment

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
WD1190	Tools and Equipment	60
WD1360	MCAW (Metal Core Arc Welding)	18
WD1390	Safety	6
WD1430	Hoisting, Lifting, Rigging and Access Equipment	30
WD1602	Oxy-Fuel Cutting, Heating, Gouging and Welding	60
WD1610	SMAW (Shielded Metal Arc Welding) I	30
WD1620	SMAW II – Fillet Weld all Positions	60
WD1631	GMAW (Gas Metal Arc Welding) I	18
WD1641	GTAW (Gas Tungsten Arc Welding) I	18
WD1651	Plasma Arc Cutting and Gouging	12
WD1661	Blueprint Reading I (Basic)	30
WD1670	Blueprint Reading II (Welding Symbols)	30
WD1682	Metallurgy	18
WD1691	Quality Control	15
WD1701	Stationary Machinery	12
WD1721	Jigs and Fixtures	12
WD1741	FCAW (Flux Core Arc Welding) I	18
WD1790	Work Planning	6
WD1801	SMAW (Shielded Metal Arc Welding) III	120
WD1815	Fillet and Groove Weld	6
WD1821	GMAW II – Fillet Weld all Positions, Mild Steel	18
WD1832	GMAW (Gas Metal Arc Welding) III	30
WD1871	Build Up of Metal Parts	12
WD1892	FCAW II – Fillet and Groove Weld	80
WD1900	Air Carbon Arc Cutting and Gouging	15
WD2910	Layout and Template Development Fundamentals	30
WD3020	Shop Drawings and Structural Components for Fabrication	30
AM1001	Introduction to Skills for Success	9
AM1101	Math Essentials	42

Code	Title	Hrs
AM1321	Welding Math Fundamentals	42
CM2161	Communication Essentials	36
SD1761	Workplace Essentials	24
MC1062	Computer Essentials	15
AP1102	Introduction to Apprenticeship	12
OT1150	Workplace Exposure	80

A certificate from College of the North Atlantic will be awarded upon successful completion of pre-employment level courses.

APPRENTICESHIP

Upon completion of the pre-employment certificate program, a graduate may pursue Red Seal Certification by finding employment, registering as an "Apprentice" and completing the following Advanced Level training and required work experience. The apprenticeship may take 4-5 years and would lead to Journeyperson status in the trade. For more information regarding apprenticeship and to view required apprenticeship-level courses, please refer to Plans of Training (POT) - Immigration, Population Growth and Skills (gov.nl.ca).

Welder/Metal Fabricator (Fitter)

Start Date: September

Credential: Diploma

Program Length: 74 Weeks

School: Natural Resources and Industrial Trades

Locations:

- Port aux Basques - On Campus delivery

PROGRAM DESCRIPTION

Versatility empowers.

Welders and Metal Fabricators use two different but related disciplines to transform raw metal materials into new usable forms. Our lives are completely surrounded – and supported – by this craft, from architectural structures, machines and heavy equipment to railings, hand tools and cutlery.

This combination of disciplines is extremely valuable in industry. There are applications for both fields across a range of industries such as auto, construction, energy and aerospace. Someone who has both welder and metal fabricator training has more choice in the job market when seeking employment. With the versatility of combined disciplines you can contribute to project efficiency with your ability to perform multiple tasks.
With that in mind, we have created this program with components of both our Welder and Metal Fabricator programs to give you work-ready skills to enter the labour force.
You leave equipped with the skills to plan a sequence of tasks to efficiently cut metal; lay out, cut and fabricate structural steel; develop patterns or follow directions from blueprints and engineering drawings; rig, hoist and move materials; perform welds of various metals using diverse welding methods; tack weld, bolt and rivet components; assemble and fit metal sections and sub-sections; install fabricated parts in the final product; and test materials and equipment using state-of-the-art techniques.
If this versatile program is a good fit for you, apply now!

Program Highlights

- Diploma in two years
- A combination of two Trades programs for a unique set of skills
- Ability to pursue apprenticeship in Welder or Metal Fabricator (Fitter) upon program completion

Did You Know?

- The global metal fabrication market is anticipated to expand at a CAGR of around 4% during the forecast period, 2020-2026.[1]
- Shifting trends in finance and manufacturing sectors and the adoption of automated fabrication process is expected to propel market growth.
- Increasing demand and supply for metal fabrication across various industries such as automotive, aerospace and defense and manufacturing is anticipated.
- Wage levels in Newfoundland and Labrador are on par with the highest in Canada.[2]
- Some of the most popular metal types available for metal fabrication include titanium, brass, aluminum, magnesium, nickel, silver, copper and gold.

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[1] Metal Fabrication Market Size, Growth & Industry Analysis | Research Report 2026 (dataintelo.com)

[2] Labourer - Metal Fabrication in Canada | Wages - Job Bank

OUTCOMES

Upon successful completion of the program graduates will be able to:

1. Demonstrate safe work practices and personal protection.
2. Interpret shop drawings, sketches and fabrication drawings.
3. Follow required codes, specifications and standards.
4. Prepare work area and equipment schedule.
5. Prepare final products for finish.
6. Demonstrate welds using SMAW, GMAW, FCAW and GTAW.
7. Perform non-destructive testing inspections on finished products.
8. Perform welds of various metals.
9. Perform welds of various positions required by industry.
10. Complete a project that encompasses skills from both welding and metal fabrication.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation
2. Adult Basic Education
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics 1102A, 1102B, 1102C and 2102A, 2102B, 2102C or 3102A, 3102B and 3102C
ii. Science 3101, 3102, 3103
3. Comprehensive Arts and Science (CAS) Trades
Comprehensive Arts and Science (Trades) Certificate
Effective Academic Year 2025 - 2026:
Trades Bridging
Trades Bridging Certificate
4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.
5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates may find employment in the following areas:
- Machine shops
- Fabrication plants
- Production plants

- Oil and Gas
- Mining
- Ship Yards

Courses

Semester 1

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
WD1390	Safety	6
WD1190	Tools and Equipment	60
WD1602	Oxy-Fuel Cutting, Heating, Gouging and Welding	60
WD1610	SMAW 1 - Set-up, Strike and Maintain an Arc	30
WD1631	GMAW 1	18
WD1661	Blueprint Reading 1 (Basic)	30
WD1670	Blueprint Reading 2 (Welding Symbols)	30
WD1620	SMAW 2 - Fillet Weld, All Positions	60
WD1430	Hoisting, Lifting, Rigging and Access Equipment	30
WD1701	Stationary Machinery	12
AM1101	Math Essentials	42
SD1761	Workplace Essentials	24

Semester 2

Code	Title	Hrs
WF1200	Oxy-Fuel Cutting for Industry	30
SF1140	Blueprint Reading (Shop Drawings)	30
SF1150	Layout Introduction and Parallel Line Development	40
SF1160	Radial and Triangulation Layout	50
SF1460	Basic Plate Development	120
WD1185	Bending and Rolling	4
SF1400	Press Brake Operation	45
SF1410	Roll Forming Equipment and Operation	45
CM2161	Communication Essentials	36
AM1231	Metal Fabrication Math Fundamentals	42

Semester 3

Code	Title	Hrs
SF1470	Basic Assembly and Fitting	40
WD1730	Fabrication Fundamentals	15
WD1871	Build Up of Metal Parts	12
WD1721	Jigs and Fixtures	12
WD1360	MCAW (Metal Core Arc Welding)	18
WD2410	Stud and Spot Resistance Welding	4
WF1300	Capstone I Welder - Metal Fabricator	90
AM1001	Introduction to Skills for Success	9

Semester 4

Code	Title	Hrs
WD1270	Shielded Metal Welding (SMAW)	30
WD1801	SMAW (Shielded Metal Arc Welding) 3	120
WF2100	SMAW for Industry I	60
WF2110	SMAW for Industry II	70
WD1815	Fillet and Groove Weld	6
WD1741	FCAW (Flux Cored Arc Welding) I	18
WD1892	FCAW (Flux Cored Arc Welding) 2	80

Code	Title	Hrs
WD1770	Submerged Arc Welding Set-up	4
WD1682	Metallurgy	18
WD1651	Plasma Arc Cutting and Gouging	12
MC1062	Computer Essentials	15

Semester 5

Code	Title	Hrs
WD2910	Layout & Template Development Fundamentals	30
WD1821	GMAW (Gas Metal Arc Welding) 2	18
WD1832	GMAW (Gas Metal Arc Welding) 3 Groove Welds, All Positions, Mild Steel	30
WD1641	GTAW (Gas Tungsten Arc Welding) I	18
WD1900	Air Carbon Arc Cutting and Gouging	15
WD3020	Shop Drawings and Structural Components	30
WF2200	FCAW for Industry	40
WF2210	GTAW for Industry	80
WF2215	Pipe Welding for Industry	80
WD1790	Work Planning	6
AP1102	Introduction to Apprenticeship	12
AM1321	Welder Math Fundamentals	42

Semester 6

Code	Title	Hrs
WF2300	Capstone II Welder - Metal Fabricator	100
WDF065	Weld Faults	9
WDF030	Communication and Trade Documents	3
OT1150	Workplace Exposure	80
WD1691	Quality Control	15

Welding Engineering Technician

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Natural Resources & Industrial Trades

Locations & Delivery Modes:

- Burin - On Campus delivery

PROGRAM DESCRIPTION

A quality constructed career.

High quality welding of materials and equipment is essential across numerous industries in today's economy. Welded materials support our daily lives, influence the world around us, and endure through time. Weld quality is thus critical for citizens' health and safety and is also related to the economic health of a country.

The Welding Engineering Technician acts as a liaison between professional engineers and welding practitioners and ensures that appropriate systems are in place to monitor welding integrity. In fact, it is they who create and manage quality control and quality assurance systems, examine industry standards and codes, and recommend which welding processes and procedures to apply for achievement of compliance. They perform visual and non-destructive testing (NDT) of welded materials, evaluate and record test results and recommend corrective actions.

This work requires attention to detail and great problem-solving skills, as well as the technical knowledge to complete diverse tasks that utilize the latest in welding technology and contribute to creating safe, strong assemblies that last.

CNA's project-based, immersive Welding Engineering Technician program is designed to meet growing industry demand for these highly trained technicians. In our modern shops and laboratory facilities, you'll gain skills and knowledges in Welding, Materials Science, Non-destructive Testing, and Computer Aided Design/Computer Aided Manufacturing (CAD/CAM). With us, you will develop the skills and knowledge to excel in this profession. The work placement is optional – you can stay and avail of additional hands-on training or graduate and get straight to work in the industry.

Upon completing this program, you'll have qualifications or credentials on provincial, national and international levels and you are automatically eligible for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), as well as similar associations in Canada.

If a diverse network of work opportunities sparks your interest, apply today!

Program Highlights

- Diversely certified instructors guide your applied learning
- Our state-of-the-art welding shop is uniquely Canadian Welding Bureau (CWB)-certified, providing you with opportunities to engage with industry professionals throughout the program
- NDT laboratories are fully equipped to demonstrate the most modern flaw detection processes including digital ultrasonic inspection, radiography, magnetic particle inspection, liquid penetrant inspection and x-ray fluorescence
- Advanced metallurgy laboratories provide immersive experiences in evaluating material properties
- Numerous certification opportunities are provided throughput the program

Did You Know?

- The global welding market size was US $20.23 billion in 2020 and is projected to grow to US $28.66 billion in 2028.

- Over 70% of all fabricated products are made with the expertise of welders.
- Major North American energy systems and civil/marine infrastructures are nearing their end of design life and must be refitted and renewed.
- Aging demographics in this field indicate an acute need to refresh the workforce.
- Graduates of the program have opportunities to travel the globe to work on major infrastructure projects.
- Welding failures are a leading cause of industrial and environmental catastrophes, resulting in more stringent weld quality requirements, materials verification and the need for welding inspectors.

ACCREDITATION

Welding Engineering Technician program is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists until December 2028. Welding Engineering Technician is also recognized internationally by the signatories of the Dublin Accord. This provides graduates of the program with both national and international mobility for work and/or study.

NOTE: There are specific vision requirements that are required by the Canadian General Standards Board prior to completing final certification in each discipline. Please refer to the following link for the requirements: http://www.nrcan-rncan.gc.ca/mms-smm/ndt-end/eli-adm/vis-vis-eng.htm

PROGRAM OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Develop, manage, and implement welding-related quality management systems
2. Interpret and apply standards and codes for welding and non-destructive testing
3. Develop and maintain welding inspection procedures
4. Execute welding inspection and non-destructive testing procedures as defined by standards, codes, and related specifications
5. Interpret and evaluate quality inspection and test results
6. Verify and recommend welding operator qualifications
7. Prepare and maintain inspection records and reports
8. Set up equipment, lay out work to specifications, and weld to prescribed standards
9. Perform project management activities within a welding and fabrication, and quality assurance, context.

CURRICULUM

General education consisting of Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrotechnology, Engineering Graphics, Technology Awareness, and Student Success.

Specific education in the theory and application of welding processes, procedures, and weldments.

Practical education employing labs and shops focused on Welding, Materials, Science, Nondestructive Testing and Computer Aided Design/Computer Aided Manufacturing (CAD/CAM).

CAREER OPPORTUNITIES

The student, upon graduation, may find employment with contractors, metal fabricators, quality assurance/quality control consultants, welding inspection firms, suppliers, oil & gas exploration/production/processing facilities and any other group that must comply with standards associated with the welding industry.
Graduates completing this program are automatically eligible for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), as well as any similar association in Canada. Graduates with two years of progressive work experience may be eligible to receive the designation of Certified Technician (C. Tech) upon completion of a Professional Practice and Ethics Exam.

EXTERNAL CERTIFICATIONS

Students in the Welding Engineering Technician program will be required to complete certifications in the following areas prior to the start of Semester 3 (Note: Fees for these examinations are not included in tuition/supply fees):

- Standard First Aid/Heart Start
- WHMIS

As an option, students will be eligible to write the following external certifications prior to the start of Semester 3 (Note: Fees for these examinations are not included in tuition/supply fees):

- CSA W47.1 Welder/Welder Operator Qualification
  - Shielded Metal Arc Welding (SMAW) technique
- Canadian Nuclear Safety Commission
  - Certified Exposure Device Operator

Additionally, students will be eligible to write the following certification examinations upon graduation (Note: Fees for these examinations are not included in tuition/supply fees):

- CSA W178.2 Welding Inspection Level 1
- CSA W47.1 Welder/Welder Operator Qualification
  - Multiple techniques
- CAN/CGSB 48.9712:
- Radiography (RT) Level I
- Ultrasonic Inspection (UT) Level I
- Magnetic Particle Inspection (MT) Level II
- Liquid Penetrant Inspection (PT) Level II

NOTE: There are specific vision requirements that are required by the Canadian General Standards Board prior to completing final certification in each discipline. Please refer to the following link for the requirements: http://www.nrcan-rncan.gc.ca/mms-smm/ndt-end/eli-adm/vis-vis-eng.htm

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. High School

High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% minimum) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1020, BL1021
b. Introductory Chemistry: CH1030, CH1031
c. Introductory Physics: PH1050, PH1051

Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:

i. Math (60% minimum) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1025, BL1026
b. Introductory Chemistry: CH1035, CH1036
c. Introductory Physics: PH1055, PH1056

Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):

i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
PH1100	Physics	4	3	2
EG1110	Engineering Graphics	3	2	2
ET1100	Electrotechnology I	4	3	2
MA1700	Mathematics	4	3	2
CM1400	Technical Report Writing I	3	3	0
WD1440	SMAW Fundamentals	4	2	6

Semester 2 (Winter)

Code	Title	Cr	Le	La
EG1430	AutoCAD Essentials	3	2	2
MA1101	Advanced Mathematics	5	5	0
CM1401	Technical Report Writing II	3	3	0
CF1100	Materials and Processes I	3	3	1

Code	Title	Cr	Le	La
WD1450	SMAW Processes	4	2	6
SP1320	Radiation Safety	2	2	1
MC1850	Spreadsheet Applications	1	0	2

Semester 3 (Fall)

Code	Title	Cr	Le	La
EG1310	Applied CAD	1	0	3
CF1101	Materials and Processes	3	3	1
FM2200	Mechanics	3	3	1
WD2620	Wire Feed Arc Welding	4	2	6
SP2110	NDT - MR & RT	4	3	3
EG1321	Drawing Interpretation	1	0	3

Semester 4 (Winter)

Code	Title	Cr	Le	La
DE2350	Project Management	3	2	2
WD2650	GTAW Processes	4	2	6
WD2680	Welding Standards & Codes	2	2	0
WD2300	Welding Failure Analysis	3	2	2
WD2450	Welding Metallurgy	2	2	1
SP2120	NDT - PT & UT	4	3	3
SP1450	Quality Management Systems	3	3	0

Semester 5 (Intersession)

Code	Title	Cr	Le	La
LW1070	Ethics, Sustainability & Law	2	2	0
WD3120	Cost Analysis Project	5	2	8
DR3310	CAD/CAM	2	1	2

Welding Engineering Technician (Co-op)

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Natural Resources & Industrial Trades

Locations & Delivery Modes:

- Burin - On Campus delivery

PROGRAM DESCRIPTION

A quality constructed career.

High quality welding of materials and equipment is essential across numerous industries in today's economy. Welded materials support our daily lives, influence the world around us, and endure through time. Weld quality is thus critical for citizens' health and safety and is also related to the economic health of a country.

The Welding Engineering Technician acts as a liaison between professional engineers and welding practitioners and ensures that appropriate systems are in place to monitor welding integrity. In fact, it is they who create and manage quality control and quality assurance systems, examine industry standards and codes, and recommend which welding processes and procedures to apply for achievement of compliance. They perform visual and non-destructive testing (NDT) of welded materials, evaluate and record test results and recommend corrective actions.

This work requires attention to detail and great problem-solving skills, as well as the technical knowledge to complete diverse tasks that utilize the latest in welding technology and contribute to creating safe, strong assemblies that last.

CNA's project-based, immersive Welding Engineering Technician program is designed to meet growing industry demand for these highly trained technicians. In our modern shops and laboratory facilities, you'll gain skills and knowledges in Welding, Materials Science, Non-destructive Testing, and Computer Aided Design/Computer Aided Manufacturing (CAD/CAM). With us, you will develop the skills and knowledge to excel in this profession. The work placement is optional – you can stay and avail of additional hands-on training or graduate and get straight to work in the industry.

Upon completing this program, you'll have qualifications or credentials on provincial, national and international levels and you are automatically eligible for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), as well as similar associations in Canada.

If a diverse network of work opportunities sparks your interest, apply today!

Program Highlights

- Choose to complete the optional embedded 12-week (minimum) work placement, or complete program courses only – the graduation time is the same
- Diversely certified instructors guide your applied learning
- Our state-of-the-art welding shop is uniquely Canadian Welding Bureau (CWB)-certified, providing you with opportunities to engage with industry professionals throughout the program
- NDT laboratories are fully equipped to demonstrate the most modern flaw detection processes including digital ultrasonic inspection, radiography, magnetic particle inspection, liquid penetrant inspection and x-ray fluorescence
- Advanced metallurgy laboratories provide immersive experiences in evaluating material properties
- Numerous certification opportunities are provided throughout the program

Did you know?

- The global welding market size was US $20.23 billion in 2020 and is projected to grow to US $28.66 billion in 2028.
- Over 70% of all fabricated products are made with the expertise of welders.
- Major North American energy systems and civil/marine infrastructures are nearing their end of design life and must be refitted and renewed.
- Aging demographics in this field indicate an acute need to refresh the workforce.
- Graduates of the program have opportunities to travel the globe to work on major infrastructure projects.
- Welding failures are a leading cause of industrial and environmental catastrophes, resulting in more stringent weld quality requirements, materials verification and the need for welding inspectors.

ACCREDITATION

Welding Engineering Technician program is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists until December 2028. Welding Engineering Technician is also recognized internationally by the signatories of the Dublin Accord. This provides graduates of the program with both national and international mobility for work and/or study.

NOTE: There are specific vision requirements that are required by the Canadian General Standards Board prior to completing final certification in each discipline. Please refer to the following link for the requirements: http://www.nrcan-rncan.gc.ca/mms-smm/ndt-end/eli-adm/vis-vis-eng.htm

PROGRAM OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Develop, manage, and implement welding-related quality management systems
2. Interpret and apply standards and codes for welding and non-destructive testing
3. Develop and maintain welding inspection procedures
4. Execute welding inspection and non-destructive testing procedures as defined by standards, codes, and related specifications
5. Interpret and evaluate quality inspection and test results
6. Verify and recommend welding operator qualifications
7. Prepare and maintain inspection records and reports
8. Set up equipment, lay out work to specifications, and weld to prescribed standards
9. Perform project management activities within a welding and fabrication, and quality assurance, context.

CURRICULUM

General education consisting of Communication Skills (oral and written), Mathematics, Physics, Chemistry, Electrotechnology, Engineering Graphics, Technology Awareness, and Student Success.

Specific education in the theory and application of welding processes, procedures, and weldments.

Practical education employing labs and shops focused on Welding, Materials, Science, Nondestructive Testing and Computer Aided Design/Computer Aided Manufacturing (CAD/CAM).

CAREER OPPORTUNITIES

The student, upon graduation, may find employment with contractors, metal fabricators, quality assurance/quality control consultants, welding inspection firms, suppliers, oil & gas exploration/production/processing facilities and any other group that must comply with standards associated with the welding industry.
Graduates completing this program are automatically eligible for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL), as well as any similar association in Canada. Graduates with two years of progressive work experience may be eligible to receive the designation of Certified Technician (C. Tech) upon completion of a Professional Practice and Ethics Exam.

EXTERNAL CERTIFICATIONS

Students in the Welding Engineering Technician program will be required to complete certifications in the following areas prior to the start of Semester 3 (Note: Fees for these examinations are not included in tuition/supply fees):

- Standard First Aid/Heart Start
- WHMIS

As an option, students will be eligible to write the following external certifications prior to the start of Semester 3 (Note: Fees for these examinations are not included in tuition/supply fees):

- CSA W47.1 Welder/Welder Operator Qualification
  - Shielded Metal Arc Welding (SMAW) technique
- Canadian Nuclear Safety Commission
  - Certified Exposure Device Operator

Additionally, students will be eligible to write the following certification examinations upon graduation (Note: Fees for these examinations are not included in tuition/supply fees):

- CSA W178.2 Welding Inspection Level 1
- CSA W47.1 Welder/Welder Operator Qualification
  - Multiple techniques
- CAN/CGSB 48.9712:
- Radiography (RT) Level I
- Ultrasonic Inspection (UT) Level I
- Magnetic Particle Inspection (MT) Level II
- Liquid Penetrant Inspection (PT) Level II

NOTE: There are specific vision requirements that are required by the Canadian General Standards Board prior to completing final certification in each discipline. Please refer to the following link for the requirements: http://www.nrcan-rncan.gc.ca/mms-smm/ndt-end/eli-adm/vis-vis-eng.htm

ENTRANCE REQUIREMENTS

Eligibility for admission to an Engineering Technology program requires the applicant to meet one of the following four academic criteria:

1. High School

High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school
Advanced Mathematics 2200 and 3200 can be exempted from Math 1700. Students must apply for the exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1020, BL1021
b. Introductory Chemistry: CH1030, CH1031
c. Introductory Physics: PH1050, PH1051

Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:

i. Math (60% MINIMUM) MA1040, MA1041

ii. Two Science courses chosen from one of the following three combinations:

a. Introductory Biology: BL1025, BL1026

b. Introductory Chemistry: CH1035, CH1036

c. Introductory Physics: PH1055, PH1056

Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):

i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C

ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C

iii. Science from one of the following sections:

a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C

b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C

c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
PH1100	Physics	4	3	2
EG1110	Engineering Graphics	3	2	2
ET1100	Electrotechnology I	4	3	2
MA1700	Mathematics	4	3	2
CM1400	Technical Report Writing I	3	3	0
WD1440	SMAW Fundamentals	4	2	6

Semester 2 (Winter)

Code	Title	Cr	Le	La
EG1430	AutoCAD Essentials	3	2	2
MA1101	Advanced Mathematics	5	5	0
CM1401	Technical Report Writing II	3	3	0
CF1100	Materials and Processes I	3	3	1

Code	Title	Cr	Le	La
WD1450	SMAW Processes	4	2	6
SP1320	Radiation Safety	2	2	1
MC1850	Spreadsheet Applications	1	0	2

Semester 3 (Spring)

Code	Title	Cr	Le	La
WT1150	Co-op Work Term (minimum 12 weeks)	5	0	0

Semester 4 (Fall)

Code	Title	Cr	Le	La
EG1310	Applied CAD	0	3	0
CF1101	Materials and Processes	3	3	1
FM2200	Mechanics	3	3	1
WD2620	Wire Feed Arc Welding	4	2	6
SP2110	NDT - MR & RT	4	3	3
EG1321	Drawing Interpretation	1	0	3

Semester 5 (Winter)

Code	Title	Cr	Le	La
DE2350	Project Management	3	2	2
WD2650	GTAW Processes	4	2	6
WD2680	Welding Standards & Codes	2	2	0
WD2300	Welding Failure Analysis	3	2	2
WD2450	Welding Metallurgy	2	2	1
SP2120	NDT - PT & UT	4	3	3
SP1450	Quality Management Systems	3	3	0

Semester 6 (Intersession)

Code	Title	Cr	Le	La
LW1070	Ethics, Sustainability & Law	2	2	0
WD3120	Cost Analysis Project	5	2	8
DR3310	CAD/CAM	2	1	2

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Agriculture Technician Co-op

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Corner Brook - On Campus delivery

PROGRAM DESCRIPTION

Feeding the future.

Modern agriculture is growing to include technologies that boost crop yields, assist planning and management, along with utilizing more efficient and sustainable farming methods. With these revolutionary advancements, the agriculture industry requires knowledgeable technicians who are skilled in the latest techniques and standards.

In this Agriculture Technician Co-op program, you will be engaged in sustainable agriculture and exposed to the study of plants and animals, including the biological effects of soil, climate, chemical management activities, tillage, fertilization, and irrigation on plant and animal performance and enhancement. You will perform physical agriculture tasks combining energy, labor, skills, and machinery using the latest technology and best practices in a real-world setting on a day-to-day basis.

A broad range of course content is aimed at developing good analytical and organizational skills, as well as the ability to work effectively as a team member. After successfully completing this program, you will have a basic working knowledge of agricultural techniques and procedures related to the care of livestock and plants and should be able to safely operate farm equipment.

As a graduate of this program, you will be able to assist in overcoming challenges identified in the sector, including agriculture production, agriculture business development and risk management, sales and marketing, food safety and processing, livestock care and processing, and value-added agriculture.

If this has planted a seed of curiosity with you, dig further with us to find out more!

Program Highlights

- Agriculture Technician instructors and students have revitalized Corner Brook campus's atrium, turning it into a lively display of an indoor jungle. They have created a green haven under the open glassed ceiling, making use of the sunlight and warmth in the space to create a tropical island feel
- Included is a field camp at the Centre for Agriculture and Forestry Development
- Learn to balance the market demands for various farm products with several socioeconomic factors including cost of production, taxation, research funding, technical assistance, land usage, and potential environmental impacts

Did you know?

- Technological progress in agriculture is intrinsically linked to the rise of urban centers and commercial exchange. New technological developments have always been prevalent in this field.
- To help feed Government's Agriculture Work Plan to enhance the sector, CNA partnered with Fisheries, Forestry and Agriculture, to break ground on a new two-year Agriculture Technician (Co-op) program in 2019.
- Students of the program were interviewed by The NL Farm and Food Show, Fit to Eat NL, in October 2022. The episode was a chance to chat with students in the class about their motivations, hopes, and expectations in farming.

OBJECTIVES

Upon successful completion of the program, graduates will be able to:

1. Perform a wide variety of duties in support of agriculture using farm tools and equipment.
2. Understand agriculture research priorities and procedures to assist the industry in moving toward a reliable, sustainable, and safe supply of food products.
3. Prepare land, select seed and nutrient varieties, plant, harvest and market agriculture products.
4. Care for livestock, as required on a day-to-day basis.
5. Safely operate farm tractors, calibrate and maintain farm equipment, and attachments.

EMPLOYMENT OPPORTUNITIES

The province's agriculture industry is a significant contributor to the economy of rural Newfoundland and Labrador. Agriculture Technicians can work with Provincial and Federal Governments, existing agriculture operations or develop their own farming enterprise.

ENTRANCE REQUIREMENTS

Academic:
Eligibility for admission to the Agriculture Technician Diploma program requires the applicant to meet one of the following four academic criteria:

1. High School
Provincial High School Graduation Certificate with a 60% average in eight level 3000 credits or equivalent.

2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate.
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate

3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with General College Profile (or Business-Related College Profile or Degree and Technical Profile) with an average pass mark of 60%

4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program must be at least 19 years of age at the time of application and out of school for at least one (1) year to be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency
All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

CERTIFICATIONS
In addition to the formal courses listed in the program of studies, students in the Agriculture Technician program are required to complete or obtain valid certification in the following areas upon graduation:

Standard First Aid & CPR/AED
ATV Training
WHMIS/OHS
Chainsaw Safety

Pesticide Applicators Certification
Skid Steer Operation
Forklift Operation
Fall Arrest

SPECIAL REQUIREMENTS

NOTE: Students should be aware that additional fees apply for certifications, field trips/tours. Additional expenses will be necessary for the purchase of items of clothing required for scheduled labs and outdoor work.

Courses

Semester 1

Code	Title	Cr	Le	La
AG1100	Sustainable Agriculture & the Food System	2	2	0
AG1350	Farm Facilities	3	2	2
GE1310	Soil Fundamentals	3	2	3
AG1400	General Agronomy	4	3	2
MC1040	Computer Applications	2	2	0
AG1120	Agriculture Safety/Field Exposure	4	2	5

Semester 2

Code	Title	Cr	Le	La
AG1510	Animal Care	3	2	2
AG1600	Vegetable and Fruit Production	3	2	3
AG1620	Field Crops	3	2	3
CM1460	Writing for the Workplace	2	2	0
AG1430	Precision Farming	2	1	3
AG1560	Dairy Production	3	2	3

Semester 3 (Intersession)

Code	Title	Cr	Le	La
AG1640	Tillage and Planting	3	2	3
AG1300	Farm Equipment Operation	3	2	4
WC1850	Co-op Work Term	5	0	0

Note:

Additional fees and expenses will be required for participation in the field camp included in AG1300.

Prior to beginning WC1850 students in the Agriculture Technician Co-op complete AG1640 and AG1300 and are required to obtain the Pesticide Applicator License.

Semester 4

Code	Title	Cr	Le	La
AG1720	Weed Management	3	2	2
AG1740	Crop Insects and Diseases	3	2	2
AG1500	Livestock Genetics	3	2	2
AC2040	Bookkeeping for Agriculture	4	3	2
AG1520	Ruminant Production: Beef, Sheep & Goats	3	2	3
AG1305	Greenhouse Production	3	2	3

Semester 5

Code	Title	Cr	Le	La
AG1240	Agriculture Sales & Marketing	3	2	2
AG1540	Non-Ruminant Production: Swine, Honeybee Production	3	2	3
AG1550	Poultry and Egg Production	3	2	2
AG1800	Food Safety and Food Processing	3	2	2
AG1700	Nutrient Management	4	3	2
AG1570	Livestock Nutrition	3	2	3

Semester 6 (Intersession)

Code	Title	Cr	Le	La
AG1200	The Business of Agriculture	4	3	3
AG1530	Livestock Diseases	3	2	3
AG1760	Forage and Pasture Management	3	2	3

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Fish and Wildlife Technician

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Corner Brook - On Campus delivery

PROGRAM DESCRIPTION

Sustainably wild.

There is a growing demand for professionals in Canada's fisheries and wildlife field. With increasing emphasis on sustainable development, integrated resource management policy and ecosystem-based management across Canada and around the world, technicians in the natural resources sector are sought after in matters related to biodiversity in general, and fish and wildlife management issues in particular.

The requirement for the forest industry to consider wildlife in its management practices and the increased monitoring and management of freshwater and marine resources highlights the need for these professionals. Fisheries and wildlife technicians are involved with fishing and aquaculture activities in government departments, First Nations, academia and independent consulting.

This two-year Fish and Wildlife Technician program, which shares many courses with the Forest Resources Technician program, is designed to provide those with a specific interest in fish and wildlife. The program reflects the trend towards integrating a wide range of natural resources technology within government departments at Federal and Provincial levels, and it provides a balance of field and classroom experiences that include a significant computer-based data collection and analysis component.

Play an important part in preserving, growing and managing Canada's rich biodiverse resources – apply now!

Program Highlights

- Actively participate in the solution of fish and wildlife management problems and challenges
- Identify forest ecosystem challenges and opportunities and undertake such assessments, preventive measures and treatments as might be associated with fish and wildlife conservation and management
- Learn to to utilize a wide range of field and office equipment and techniques associated with the assessment and analysis of fish and wildlife resources data
- Qualify for continued learning experiences at the post-graduate level

Did you know? [1]

- In 2015, the core workforce was comprised of 12,569 professionals in Canada. By 2024, that number is projected to increase to 14,864.
- Government is a major employer of fish and wildlife practitioners.
- According to Fisheries and Wildlife ECO Canada, the demand for managers in aquaculture, fishing, game and land, and others is at 62%, and demand for scientists and technicians in aquatic and wildlife areas is at 35%.
- This field encompasses environmental protection, resource management, and resource sustainability

[1]Fisheries and Wildlife – ECO Canada (n.d)

OBJECTIVES

Upon successful completion of the Fish and Wildlife Technician program, graduates of the program will have the knowledge and skills to be able to:

1. Actively participate in the solution of fish and wildlife management problems and challenges.

2. Identify forest ecosystem challenges and opportunities and to undertake such assessments, preventive measures and treatments as might be associated with fish and wildlife conservation and management.
3. Utilize a wide range of field and office equipment and techniques associated with the assessment and analysis of fish and wildlife resources data.
4. Pursue continued learning experiences at the post graduate level.

EMPLOYMENT OPPORTUNITIES

Graduates of this program may obtain employment throughout Canada in a variety of fish and wildlife related fields: protection and enforcement, resource inventory and site classification, habitat protection and improvement, environmental impact assessment and parks and interpretation programs. Graduates are employed with governmental and private agencies in fields ranging from forestry technicians to fisheries observers.

PROGRAM TRANSFERABILITY

Graduates of the Fish and Wildlife Technician program, who wish to pursue additional post-secondary studies, can apply for entry with advanced standing at a number of Canadian Universities that the college has established credit transfer agreements with. Please refer to the NL Department of Education's transfer guide (www.cna.nl.ca/transfer), or contact your intended university or college.

CNA presently has articulation agreements with University of New Brunswick and Royal Roads University.

ACCREDITATION AND RECOGNITION

To ensure a consistently high standard of training and education, College of the North Atlantic's Fish and Wildlife Technician program is accredited by the North American Wildlife Technology Association (NATWA).

CERTIFICATIONS

In addition to the formal semester courses listed in the program of studies, students in the Fish and Wildlife Technician program are required to obtain certification in the following areas over the two-year period of study:
Chainsaw Safety
Canadian Firearm Safety Course / Hunter Education
Pleasure Craft Operators Card
WHMIS/OHS
ATV Safety Training
Wilderness First Aid
Snowmobile Safety

NOTE: Students should be aware that additional fees and expenses apply for most of these certifications and for field camps, tours and On-the-Job Training. Students will be required to hold valid certifications for the above courses prior to graduation.

ENTRANCE REQUIREMENTS

Academic:
Eligibility for admission to the program requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201 or 3202
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from Math 1100. Students must apply for the exemption.
iii. Science – (4 credits) two of which must be chosen from:

Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Environmental Science 3205

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math : MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Biology: BL1020, BL1021
b. Chemistry: CH1030, CH1031
c. Physics: PH1050, PH1051

Note: It is strongly recommended that CAS students who intend to enroll in the Fish and Wildlife, Forest Resources Technician, Natural Resources Technician or Northern Natural Resources Technician program complete BL1020 and BL1021.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math : MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Biology: BL1020, BL1021
b. Chemistry: CH1030, CH1031
c. Physics: PH1050, PH1051

Note: It is strongly recommended that CAS students who intend to enroll in the Fish and Wildlife, Forest Resources Technician, Natural Resources Technician or Northern Natural Resources Technician program complete BL1025 and BL1026.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile (and appropriate grades) may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

SPECIAL REQUIREMENTS

Because of the extensive field exposure incorporated in this program, students are required to acquire the following equipment and clothing: compass, axe, snowshoes, rubber boots, hiking boots, chest wader, good quality rainwear, neoprene gloves and other clothing appropriate for outdoor work.

NOTE: Participation in activities that are physically demanding will be required due to the extensive field components incorporated into this program.

Courses

Semester 1

Code	Title	Cr	Le	La
BL1120	Biology I	3	2	3
CM1400	Technical Report Writing I	3	3	0
EN2120	Environmental Citizenship	3	3	0
MA1100	Mathematics	5	4	2
MC1850	Spreadsheet Applications	1	0	2
SU1150	Field Navigation	3	2	3
GE1420	Physical Environments	3	2	3

**Admission into the appropriate Mathematics course will be decided by the grade in High School math.*

Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from MA 1100 Mathematics. Students must apply for the exemption.

Semester 2

Code	Title	Cr	Le	La
CM1401	Technical Report Writing II	3	3	0
CS2630	Wilderness Survival	1	1	1
FR1330	Natural Resource Measurements I	3	2	3
BL1400	Fish and Wildlife Biology	4	3	2
EY2210	Silvics/Dendrology I	3	2	3
MA1670	Statistics	4	4	1
SU3210	Geographic Information Systems	2	1	3

Semester 3 (Intersession I)

Code	Title	Cr	Le	La
FT1410	Fish & Wildlife Field Camp I	0	0	2 wks
RM1400	Wildlife Techniques I	4	3	2
RM1500	Fisheries Techniques I	4	3	2

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4

Code	Title	Cr	Le	La
EY1200	Ecosystem Ecology	2	1	3
FT1430	Fish and Wildlife Field Camp II	0	0	1 wk
LW2210	Natural Resources Policy and Law	4	4	0
RM1401	Wildlife Techniques II	3	2	2
RM1501	Fisheries Techniques II	3	2	2
RM2200	Habitat Assessment	3	2	3
SU1710	Forest Surveying	3	2	3
SU1575	Remote Sensing Applications for Natural Resources	3	2	3

Semester 5

Code	Title	Cr	Le	La
EY2510	Population Ecology	3	2	2
HR2200	Human Relations	2	1	2
LW2211	Law Enforcement	4	3	2
PR2660	Technical Project and Presentation	2	1	2
RM2420	Habitat Management	3	2	2
RM2410	Wildlife Techniques III	3	2	2
RM2500	Fisheries Techniques III	3	2	2

Semester 6

Code	Title	Cr	Le	La
OJ1301	On-the-Job Training	0	0	3 wks

Students graduating from the Fish and Wildlife Technician program can complete the Forest Resources Technician program with one additional year. Interested students must begin their studies in the First Technical Intersession of the Forest Resources Technician program.

Forest Resources Technician

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Corner Brook - On Campus delivery

PROGRAM DESCRIPTION

Stewards of sustainability.

A transformation has swept the forestry industry, changing the business and planting the seeds of sustainable eco-management. Canada's forests support more than 300,000 jobs across the country and add over $26 billion to our economy each year1. At the same time, a commitment to maintain forest ecosystems and biodiversity has created a need for protectors and stewards of one of our most valuable natural resources.

That's what Forest Resource Technicians are – protectors and stewards of sustainability for this precious ecosystem. Some 90 per cent of animal and plant species are found in the forest and cannot survive without them. And as the "lungs of the earth," they are essential to human populations as well.

This lays the ground for a dynamic and diverse career that will open pathways to employment throughout Canada in a variety of forestry-related fields such as: parks, wildlife and environmental assessment, forest inventory and site classification, silviculture, logging and engineering, forest access road construction and maintenance, and protection and enforcement. Sustainable forest management in Canada is especially important for rural and Indigenous communities, where forest-based work is a main source of income and subsistence.

This nationally accredited program will prepare you to identify forest ecosystem issues to develop preventive measures, treatments and practices used in forest resource protection, management and utilization. You will acquire skills with field and office equipment to assess and analyze natural resources data and build your competence and confidence in finding sustainable solutions to forest management problems and challenges.

You will be firmly planted in the knowledge to grow in this meaningful career.

Program Highlights

- Additional certification in: Canadian Firearms/Hunter Education, Timber Scaling, WHMIS?OHS, Chainsaw Safety, ATV Safety, Snowmobile Safety, Wilderness First Aid & Certification Board License - Pleasure Craft
- Nationally accredited by the Technology Accreditation Canada (TAC)
- Apply for entry with advanced standing at several Canadian Universities (transfer credits)
- Graduates receive a silver ring from the Canadian Institute of Forestry (CIF) and are eligible for membership in the CIF

Did you know?

- Canada is home to 38 percent of the world's certified forests[2].
- Canada's forest industry employs over 300,000 Canadians (Natural Resources Canada, 2020).
- Tree genomics is the research and study of a tree's DNA, also known as its genome[3].
- Each year, the forest industry in Canada plants over half a billion trees as part of legal requirements to reforest any harvested Crown land forests[4].
- Canada's forest products industry has the best environmental reputation in the world according to a 2014 Leger survey of international customers (FPAC)
- Using wood products helps "green" the environment by replacing more carbon intensive materials with wood, which is also a carbon sink that helps mitigate climate change[5].

1,2,5 Forestry in Canada - Canada Action (n.d.)
3,4 Canadian Institute of Forestry – Tree Genomics (n.d.)

OBJECTIVES
Upon successful completion of the Forest Resources Technician program, graduates will be able to:

1. Demonstrate the knowledge, skills and attitudes required to participate in finding solutions to forest management problems and challenges.
2. Identify forest ecosystem issues, challenges and alternate solutions.
3. Use assessment and evaluation techniques involved in forest resource protection, management and utilization.
4. Identify current preventive measures, treatments and practices used in forest resource protection, management and utilization.
5. Apply effective procedures and practices in the use of field and office equipment to assess and analyze natural resources data.

EMPLOYMENT OPPORTUNITIES

Graduates of this nationally accredited program may obtain employment throughout Canada in a variety of forestry related fields: protection and enforcement, forest inventory and site classification, logging and engineering, forest access road construction and maintenance, silviculture as well as parks, wildlife and environmental assessment. This program has an established reputation for supplying graduates to employers all across Canada.

PROGRAM TRANSFERABILITY

Graduates of the Forest Resources Technician program, who wish to pursue post-secondary studies, can apply for entry with advanced standing at a number of Canadian Universities that the College has established credit transfer agreements with. Please refer to the NL Department of Education's transfer guide (www.cna.nl.ca/transfer), or contact your intended university or college.

CNA presently has articulation agreements with University of New Brunswick and Royal Roads University.

ACCREDITATION AND RECOGNITION

Forest Resources Technician is accredited by Technology Accreditation Canada under the mandate of the Canadian Council of Technicians and Technologists until December 2028. Forest Resources Technician is also recognized internationally by the signatories of the Dublin accord. This provides graduates of the program with both national and international mobility for work and/or study.

CERTIFICATIONS

In addition to the formal semester courses listed in the program of studies, students in the Forestry Resources Technician program are required to obtain certification in the following areas over the two-year period of study:
Canadian Firearm Safety/Hunter Education
WHMIS
OHS
Wilderness Remote First Aid
ATV Safety - Canada Safety Council
Snowmobile Safety - Canada Safety Council
NL Timber Scaling
Chainsaw Safety Awareness
Brush Saw Safety Awareness
Canadian Boat License - Pleasure Craft

NOTE: Students should be aware that additional fees and expenses apply for certifications and for field camps, tours and On-the-Job Training. Students will be required to hold valid certifications for the above courses prior to graduation.

ENTRANCE REQUIREMENTS

Academic:
Eligibility for admission to the program requires the applicant to meet one of the following academic criteria:

1. High School
High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201 or 3202
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from Math 1100. Students must apply for the exemption.
iii. Science – (4 credits) two of which must be chosen from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Environmental Science 3205

2. Comprehensive Arts and Science (CAS) Transition
Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math : MA1040, MA1041
ii. Two Science courses chosen from two of the following three combinations:
a. Biology: BL1020, BL1021
b. Chemistry: CH1030, CH1031
c. Physics: PH1050, PH1051
Note: It is strongly recommended that CAS students who intend to enroll in the Fish and Wildlife or Forest Resources Technician program complete BL1020 and BL1021.
Effective Academic Year 2025 - 2026:
College Transition
College Transition Certificate with the following courses:
i. Math : MA1040, MA1041
ii. Two Science courses chosen from two of the following three combinations:
a. Biology: BL1025, BL1026
b. Chemistry: CH1035, CH1036
c. Physics: PH1055, PH1056
Note: It is strongly recommended that CAS students who intend to enroll in the Fish and Wildlife or Forest Resources Technician program complete BL1025 and BL1026.

3. Adult Basic Education (ABE)
Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile (and appropriate grades) may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements
Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

SPECIAL REQUIREMENTS

Because of the extensive field exposure incorporated in this program, the student is required to acquire the following equipment and clothing: hard hat, compass, axe, snowshoes, logger boots, good quality rainwear, and other clothing appropriate for outdoor work.

Note: Participation in activities that are physically demanding will be required due to the extensive field components incorporated into this program.

Courses

Semester 1

Code	Title	Cr	Le	La
BL1120	Biology I	3	2	3
CM1400	Technical Report Writing I	3	3	0
EN2120	Environmental Citizenship	3	3	0
MA1100	Mathematics I	5	4	2
MC1850	Spreadsheet Applications	1	0	2
SU1150	Field Navigation	3	2	3
SU1710	Forest Surveying	3	2	3

**Admission into the appropriate Mathematics course will be decided by the grade in High School math.*

Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from MA 1100 Mathematics. Students must apply for the exemption.

Semester 2

Code	Title	Cr	Le	La
CM1401	Technical Report Writing II	3	3	0
EY2210	Silvics/Dendrology I	3	2	3
FR1330	Natural Resource Measurements I	3	2	3
FR1400	Wood Products	2	1	2
MA1670	Statistics	4	4	1
SU3210	Geographic Information Systems (GIS)	2	1	3
LW2210	Natural Resources Policy & Law	4	4	0

Semester 3 (Intersession I)

Code	Title	Cr	Le	La
FR1230	Forest Fire Management	3	2	3
FR2340	Hydrology	3	2	2
SU1330	GPS Data Collection & Mapping	0	0	3 days
FT1400	Forestry Field Camp	0	2 wks	0

The Course and Lab hours per week are based on a 15 week semester. In intersession, the Course and Lab hours will be adjusted to reflect the shorter semester length.

Semester 4

Code	Title	Cr	Le	La
EY2211	Silvics/Dendrology II	3	2	2
FR1560	Timber Harvesting I	2	1	2
FR1331	Natural Resource Measurements II	2	1	3
FR2350	Forest Entomology/Pathology	3	2	3
FR2360	Silviculture	3	2	3
FT1401	Forestry Camp/Tour	0	0	1 wk
GE1300	Forest Soils	3	2	3
SU1575	Remote Sensing Applications for Natural Resources	3	2	3

Semester 5

Code	Title	Cr	Le	La
FR1561	Timber Harvesting II	4	3	3
FR2430	Wildlife Management	3	2	3
HR2200	Human Relations	2	1	2
LW2211	Law Enforcement	4	3	2
MN1800	Sustainable Forest Management	4	3	3
PR2660	Technical Project & Presentation	2	1	2

Semester 6 (Intersession II)

Code	Title	Cr	Le	La
OJ1300	On the Job Training - Forestry	0	0	3 wks

Students graduating from the Forest Resources Technician program can complete the Fish and Wildlife program with one additional year. Interested students must begin their studies in the first Technical Intersession of the Fish and Wildlife Technician program.

GIS Applications Specialist

Start Date: September

Credential: Post Diploma

Program Length: One Year

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Corner Brook - On Campus delivery

PROGRAM DESCRIPTION

Location, location, location.

Position yourself at the intersection of geography, data analysis, and technology, where every point on the map tells a story waiting to be discovered. As a GIS Specialist, you'll play a pivotal role in empowering agencies and governments, skillfully applying Geographic Information Systems (GIS), remote sensing, and Global Positioning Systems (GPS), alongside innovative web mapping and data visualization technologies. Your work will directly support essential informational needs, optimize workflows, and refine business processes, making complex data not only accessible but actionable. A geographic information system (GIS) is a computer system that captures, stores, analyzes, and displays many kinds of geographical or spatial data – information related to positions on the Earth's surface.

GIS Applications Specialist is a growing field due to increasing informational needs of government and private agencies. As technology within this field continues to advance, yielding more and more valuable data, you will be a major asset to your team. A GIS Applications Specialist can significantly impact numerous economic sectors, pioneering the application of emerging technologies. Their expertise in remote sensing, GPS (Global Positioning Systems), internet mapping, and data visualization paves the way for innovative solutions across industries.

This post-graduate, intensive, three-semester GIS program utilizes current high-end technology tools to collect, store, manipulate, analyze, interpret and communicate geographic information within a variety of disciplines. You will become versed in several spatial computing technologies used in the industry today and have access to the latest in applicable computer hardware, software, and field technology. You will have considerable opportunities to practice your skills in a work-life setting by putting theory into practice.

Now…isn't that spatial?

Program Highlights

- Pursue subsequent studies in GIS applications in various program areas
- Apply the knowledge and skills to develop simple-to-elaborate good practice applications with theory relating to Vector GIS technology
- Learn how to build web-based GIS applications to contribute to the world of Distributed Geographic Information

Did you know?

- Canada is the second largest country in the world, covering almost 10 million km^2 with over 243 thousand kilometres of coastline[1].
- The current market for GIS Applications Specialists in Newfoundland and Labrador includes various provincial and federal departments, crown corporations, municipalities, research agencies, post-secondary institutions and private corporations.
- Canada GIS has geomatics specialists who have worked in every province and territory on a wide range of geospatial projects.
- You can use GIS data to achieve a multi-layered result for many types of analysis and management pertaining to your project.

1. CanadianGIS.com (n.d)

OBJECTIVES

Upon successful completion of the GIS Applications Specialist (Post Diploma) program, graduates will be able to:

1. Develop and apply skills for the effective presentation of geographic information.
2. Perform data collection techniques for gathering geographic information from the field, existing maps, or spatial data.
3. Apply fundamental principles of database processing regarding GIS environments, and develop skills in designing, implementing, and managing databases.
4. Design and implement a GIS application that addresses predefined objectives.
5. Demonstrate the building of web-based GIS applications.
6. Design GIS applications based on the integration of programming languages, database management systems, and GIS software, to achieve the most efficient data access, manipulation, and presentation.

ENTRANCE REQUIREMENTS

Applicants must have graduated from a recognized college or university with a diploma and/or degree in a relevant program area. Related program areas include, but are not limited to forestry, natural resource sciences, engineering, environmental studies, geology, surveying, geography, business, municipal planning and law enforcement.

EMPLOYMENT OPPORTUNITIES

Program graduates are prepared to work in positions as diverse as GIS programmers/analysts, applications specialists/consultants, ecosystem IT managers, utilities managers, database managers, GIS systems operators, and land information managers.

SPECIAL REQUIREMENTS

The program incorporates a Major Geographic Information Systems Project establishing industry-student linkages. Students will have considerable opportunities to practice their skills in a work-life setting by putting theory into practice.

Courses

Semester 1

Code	Title	Cr	Le	La
GS1110	Cartographic Concepts	3	2	2
GS1210	GIS Database Principles	2	1	2
GS1320	Principles of GIS	3	2	2
GS1410	Problem Solving and Programming	3	2	3
GS1510	Remote Sensing and Image Analysis	2	1	3
GS2100	Open Source GIS and Data Management Tools	3	2	2
GS2512	Spatial Statistics	3	2	2

Semester 2

Code	Title	Cr	Le	La
GS2110	Customization of GIS Applications	3	2	2
GS2210	Database Design and Development	2	1	2
GS2410	Spatial Analysis and Applications	3	2	2
GS2310	Project Planning and Management	2	1	2
GS2710	Web GIS Development	3	2	2
GS2911	Advanced Remote Sensing	3	2	2
GS3410	Spatial Database Applications	3	2	3

Semester 3 (Intersession)

Code	Title	Cr	Le	La
GS3110	Advanced Topics in Geomatics	2	1	2
GS1610	Surveying and Mapping	3	2	3
GS3210	Major GIS Project	5	3	6

Mining Engineering Technician

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Natural Resources and Industrial Trades

Locations & Delivery Modes:

- Corner Brook - On Campus delivery

PROGRAM DESCRIPTION

It's elemental
Newfoundland and Labrador is among the top 10 mining jurisdictions in the world[1], making the versatile mining engineering technician a highly-sought after employee in this industry, right here at home.

Mining engineering technicians support mining engineering and geological teams. They assist in conducting geophysical surveys and analyzing the data to identify potential mineral exploration opportunities. They collect and evaluate mineral deposits to assess contaminants in soil and groundwater, and direct and facilitate other essential geological and geophysical fieldwork.

Mining is one of the industries expected to experience the largest increase in employment during the 2015 to 2025 period. As of 2022, Mining Industry NL estimated about 8,000 jobs in the mining sector and expects to increase to 12,000 in the next couple of years, unearthing a steady demand for skills in the mining sector. The province aims to be a top producer in additional mineral commodity markets as new mineral resources are identified such as lithium, salt, and critical rare earth elements.

That means now's the time to dig into this career! The Mining Engineering Technician program will challenge you to explore why and how things work in this dynamic field and find innovative solutions to mining challenges. You will be qualified for work in the fields of mineral resources exploration, in the operations of surface or underground mines, and in mine/quarry production. Or you may discover you like specialized areas such as mine surveying, ground control, mine ventilation, mine safety, field explorations, mine geology, or mine planning.

Whatever features of mining that surface to pique your interest, you're going to rock this career!

Program Highlights

- Developed "from the ground up" to ensure alignment with Technology Accreditation Canada (TAC) requirements
- Field trips to one or more mines in the province for hands-on activities and field demonstrations
- Eligibility for membership in the Association of Engineering Technicians and Technologists of Newfoundland and Labrador (AETTNL) and similar associations across Canada
- With two years of progressive work experience, become eligible to receive the designation of Certified Technician (C. Tech) upon completion of a Professional Practice and Ethics Exam

Did You Know?

- With multiple producing mines in the province, several metal and non-metal commodities are produced, including iron ore, nickel, copper, cobalt, and gold.
- As a significant contributor to the national mineral commodity market, Newfoundland and Labrador provides over 45% of Canada's iron ore shipments and 26% of Canada's nickel shipments.
- According to the Newfoundland and Labrador Government's Labour Market Outlook 2025, over the 2019 to 2025 period, the number of workers [across industries] is expected to increase by approximately 12,000 (or 4.5 per cent).[2]
- The Province of Newfoundland and Labrador plans to open five (5) new mines by 2030 with a goal of boosting direct employment from 4,800 to 6,200.

- Government also aims to increase annual exploration expenditures to $100 million to expand the NL share of annual mineral shipments from 6.4% to 10% of the Canadian total.
- The workforce is diversifying and increasing participation of women from 15% to 30%.

OBJECTIVES

Upon successful completion of the Mining Engineering Technician program, graduates will have the knowledge and skills to be able to:

1. Conduct geophysical surveys and analyze geophysical profiles and maps
2. Create and interpret geological maps and cross sections for mineral exploration, in collaboration the exploration teams
3. Perform field procedures appropriate for the acquisition of geological and geochemical data
4. Assist in the evaluation of mineral deposits
5. Collaborate to identify geologic formations, structures, and processes
6. Assist in managing the mine development and production processes for both underground and surface mines
7. Perform project management activities within a mining exploration and mine development context.

CERTIFICATIONS

Students in the Mining Engineering Technician program will be required to complete certifications in the following areas prior to the start of Semester 3:

1. Standard First Aid/Heart Start
2. Workplace Hazardous Materials Information System (WHMIS)
3. Transportation of Dangerous Goods (for Land)
4. ATV Safety Training

Students should be aware that additional fees may apply for external certifications.

EQUIPMENT REQUIREMENTS

Students in the Mining Engineering Technician program are required to purchase the following equipment at their own expense:

- Rain Gear
- Hi Visibility Vest
- Field Clothes
- Shop Coat
- Hard Hat
- Safety Glasses
- Rubber Boots
- Steel Toe Boots
- Backpack
- Sylva Compass
- Padlock
- Scientific Calculator

ENTRANCE REQUIREMENTS

Eligibility for admission to the Mining Engineering Technician program requires the applicant to meet one of the following four academic criteria:

1. High School

High School Graduation Certificate with 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201

ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
Note: Students who received a combined average of 70% in high school Academic Mathematics 2201 and 3201, or a pass in both high school Advanced Mathematics 2200 and 3200 can be exempted from Math 1700.
Students must apply for this exemption.
iii. Science (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3.

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1020, BL1021
b. Introductory Chemistry: CH1030, CH1031
c. Introductory Physics: PH1050, PH1051
Note: It is strongly recommended that CAS students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.
Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1025, BL1026
b. Introductory Chemistry: CH1035, CH1036
c. Introductory Physics: PH1055, PH1056
Note: It is strongly recommended that College Transition students who intend to enroll in Engineering Technology programs complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from

those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

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[1] Fraser Institute (2020). *Fraser institute annual survey of mining companies 2020*. Available from: Fraser Institute Annual Survey of Mining Companies 2020

[2] https://www.nr.gov.nl.ca/nr/pdf/WF_Mining_2018.pdf

Courses

Semester 1 (Fall)

Code	Title	Cr	Le	La
CH1165	Applied Chemistry for Mining	4	3	2
GE1110	Geology I	3	2	2
MA1700	Mathematics	4	3	2
CM1400	Technical Report Writing I	3	3	0
SU1130	Mine Surveying I	3	1	5
MT1115	Introduction to Mining	3	3	0
MC1850	Spreadsheet Applications	1	0	2

Semester 2 (Winter)

Code	Title	Cr	Le	La
GE1210	Geology II	4	3	3
EG1235	Engineering Graphics & CAD	2	1	3
MA1101	Advanced Mathematics	5	5	0
CM1401	Technical Report Writing II	3	3	0
SU1230	Mine Surveying II	3	2	4
MT1210	Mining Methods	3	2	2

Semester 3 (Intersession)

Code	Title	Cr	Le	La
FT1235	Mineral Resources Field Camp	0	0	2 wks
MA1530	Statistics	2	2	1
MT2430	Mineral Processing	5	4	2

Mining Engineering Technician students will complete MA1530 Statistics and MT2430 Mineral Processing before going out to complete FT1235 Mineral Resources Field Camp.

Semester 4 (Fall)

Code	Title	Cr	Le	La
GE2100	Geological Fieldwork	3	2	3
GE2210	Exploration Geophysics	3	2	3
GE2520	Digital Map Making	1	0	2
MT2130	Mine Layouts and Planning	3	2	3
MT2320	Mine Equipment & Safety	3	3	1
MT2450	Mine Blasting Techniques	3	3	1

Semester 5 (Winter)

Code	Title	Cr	Le	La
GE2310	Intro to Structural Geology	4	3	2
GE2410	Mineral Resource Evaluation	4	3	2
MT2700	Ground Control	3	3	1
MT2110	Industrial Hygiene for Mines	3	3	1
MT2155	Mining Ethics	3	3	0
PR3150	Project Management & Financial Analysis	4	4	0

School of Sustainable Development

Hydrogen Technician

Start Date: September

Credential: Diploma

Program Length: Two Years

School: Sustainable Development

Locations & Delivery Modes:

- Corner Brook - On Campus delivery

PROGRAM DESCRIPTION

Fuel Sustainability

The green hydrogen industry around the world is growing. As world nations strive to make the global initiative of net zero emissions by 2050 a reality, hydrogen is increasingly being used as a clean energy source. College of the North Atlantic (CNA) is endeavoring to support the creation of the required skilled workforce required at hydrogen production facilities.

Hydrogen is the simplest and most abundant element on earth. It is an efficient energy carrier that can store and deliver usable energy. It has the capability of mitigating the challenges of the fossil fuel economy, particularly pollution.

With your training as a Hydrogen Technician, you will gain strong technical skills and be on the cutting edge of a revolutionary change in the sustainable energy economy. Governments across this country and beyond are investing in the sector for what is expected to be a global $2.5 trillion industry1. For a skilled workforce, we are aligning with global reports and their recommendations to build on existing occupations such as Power Engineering and Process Operators and upskilling to meet the needs of this emerging hydrogen industry.

This program will provide training related to hydrogen safety and production technologies. As ammonia is a carrier for hydrogen and is a key part of the green hydrogen industry, safety training and production technologies will also be examined.

Program Highlights

- Train to become a versatile plant operator
- Global and local applications and relevance
- Practical training provided to reinforce theoretical concepts

Did you know?

- Hydrogen is an energy carrier, not an energy source, and it can deliver or store a tremendous amount of energy.[2]
- Reaching net zero emissions means removing an equal amount of CO_2 from the atmosphere as we release into it.
- Hydrogen production globally was valued at over US$120 billion and is expected to grow over 5% annually through 2028.[3]
- Some analysts expect hydrogen could meet 24 per cent of world energy demand by 2050.[4]

[1] How Ottawa hopes to supercharge Canada's hydrogen fuel sector | CBC News
[2] Hydrogen: A Clean, Flexible Energy Carrier | Department of Energy
[3] Hydrogen production - Wikipedia
[4] How Ottawa hopes to supercharge Canada's hydrogen fuel sector | CBC News

OBJECTIVES

Upon successful completion of this program, graduates will be able to:

1. Demonstrate the practical skills necessary for a 4th Class, Power Engineer.
2. Prepare for a provincial examination in Power Engineering 4th Class part "A" and "B".
3. Demonstrate safety procedures required in hydrogen, ammonia, fuel, and steam-based plant environments.
4. Demonstrate problem solving skills and team-based work practices to optimize hydrogen production.
5. Utilize essential skill training to enhance their career experience and opportunities.
6. Utilize control documentation and reporting systems in Power Engineering and Process Operation environments.
7. Develop and practice mechanical and electrical diagnostics, installation, calibration, repair, and replacement of instruments, controls, output devices, in start up, idle, shut down, decommissioning and commissioning within a processing environment.
8. Develop and employ standardized operating procedures using technology integrated preventative maintenance procedures for reliability utilizing performance data, monitoring, production indicators, and quality tracking.
9. Develop a comprehensive familiarity for safe processing of cryogenic based fuel cells, electrolysers, cooling systems, transportation systems, handling, maintenance, storage, and electrolysis.

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Hydrogen Technician diploma program are required to obtain a certificate of completion in the following prior to graduation:

1. Introduction to Confined Space
2. Introduction to Fall Arrest & Protection
3. Introduction to Lock-out – Tag-out
4. Standard First Aid/Heart Start
5. WHMIS
6. Introduction to Newfoundland and Labrador Health & Safety Act
7. 4th Class Power Engineering

Students should be aware that additional fees may apply for extra certifications.

ENTRANCE REQUIREMENTS

1. High School

High School Graduation Certificate with a 60% overall average in the following (or equivalent):
i. English (2 credits) (minimum 60%) from: 3201
ii. Mathematics (4 credits) chosen from:
Advanced: 2200, 3200 (50% minimum in each course)
Academic: 2201 (50% minimum), 3201 (60% minimum)
iii. Science: (4 credits) two of which must be selected from:
Biology: 3201
Physics: 3204
Chemistry: 3202
Earth Systems: 3209
Note: The remaining two Science credits to be chosen from the highest Science mark in level 1, 2 or 3. **Note that it is recommended that students considering the Hydrogen Technician program should complete High School Physics.**

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1020, BL1021
b. Introductory Chemistry: CH1030, CH1031
c. Introductory Physics: PH1050, PH1051
Note: It is strongly recommended that CAS students who intend to enroll in the Hydrogen Technician program complete both of the Chemistry courses and both of the Physics courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with the following courses:
i. Math (60% MINIMUM) MA1040, MA1041
ii. Two Science courses chosen from one of the following three combinations:
a. Introductory Biology: BL1025, BL1026
b. Introductory Chemistry: CH1035, CH1036
c. Introductory Physics: PH1055, PH1056
Note: It is strongly recommended that College Transition students who intend to enroll in the Hydrogen Technician program complete both of the Chemistry courses and both of the Physics courses.

3. Adult Basic Education (ABE)

Adult Basic Education (Level III) Graduation with Degree and Technical Profile including the following courses (or equivalent):
i. English (60% minimum) 3101A, 3101B, 3101C or 3102A, 3102B, 3102C
ii. Mathematics (60% minimum) 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
iii. Science from one of the following sections:
a. Biology 1101, 2101A, 2101B, 2101C, 3101A, 3101B, 3101C
b. Chemistry 1102, 2102A, 2102B, 2102C, 3102A, 3102B, 3102C
c. Physics 1104, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C
Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses including those outlined above have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, are 19 years at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).
If a language proficiency test other than those referenced above was used, applicants can forward for assessment.
If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.
Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

EMPLOYMENT OPPORTUNITIES

Graduates of the Hydrogen Technician program are trained for industrial plant operations. Importantly, graduates are provided with diverse foundational training to upskill effectively for specific hydrogen processes required by employers. Hydrogen Technicians can work in both the private and public sector industries for hydrogen, manufacturing, mining, oil and gas. Employment opportunities are also available in government, health care, and educational facilities.

Courses

Semester 1 (Fall)

Code	Title	Cr	Hrs
PW1112	Mechanics & Dynamics	2	30
PW1113	Phys. & Chem. Thermodynamics	2	30
PW1114	Canada Power Eng. Leg. & Reg.	2	30
PW1115	Intro to Plant & Fire Safety	2	30
PW1116	Plant Operation & Environment	2	30

Code	Title	Cr	Hrs
PW1117	Mat. Science & Welding Tech.	2	30
PW1118	Fluid Handling Technology	1	15
PW1119	Electro-Technology Concepts	2	30
PW1122	Energy Plant Inst. & Controls	2	30
PW1123	Industrial Communications	1	15
PW1124	Introduction to Boiler Designs	2	30
PW1125	Elements of Boiler Systems	3	45
PW1126	Power Ops. & Maint. Lab I	6	100

Semester 2 (Winter)

Code	Title	Cr	Hrs
PW1201	Lubrication & Bearings	2	30
PW1202	Pumps and Compressors	2	30
PW1203	Boiler Safety Devices	2	30
PW1204	Plant Operation & Management	2	30
PW1205	Energy Plant Maintenance	2	30
PW1206	Water Treatment	2	30
PW1207	Prime Movers & Heat Engines	1	15
PW1208	Plant Auxiliary Systems	2	30
PW1209	Compress. & Absorption Refrig.	3	45
PW1211	HVAC for Facility Operators	1	15
PW1212	Bldg. Enviro - Systems & Ctrol.	3	45
PW1213	Ind. Plant Configurations	3	45

Semester 3 (Intersession)

Code	Title	Cr	Hrs
PW1302	Power Ops. & Maint. Lab II	6	100

NOTE: An exit option exists after the first year for students who successfully complete their studies, practicum and fulfill all SOPEEC requirements.

Students awarded a College of the North Atlantic certificate of Power Engineering 4th Class may be entitled to write the SOPEEC 4th Class Certification Exams subject to approval by the Department of Immigration, Population Growth, and Skills.

Semester 4 (Fall)

Code	Title	Cr	Hrs
HC1300	Hydrogen Safety	1	20
HC1310	Introduction to Process Operations	2	30
HC1320	Hoisting, Rigging, and Lifting	2	30
HC2115	Process Diagrams	2	30
HC2120	Final Control Elements	4	60
CM2125	Communications in the Workplace	3	45
HC2125	Storage of Liquids and Gases	2	30
HC2130	Green Hydrogen Industry	1	20
HC2135	Pollution and Control	2	35
HC2140	HMI and Process Control Systems	1	15
HC2145	Process Instrumentation	3	50
HC2150	Asset Maint. & Reliability	3	45

Semester 5 (Winter)

Code	Title	Cr	Hrs
HC2110	Ammonia Safety	1	20
HC2200	Hydrogen Production	1	20
HR2210	Human Relations	4	60
HC2215	Ammonia Production	1	20

Code	Title	Cr	Hrs
HC2220	Basic Process Control	6	100
HC2225	Advanced Control Systems	5	80
HC2230	Advanced Process Control	3	45
HC2235	Work Planning	1	25
HC2240	Troubleshooting Techniques	4	60
HC2245	Hydrogen Fuel Cells	1	20

Wind Turbine Technician

Start Date: September

Credential: Certificate

Program Length: One Year

School: Sustainable Development

Locations & Delivery Modes:

- Bay St. George - On Campus delivery

PROGRAM DESCRIPTION

Next-generation energy

There is a worldwide movement in the air – harnessing wind capacity for renewable energies. According to the Global Wind Energy Council, electrification with renewables is the most cost-efficient way to decarbonize the global economy. It is expected to not only improve the health of the planet, but also generate wealth for nations and vast employment opportunities.

The generation of electricity through wind energy doesn't emit greenhouse gases or air pollutants, and it doesn't consume large quantities of freshwater or generate toxic, hazardous or radioactive waste.[1] And this form of sustainable energy will create new jobs and boost economic growth in regions investing in this next-generation wind technology. Change is here, and it's bringing the future of energy.

CNA is riding these winds of change and introducing the first program of its kind in the province. The Wind Turbine Technician program will prepare you for the varied demands of this exciting energy industry. This training will reinforce your understanding of the mechanical and electrical systems of turbine and hydraulic systems, which you will maintain in your role as technician. Our extensive safety training and rescue drills will establish acumen and respect for the strict protocols of the industry.

Join us, be a part of keeping the lights on.

Program Highlights

- Learn critical safety competencies working at heights and within wind turbine nacelles
- Build a diverse skillset with training in mechanical, electrical, and hydraulic fields
- Apply classroom theory in a wind turbine training facility

Did You Know?

- The new report of the UN's Intergovernmental Panel on Climate Change (IPCC) stated that the Earth is already 1.1°C warmer than before industrialization.
- 2021 was the second-best year on record for the global wind industry, with 93.6 GW new installed capacity.[2]
- Canada's wind, solar and energy storage sector grew by 10.5% in 2022.[3]

OBJECTIVES

Upon successful completion of the Wind Turbine Technician program, graduates will be able to:

1. Apply and complete Newfoundland and Labradors occupational and health requirements for safety while ascending and descending wind turbines.
2. Establish an understanding of the mechanical, electrical, and control systems and sub-systems common to modern wind turbines.
3. Implement troubleshooting and problem-solving skills required to maintain a wind turbine.
4. Perform mechanical, hydraulic, and electrical component maintenance, repair, and replacement of parts to correct malfunctions.
5. Apply preventative maintenance and inspection procedures on wind turbines

CERTIFICATIONS

In addition to the formal courses listed in the program of studies, students in the Wind Turbine Technician program are required to obtain certificates of completion in the following external certifications prior to beginning WI1315 Wind Turbine On-the-job Training in Semester 3:

1. Fall Protection
2. Wind Turbine High Angle Rescue
3. Lock Out Tag Out Electrical
4. Confined Space Entry

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

1. High School

High School Graduation Certificate with a 60% average in eight level 3000 credits, or equivalent, including Mathematics (4 credits) chosen from:

i. Advanced: 2200, 3200 (50% minimum in each course)

ii. Academic: 2201 (50% minimum), 3201 (60% minimum)

2. Comprehensive Arts and Science (CAS) Transition

Comprehensive Arts and Science (Transition) Certificate with MA1040 (Math Fundamentals 1) and MA1041 (Math Fundamentals II) OR clearing High School course deficiencies through Comprehensive Arts and Science (Transition) individual courses.

Effective Academic Year 2025 - 2026:

College Transition

College Transition Certificate with MA1040 (Math Fundamentals 1) and MA1041 (Math Fundamentals II) OR clearing High School course deficiencies through College Transition individual courses.

3. Adult Basic Education

Adult Basic Education (Level III) Graduation with a Degree and Technical Profile (or Business Related College Profile), including the following courses (or equivalent):

i. Mathematics: 1101A, 1101B, 1101C, 2101A, 2101B, 2101C, 3101A, 3101B and 3101C

Applicants with Adult Basic Education (Level III) Graduation with a different Profile may be eligible for admission to the program provided the appropriate selection of courses, including those outlined above, have been completed.

4. Mature Student Requirements

Applicants who do not meet the education prerequisites for this program, must be at least 19 years of age at the time of application and out of school for at least one year may be considered on an individual basis under the Mature Student Requirements; for more information regarding the Mature Student Requirements please refer to Procedure AC-102-PR Admission.

5. International Applicants – English Proficiency

All international applicants must meet the College's English language proficiency requirements for acceptance into regular programs. The College will accept these recognized tests of English language proficiency (TOEFL paper based 550, TOEFL Internet based 79, TOEFL computer based 213 or equivalent, IELTS Academic Test overall band score of 6.0, or Pearson PTE 53 or greater, etc.).

If a language proficiency test other than those referenced above was used, applicants can forward for assessment.

If an international applicant has attended an educational institution (high school or post-secondary) for a period of three years or more where the official language of instruction was English, the English language proficiency test will not be required.

Note: Some programs may require specific English language requirements and proficiency scores that differ from those stated above; therefore international applicants are advised to please refer to the specific program admission requirements as identified in the College Calendar.

MEDICAL ASSESSMENT

Prior to entry into the program students must be cleared by a physician to be able to complete required physical activities with assessment submitted to Admissions

EMPLOYMENT OPPORTUNITIES

Graduates from the Wind Turbine Technician program will have employment opportunities with wind energy projects across Canada. There is a need within these wind projects for installation, operation, maintenance, and repair of wind turbines. As wind energy continues to emerge globally international opportunities may also be available for students.

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1. Annual-Wind-Report-2022_screen_final_April.pdf (gwec.net)
2. Global Wind Report 2022 - Global Wind Energy Council (gwec.net)
3. Canadian Renewable Energy Association - Wind. Solar. Storage. (renewablesassociation.ca)

Courses

Semester 1

Code	Title	Hrs
TS1510	Occupational Health and Safety	6
TS1520	Workplace Hazardous Materials Information System	6
TS1530	First Aid	14
WI1005	Blueprint Reading and Sketching	45
WI1010	Wind Energy Electrical Basics	60
MA1250	Mathematics for WT	60
WI1015	Wind Energy Mechanical Systems I	45
WI1020	Intro to Wind Turbine Systems	30
WI1025	Wind Turbine Work Practices I	120

Semester 2

Code	Title	Hrs
CM2161	Communication Essentials	36
PH1205	Physics	60
MC1062	Computer Essentials	15
WI1205	Wind Energy Electrical Equipment	60
WI1210	Wind Turbine Hydraulics	45
WI1215	Wind Energy Mechanical Systems II	45
WI1220	Wind Turbine Work Practices II	90

Semester 3

Code	Title	Hrs
WI1305	Wind Turbine Controls	30
WI1310	Rotor System Inspection and Repair	30
WI1315	Wind Turbine On-the-job Training	120

Course Descriptions Academic Year 2024-2025

AC1100 - Bookkeeping I •
Bookkeeping I is a study of the fundamental principles and mechanics of bookkeeping, including the recording, classifying, and summarizing of financial data for a service business. The course also includes the control of cash and petty cash, banking procedures, and completing the accounting cycle. This course emphasizes the national accounting standards (private enterprise Generally Accepted Accounting Principles – GAAP).

AC1260 - Financial Accounting I •
This course introduces the student to accounting concepts, including: the basics of the double-entry accounting system including adjusting entries; financial statement preparation; accounting for payroll; accounting for a merchandising company; and the basics of the internal control of cash. This course emphasizes the national accounting standards (private enterprise GAAP).

AC1350 - Income Tax •
This course is designed to introduce students to the basic principles of Canadian Income Tax. Emphasis is placed on computing taxable income and taxes payable for individuals. The course also includes basic tax planning for individuals.
Prerequisite(s): AC2260

AC2040 - Bookkeeping for Agriculture
Bookkeeping for Agriculture prepares students for the financial management side of an agriculture enterprise. It includes a study of the fundamental principles and mechanics of bookkeeping, including recording, classifying, and summarizing of financial data for a service business. The course also includes bank reconciliations and the preparation of year-end files for a farm's external accounts. This course emphasizes the national accounting standards (private enterprise Generally Accepted Accounting Principles – GAAP).

AC2100 - Bookkeeping II •
Bookkeeping II involves the application of accounts receivable and accounts payable, and the study and application of the generally accepted accounting principles within merchandising firms. The course involves using special journals, end-of-the-year adjustments for depreciation, accruals, bad debts, closing entries, financial statements, and payroll. This course emphasizes the national accounting standards (private enterprise Generally Accepted Accounting Principles – GAAP).
Prerequisite(s): AC1100

AC2220 - Intermediate Financial Accounting I •
This course is designed to build on the knowledge the student obtained in Financial Accounting I and II. Its focus is on the asset side of the Balance Sheet, providing an in-depth study of current assets, property, plant and equipment, and intangible assets. The recognition and measurement of revenues and expenses, the preparation of financial statements including the Statement of Financial Position, Statement of Comprehensive Income, Statement of Cash Flows, and Statement of Changes in Equity are also covered.
Prerequisite(s): AC2260, MC1242

AC2230 - Computerized Accounting I •
This course introduces the student to the elements of integrated computerized financial accounting software. The student will explore integrated software systems, general ledger, payables, receivables, payroll and inventory. The student will have the opportunity to apply the skills through various applications.
Prerequisite(s): AC1260 or AC2100

AC2250 - Managerial Accounting I •
This course is designed to provide the student with knowledge in accounting techniques required by management for planning and control, decision making, performance evaluation and preparation of internal reports.
Prerequisite(s): AC2260, MC1242

AC2260 - Financial Accounting II •

This course introduces the student to the principles and procedures needed to account for long-term assets (including capital assets, intangible assets, and investments), liabilities, and equities, and to the concepts of financial reporting and decision making for both partnerships and corporations. In this course the student will explore property, plant, equipment &intangibles; current and long-term liabilities; partnership accounting; corporate organization, transactions and reporting; bonds as liabilities and investments; equity investments; statement of cash flows; and analyzing financial statements. This course emphasizes the national accounting standards (private enterprise GAAP).
Prerequisite(s): AC1260

AC2280 - Accounting
The course is designed to provide a working knowledge of the fundamentals of financial and managerial accounting that can be useful for the graduate industrial technologist in understanding, interpreting, and preparing financial statements. Basic principles of managerial accounting including cost behaviour, cost systems, and cost-volume relationships are investigated. The focus will be on the extraction of relevant information from accounting data and how this information can be used in engineering decision making and budget preparation.

AC2365 - Principles of Internal Auditing •
This course is designed to introduce internal auditing for accounting students who do not have significant auditing or accounting experience. The course is a practical guide to internal auditing theory and practice. The course will introduce students to the practice of internal audit and the auditor's decision-making process.
Prerequisite(s): AC2220

AC2375 - Principles of External Auditing •
This course is designed to introduce external auditing for accounting students who do not have significant auditing or accounting experience. The course is a practical guide to external auditing theory and practice.
Prerequisite(s): AC3220

AC2540 - Oil and Gas Production Accounting
This course will provide students with an overview of the development of the oil and gas industry, from inception to modern practices and from the reservoir to refining and the role which the production accountant plays in accounting for oil and gas. This will enable students to understand and communicate effectively with professionals in the oil and gas industry and to understand and apply the accounting concepts.
Prerequisite(s): AC2260

AC2600 - Managerial Accounting for HRM •
This course is designed to introduce the student to the accounting techniques needed by management for planning and control, decision making, performance evaluation and preparation of internal reports. The student will explore basic concepts of managerial accounting; departmental, project and program cost allocation; budgeting and control; control through standard costs; flexible budgets and overhead analysis; control of decentralized operations; and pricing of products and services. The student will have the opportunity to apply their skills through practical learning.
Prerequisite(s): AC2260

AC3220 - Intermediate Financial Accounting II •
This course is a continuation of the study of the principles and procedures covered in the previous semester of Intermediate Financial Accounting I. It focuses on an in-depth study of the liabilities and owner's equity sections of the Statement of Financial Position. Earnings per share (EPS), income taxes, accounting for leases, accounting changes and error corrections, and financial statement analysis are also covered.
Prerequisite(s): AC2220

AC3250 - Managerial Accounting II •
This course is designed to build on the knowledge gained in Managerial Accounting I by having the student apply their previous knowledge of cost behaviour to specialized areas of cost and management accounting including budgeting, standard costing, reporting for control, relevant cost analysis, pricing of products and services, and capital budgeting.
Prerequisite(s): AC2250

AC3270 - Payroll and Commodity Taxes
This course introduces the basic principles of payroll administration and of commodity taxes. The student will be able

to account for and file the required reports for payroll and commodity taxes.
Prerequisite(s): AC2230

AD1100 - Cultural Competence •
Cultural competence is a critical component of providing effective and inclusive care for individuals from diverse backgrounds. The purpose of this course is to examine cultural competence and provide students with in-depth knowledge of the cultural, social, and psychological factors that affect individuals. This will enable students to become culturally competent mental health and addictions practitioners.

AD1105 - Ethics & Professionalism •
Ethics & Professionalism introduces students to the duties and ethical responsibilities of human service professionals. The course will cover a range of topics that are essential for professionals working in human services, including ethical principles and frameworks, codes of ethics, values and the helping relationship, confidentiality and boundaries, ethical and legal issues, negligence, and risk management.

AD1110 - Human Service Relationships •
In this course, students will focus on developing effective interpersonal skills and approaches in mental health care. Students will analyze and apply essential communication skills for successful interactions with clients and groups while enhancing their ability to recognize signs and symptoms of common mental health issues. In addition, this course is designed to support students as they build confidence in helping individuals who may experience a mental health issue or crisis.

AD1115 - Mental Health Fundamentals •
Mental health affects all facets of life including psychological, emotional, spiritual, and social wellbeing. This course is designed to introduce students to mental health, mental illness, substance use disorders, effects of mental illness in different stages of life, and cultivating and maintaining positive mental health. In addition, students will analyze the process of diagnosis, intervention, and post-diagnosis while examining the Mental Health Treatment Act and certification process.

AD1205 - Interviewing & Helping Skills I •
This course introduces students to the foundations of intentional interviewing in the human services field. They will develop competencies to conduct effective interviews in helping relationships. Using a micro skills training model, students will examine a framework within which interviewing takes place. Students will analyze practical interviewing and basic counselling strategies, and will apply interviewing skills.

AD1210 - Introduction to Addictions •
This course introduces students to societal factors that influence values and attitudes towards mental health and addictions, and the effects of psychoactive drugs on individuals. Students will analyze the nature of dependency, and will examine philosophies and methods surrounding prevention, harm-reduction, and treatment.

AD1215 - Pharmacology & Dependency •
This course is designed to introduce students to the fundamental principles of pharmacology, including an overview of the central nervous system, routes of drug administration, and the effects of different drug classes on the body. Students will analyze the mechanisms of action of various drug classes, including depressants, stimulants, hallucinogens, and psychotherapeutic agents.

AD1220 - Self-Care & Wellness •
Mental and physical wellness is central to a practitioner's success in the workplace. This course introduces students to the dimensions of wellness, stress management, self-care, and achieving a work/life balance. Students will prepare for their field placements by identifying placement opportunities, creating learning contracts, and completing field placement documentation. In addition, students will earn nationally recognized credentials to prepare them for placements with human service agencies.

AD1225 - Trauma-Informed Practice •
In this course, students will be introduced to trauma-informed practice, which is an approach to working with individuals who have experienced trauma. Students will develop skills to recognize the effects of trauma by

identifying its signs and symptoms. In addition, students will analyze ways to create safe and supportive environments to empower individuals and avoid re-traumatization.

AD2100 - Assessment & Case Management •
In this course, students will analyze screening and assessment tools used in the addictions and mental health field. This course will prepare students to apply case management principles and models across a range of intervention settings. Core functions of case management will be evaluated, including assessment skills and tools, professional documentation skills, linking strategies, and the purpose of advocacy. Emphasis will be on legislative and professional practice matters that accompany the responsibilities and complexities of case management.
Prerequisite(s): AD1100, AD1225

AD2105 - Human Development •
This course provides an in-depth analysis of human development across the lifespan as it relates to mental health, including physical, cognitive, emotional, and social development. Students will evaluate theories of human development, including nature vs. nurture, and will analyze how development is influenced by biological, environmental, and cultural factors. Students will examine developmental milestones and stages, and how they are related to different aspects of development, such as language acquisition, moral reasoning, and personality.
Prerequisite(s): PS1145

AD2110 - Interviewing & Helping Skills II •
This course is designed to expand on the skills and knowledge necessary to conduct therapeutic interviews in helping relationships. Students will continue to practice interviewing and counseling strategies and apply interviewing skills in a variety of situations through the extensive use of role-playing. Theoretical frameworks and documentation will also be discussed.
Prerequisite(s): AD1205

AD2115 - Working with Families •
In this course, students will be introduced to the structure of families and the attitudes and skills required to support individuals, families, and communities affected by mental health and substance abuse disorders. Key topics address family resilience and building on a family's strengths to positively affect family functioning and well-being. In addition, students will evaluate family development across the lifespan and will examine the effects of grief and loss on family functioning.

AD2200 - Treatment & Recovery •
This course provides a comprehensive overview of addiction treatment and recovery, including the nature and causes of addiction, and different treatment models and approaches. Students will examine relapse prevention, the effects of co-occurring mental health and substance use disorders, family involvement in the treatment process, and the role of group therapy and peer support. In addition, they will analyze aftercare and continuing care, and current issues and practices in addiction treatment and recovery.
Prerequisite(s): AD1210

AD2205 - Health Promotion •
Health Promotion focuses on promoting health and preventing mental illness within the community. This course will equip students with the knowledge and skills to design, implement, and evaluate programs and interventions aimed at improving health outcomes, reducing health disparities, and creating healthy communities.

AD2210 - Working with Groups •
In this course, students will be introduced to group skill development in the human services field. It focuses on preparing students for teamwork, leadership, effective group participation and group structures within their helping profession. In addition, students will apply reflective practices to assess their purpose and function within group situations.

AE1240 - Electronic Devices
This course covers the description, operation, and application of fundamental electronic components with reference to semiconductor theory. The PN Junction Diode, Bipolar Junction Transistor, Junction Field Effect Transistor, and other devices will be discussed. Analysis techniques associated with linear power supplies and transistor amplifier

circuits will be explained.
Prerequisite(s): ET1280

AE1265 - Analog Electronics
This course introduces the student to solid state electronics. The purpose of this course is to provide the student with an understanding of the operation of transistor and operational amplifier circuits. The theory covered in class will be applied and validated during the laboratory periods.

AE2260 - Electronic Power Devices & Circuits
This course will include three-phase rectification and the analysis, operation and application of op amps and power amplifiers. Power MOSFETs and various thyristors will also be introduced with applications for power control.
Prerequisite(s): AE1240

AE2330 - Analog Electronics I
This course will include the description, operation, and application of simple electronic components and their use in linear power supplies, small signal amplifiers, and power amplifiers. An introduction to frequency response is also covered. Design and troubleshooting skills are emphasized.
Co-requisite(s): MP2140

AE2331 - Analog Electronics II
This course provides further study of transistor amplifiers, with emphasis on frequency response characteristics. Also included is a study of oscillators and power control using thyristors.
Prerequisite(s): AE2330

AE2360 - Analog Electronics I
This course will include the description, operation, and application of fundamental electronic components with particular emphasis on semiconductor theory. Analysis of electronic circuits utilizing diode equivalent circuits will be introduced and expanded to bipolar transistor DC biasing and the analysis of amplifier systems.
Prerequisite(s): ET1141
Co-requisite(s): ET1146

AE2365 - Analog Electronics II
This course is a detailed examination of analog applications of advanced transistor circuits and operational amplifiers, with emphasis on circuit analysis, applications, circuit simulation, and troubleshooting. Also included is the analysis and troubleshooting of IC power supply linear and switching regulators, as well as thyristors and representative power control circuits.
Prerequisite(s): AE2360

AE3130 - Active Circuit Applications
The purpose of this course is to provide the learner with an understanding of the operation of integrated circuit amplifier circuits, active filters, and switching power supplies. The theory covered in class will be applied and validated during the laboratory periods.
Prerequisite(s): AE2330

AE3300 - Industrial Electronics & PLCs
This course is designed to introduce the student to the various types of motor and power control devices. This will provide the student with an understanding of the electronic components and systems used to control discrete industrial processes and variable speed drives. Also, it will provide the fundamental concepts and application of programmable logic controllers.
Prerequisite(s): AE2365

AE3301 - Process Control
This course will introduce the student to various types of open-loop and closed-loop feedback control and will provide the student with an understanding of the components and systems which are used to control industrial processes.
Prerequisite(s): AE3300

AF1130 - Aircraft Structures and Materials
This course will provide the student with the knowledge of aircraft structural design and the materials and processes used in their construction. The student will be introduced to stresses acting on aircraft structures and will be able to determine the urgency of repair when damaged.

AF1220 - Aircraft Structure - Wood, Tubular and Fabric
This course provides an introduction into inspection and repair procedures of aircraft wood, tubular and fabric structures. This includes their design, construction and the stresses affecting them.

AF1240 - Aircraft Structural Repair
This course will provide the student the knowledge and skill in the principles of aircraft structural repair using different types of sheet metal forming processes, materials, fasteners, and equipment.
Prerequisite(s): AF1130

AF1250 - Aircraft Stress Skin Repair
This course will develop the students' knowledge and skill to repair damaged stressed skin structures by patching and spot welding.
Prerequisite(s): AF1240

AF1270 - Composite Materials
This course will provide the students with the knowledge to identify composite materials and the skills to inspect them for damage and perform an effective repair when required.

AF1340 - Advanced Composite Repair
This advanced level course will reinforce the students' knowledge and skill to apply advanced composite fabrication techniques, identify advanced composite structural damage, complete a full damage assessment, and perform an effective structural repair as per Canadian Aviation Regulatory or aircraft manufacturer's standards.
Prerequisite(s): AF1270

AF1400 - Specialized Processes and Fixtures
This course will provide the students with the knowledge and skill to be able to select and manufacture jigs and holding fixtures, perform special metal treatment processes and repair forgings and extrusions as per manufacturer's specifications.

AF1500 - Windshields, Windows and Lenses
This course will provide the students with the knowledge and skill to identify various types of aircraft windshields, windows and lenses, inspect them for damage and evaluate whether repair or replacement is required. The student will manufacture an aircraft window to fit aircraft structure and install it. The student will also perform proper maintenance and repairs to windshields, windows and lenses.

AF2110 - Aircraft Maintenance Fundamentals
This course is designed to provide the Aircraft Structural Repair student with the knowledge of Aircraft Maintenance fundamentals.
Prerequisite(s): GM1160

AF2200 - Corrosion Control
This is a course that will provide the student with the knowledge to identify various types of corrosion, the causes of corrosion and the susceptible locations of corrosion on aircraft structures. This course is designed to provide the knowledge to inspect aircraft structures for corrosion, assessment of damage, removal of corrosion, treatment of corroded areas and protection methods used to prevent or retard further deterioration of aircraft structural components.

AG1100 - Sustainable Agriculture & the Food System
This course will explore current agriculture issues and trends in the industry. Major topics include agriculture sustainability, farm succession, new crops, food safety and growing the business.

AG1120 - Agriculture Safety/Field Exposure
This course will introduce students to the hazards associated with the agriculture workplace and the skills necessary to avoid injury. Major topics include workplace risk assessment, pesticide storage and handling, fire prevention, transportation of dangerous goods, flammable material storage, silo safety, agriculture equipment, transporting and trailering, loading and securing cargo, agriculture road safety and product and machinery safety. Students will participate in a three day pesticide applicators certification course.

AG1200 - The Business of Agriculture
This course will introduce the student to the overall management and operation of the farm business incorporating all aspects such as planning, organizing, and managing. Major topics include business set-up, farming regulations, farm estate planning and decision making for risk management.

AG1240 - Agriculture Sales and Marketing
This course examines the common practices of selling and marketing agriculture products. Major topics include, buying decisions, sales presentations, sales planning, marketing, online marketing platforms and leadership techniques.

AG1300 - Farm Equipment Operation
This course will introduce the student to the operation of various pieces of equipment used on the farm. Major topics include safe operation and maintenance of field equipment, farm tractor operation, farm tools, farm attachments and operation, ATV/SXS, Skid Steer operation, trailering and field camp.
Prerequisite(s): AG1120

AG1305 - Greenhouse Production
This course introduces students plant production within a greenhouse environment. Major topics include: common greenhouse crops, aspects of greenhouse environment, greenhouse design, insects and diseases, technology and automation.

AG1350 - Farm Facilities
Students will be introduced to farm facilities. Major topics include farming facilities, farm building design, , construction materials, building types, cost estimation, farm water systems, energy systems, waste management, feed storage and ventilation.

AG1400 - General Agronomy
This course introduces the student to plant, animal and soil science. Major topics include plant morphology, plant physiology, animal science, animal husbandry, basic research, and agriculture production.

AG1430 - Precision Farming
This course introduces students to precision farming techniques. Major topics include Differential Global Positioning System (DGPS) receivers, yield monitors, variable rate application equipment, field scouting computers, crop data management, Geographical Information Systems (GIS), profit maps and prescription maps.

AG1500 - Livestock Genetics
This basic genetics course will provide a background for genetics, family blood lines and the breeding of animals. Major topics include heredity traits, economic breeding, selection principles, pedigree charts and systematic breeding.

AG1510 - Animal Care
This course will introduce the student to the care of large animals in a field setting. Major topics include handler safety, humane treatment, animal housing and animal welfare and ethics.

AG1520 - Ruminant Production: Beef, Sheep & Goats
This course introduces the student to day-to-day duties, planning and strategic management of beef, sheep and goats. Topics include cow and calf management, calving, livestock management and modern herd management.

AG1530 - Livestock Diseases
Students will be introduced to livestock diseases in farm animals, including principles of disease, infectious disease transmission, clinical signs, and control. Major topics include systemic states, disease spread, immunology, vaccinations, preventative maintenance, pharmacological basics, drug handling and administration, pharmaceuticals safety and withdrawal times and dealing with disease situations.

AG1540 - Non-Ruminant Production: Swine, Honeybee and Fur Production
This course deals with swine and honeybee production. Major topics include nutrition basics, production systems, health management, husbandry, harvest and marketing of primary products and byproducts.

AG1550 - Poultry and Egg Production
This course deals with poultry and egg production. Major topics include poultry and egg production, breeding, and marketing.

AG1560 - Dairy Production
Students will be introduced to the study of dairy cattle. Major topics include the anatomy of the udder, physiology of milk production, equipment, nutrition, record keeping, dairy herd improvement, sanitation and economics.

AG1570 - Livestock Nutrition
This course will introduce students to livestock nutrition. Major topics include nutrient requirements and function, at various stages of life, nutrient formulations for beef, dairy, hog, horses, poultry, fur farming, nutrient honeybees, and goats, feeding programs and available and alternate feeds.

AG1600 - Vegetable and Fruit Production
This course introduces the student to vegetable and fruit production. Major topics include vegetable production, intensive vegetable production, small fruit production, orchard development and production, controlled environment production and organic production.

AG1620 - Field Crops
This course will focus on the basics of crop characteristics and the production of field crops including grain and oil seed crops. Major topics include crop characteristics, production, plant growth, best practices for field crops and environmental factors and influences.

AG1640 - Tillage and Planting
The student will be introduced to tillage and direct seeding. Major topics include tillage, planting, fertilization, equipment calibration and equipment operation.
Prerequisite(s): AG1120

AG1700 - Nutrient Management
This course will introduce students to nutrient requirements for field crop production. Major topics include plant nutrient requirements, nutrient sources, methods of nutrient and soil amendment applications, chemical and physical properties of fertilizers, soil amendments, nutrient availability, nutrient loss, and soil analysis and report interpretation.
Prerequisite(s): GE1310

AG1720 - Weed Management
Students will be introduced to weed management techniques. Major topics include biology of weeds, weed ecology, weed identification, cultural management of weeds, biological and chemical management practices, chemical properties and function of herbicides, application techniques and herbicide handling.

AG1740 - Crop Insects and Diseases
This course introduces students to crop insects and diseases. Major topics include crop insects, crop diseases, insect and disease life cycles, and cultural, biological and chemical methods of management.

AG1760 - Forage and Pasture Management

Students will be introduced to forage and pasture management. Major topics include forage crop varieties, plant growth requirements, forage quality, forage processing and storage, pasture plant and animal interactions, grazing management, and costs of production.

AG1800 - Food Safety and Food Processing
This course will introduce students to, food safety, food processing and food science. Major topics include, on-farm food safety programs, food science, Hazard Analysis and Critical Control Point (HACCP) and HACCP – Based Farms, standard operating procedures, sanitation and hygiene, food-borne illnesses, animal harvesting, food processing, by-products and food waste.

AJ1000 - Introduction to Carpenter
This course provides students with an overview of the Carpenter trade. During the course, students will learn about the safety protocols used in the Carpenter trade, and the equipment used. Students will be provided with a hands-on learning experience in order to gain a deeper understanding of the Carpenter trade and will also explore the current labour market with regards to the Carpenter trade.

AJ1020 - Carpenter
The primary goal of this course is to provide students with the basic knowledge required of a carpenter. Most of the topics discussed and the skills developed throughout the course are within the repertoire of every carpenter/framer and are in accordance with the National Building Code of Canada (NBCC). Competence in the topics covered in combination with practical experience will provide a solid foundation for anyone who wishes to master the trade. Because speed, which cannot be taught, is a critical element of the framing business, the hands-on experience provided throughout the course will increase each student's ability to anticipate next steps while being fully engaged in the task at hand. To this end, students will work on a local residential framing project determined by College of the North Atlantic to practice the proper and efficient use of framing tools and equipment and apply the carpentry and framing skills learned throughout the course.
Prerequisite(s): AJ1760, AJ1025, AJ1030

AJ1025 - Aerial Work Platforms-Scissors
This eight (8) hour course covers the operation of an aerial work platform (AWP) (also commonly referred to as an elevating work platform). It covers the principles of training and operation of AWPs that are general in nature – meaning, they are common to all types of AWPs. These include how standards and regulations govern the operation of AWPs and the importance of following manufacturer's instructions for operation and maintenance of AWPs.

The course looks at factors affecting the safe use of AWPs such as terrain, weather, stability, and other hazards associated with the operation of the aerial platform are also general topics for training and operation.

A practical component is included to reinforce the knowledge covered and give confidence in the student's ability to safely operate an AWP.

AJ1030 - Aerial Work Platforms-Boom
This eight (8) hour course covers the operation of an aerial work platform (AWP) (also commonly referred to as an elevating work platform). It covers the principles of training and operation of AWPs that are general in nature – meaning, they are common to all types of AWPs. These include how standards and regulations govern the operation of AWPs and the importance of following manufacturer's instructions for operation and maintenance of AWPs.

The course looks at factors affecting the safe use of AWPs such as terrain, weather, stability, and other hazards associated with the operation of the aerial platform are also general topics for training and operation.

A practical component is included to reinforce the knowledge covered and give confidence in the student's ability to safely operate an AWP.

AS1200 - Aerodynamics and Flight Control
This course is designed to provide the student with basic knowledge of aerodynamic forces, flight characteristics and

aircraft design and the basic skills to inspect, install and adjust aircraft flight controls. Inspection and adjustments of flight controls and Installation of float and ski systems will be covered in depth.
Prerequisite(s): GM1165

AS1300 - Hydraulic and Pneumatic Systems
This course is to provide students with the basic knowledge of aircraft hydraulic and pneumatic systems design and function. This course will also enable students to perform inspections, troubleshooting principles, and repair and maintenance on Aircraft Hydraulic and Pneumatic Systems. Aircraft plumbing systems will also be covered.

AS1310 - Aircraft Landing Gear System
This course provides students with the knowledge of aircraft landing gear and associated systems, their design and operation as well as enable students to perform inspection, trouble shooting, repair and maintenance on Aircraft Landing Gear and related systems.
Prerequisite(s): AS1300

AS2130 - Aircraft Systems
This course is designed to provide the student with basic knowledge of the operation of aircraft support, environmental and safety systems.

AS2230 - Propellers and Systems
This course will provide the basic knowledge in design, construction, operation and maintenance of propellers and associated systems. Students will also test, troubleshoot, repair, adjust, remove, and replace propeller systems.

AS2520 - Reciprocating Engine Fuel Metering
This course will provide the student with the knowledge of aircraft fuel systems, fuel metering systems, their design components, function, operation, and maintenance.

AV1220 - Aircraft Instruments I
This course will give students an understanding of the requirements for operation and maintenance practices of various types of mechanical and electrical transmitters, transducers, and instruments that are used to provide operational information for most common aircraft engine associated systems.

AV1320 - Aircraft Communication Equipment
This introductory course is designed to give the learner a basic understanding of communication systems used on aircraft and the Emergency Locator Transmitters (ELT's). Basic radio theory will be studied to the block diagram level. Ramp testing, removal and replacement of various communication systems will take place.

AV2120 - Basic Navigation I
This course provides students with information about basic navigation principles and terms used in aircraft systems. Installation practices regarding bonding, panel layouts, antenna installations and remote mounting equipment are discussed. The course will also include descriptions of some common navigation system types.

AV2220 - Aircraft Instruments II
This course is designed to give the students an understanding of flight instruments, the typical panel layouts and installation practices associated with them. It covers air pressure- sensitive and gyro-stabilized systems, including Air Data and Attitude Reference systems. The course also utilizes synchronous transmitter theory. Practical labs include operation and inspections of Pneumatic gyro systems, pitot-static testing & troubleshooting, and performing a compass swing.

AV2225 - Avionic Systems Installation
This course is designed to give students practical experience in installing integrated avionics navigation equipment on aircraft. It involves designing a system that will share a navigation display. Students will gain procedural knowledge of the steps involved in designing and implementing systems installation procedures including associated regulatory supporting documentation. Students will inspect installations and report deficiencies if any.
Prerequisite(s): PE1200

AV2310 - Major Communications Radio Install
This only course prepares the student to inspect, install, troubleshoot, repair and maintain electronic communication radio equipment and their systems. A major installation will be completed including all of the required paperwork and technical records.
Prerequisite(s): AV1320

AV2320 - Auto Flight
This course of study will cover the fundamental principles of automatic flight for both fixed wing and rotary wing aircraft including servo systems, components, aircraft dynamics, pitch, roll, yaw, and speed commands.

AV3110 - Monitoring and Digital Systems
This course provides information regarding the design of data communication systems used by avionics equipment on the aircraft. Topics also include electronic systems that record and display data. Practical applications include inspecting, testing, and troubleshooting installed avionic and electrical systems.

BA1000 - Health and Safety
This course demonstrates knowledge of industry standards, safe work practices and regulatory requirements pertaining to health and safety for the baking and pastry arts industry.

BA1010 - The Professional Baker
This course will introduce students to the industry standards and baker terminology. It will explore common communication and conflict resolution models, coaching, and mentoring for bakers. The course will identify and practice forms and documentation, as well as identify the designation for baker career options.
Prerequisite(s): BA1105

BA1015 - Baker Tools and Equipment
This course will involve the selection of kitchen tools and equipment, basic maintenance and procedures for their use. The course will also explore baker specific tools and equipment, their applications, basic maintenance and procedures for their use.
Prerequisite(s): BA1105

BA1020 - Weights and Measures
This course demonstrates knowledge of weighing and measuring devices, their applications and procedures for use. It also demonstrates knowledge of increase and decrease recipe yields and portions to meet specific requirements.

BA1025 - Baking Methods and Principles
This course will demonstrate knowledge of baking methods and their characteristics, baking terminology and techniques, as well as explore seasonings and flavorings, their purpose and use.
Prerequisite(s): BA1105

BA1030 - Bread Products
This course requires the use of baking utensils, equipment, and baking supplies. It involves preparing bread products. It includes information on yeast fermentation, bread formulas, chemical leavening and production methods used for yeast dough and quick breads.
Prerequisite(s): BA1010, BA1025, BA1105

BA1035 - Cakes I
This course requires the use of baking utensils, equipment, and baking supplies. It involves preparing cakes and icings. It will include the background information on ingredients, mixing methods, baking methods, icing, decorating and storing cakes.
Prerequisite(s): BA1010, BA1025, BA1105

BA1040 - Cookies
This course requires the use of baking utensils and equipment, and baking supplies. It involves preparing specialty cookies and squares. It includes information on types mixing methods and the necessary makeup methods and

preparation techniques for cookies and squares.
Prerequisite(s): BA1025, BA1105

BA1050 - Artisan Breads
This course requires the use of baking utensils, equipment, and baking supplies. It involves preparing artisan breads, rich breads, and laminated breads. It will include information on ingredients, pre-ferment, mixing methods, baking methods, icing, and storing products.
Prerequisite(s): BA1010, BA1025, BA1030, BA1105

BA1055 - Cakes II
This course requires the use of baking utensils, equipment, and baking supplies. It involves preparing specialty cakes and advanced assembly and decorating.
Prerequisite(s): BA1035, BA1061, BA1105

BA1061 - Pastry, Fillings and Creams
This course is an overview of basic skills needed to produce various baked goods and dessert items. Fundamental baking techniques and methods are applied to produce products in an industry-like environment. Students will also learn to create different types of creams, custards, fillings and dessert sauces.
Prerequisite(s): BA1010, BA1025, BA1105

BA1070 - Advanced Pastries
This course is an application of advanced skills needed to produce premiere quality baked goods. Students will apply these advanced baking techniques and methods to produce products in an industry-like environment.
Prerequisite(s): BA1061, BA1105

BA1075 - Creams, Custards, Fillings and Dessert Sauces
This course provides students with the knowledge, understanding and ability to produce different types of creams, custards, fillings and dessert sauces that require advanced technical skill and knowledge.
Prerequisite(s): BA1061, BA1105

BA1080 - Dietary Baking
This course is an application of advanced skills needed to produce baked goods requiring adaptations due to dietary restrictions. Students will apply fundamental baking techniques and methods to produce products in an industry-like environment.
Prerequisite(s): BA1105

BA1085 - Laminate Dough
This course is an application of advanced skills needed to produce premiere quality baked goods featuring laminate dough methods. This course will apply these fundamental baking techniques and methods to produce products in an industry-like environment.
Prerequisite(s): BA1030, BA1050, BA1105

BA1090 - Frozen Desserts
This course is an application of advanced skills needed to produce premiere quality frozen products. This course will apply fundamental baking techniques and methods to produce products in an industry-like environment.
Prerequisite(s): BA1061, BA1105

BA1095 - Chocolate and Sugar
This course is an application of advanced skills needed to produce premiere quality baked goods. Apply fundamental baking techniques and methods to produce products in an industry-like environment.
Prerequisite(s): BA1010, BA1025, BA1105

BA1100 - Workplace Exposure Baking and Pastry Arts
Students will gain an appreciation of the real work environment through a three (3) week job placement experience

directly related to the area of training. This experience will be required in addition to all academic requirements of the Baking and Pastry Arts program. Students will be able to develop employability skills such as working independently, team building, customer service, work ethic, attitude, accountability, and further enhancing their personal growth.
Prerequisite(s): BA1025

BA1105 - Food Safety and Sanitation
This course is designed to provide students with a comprehensive understanding of the regulations, principles and best practices in food safety and sanitation. This course is essential for individuals working in the food industry to ensure proper food handling, personal hygiene and safe food preparation, service and storage.

BL1025 - Introductory Biology I •
This introductory biology course is designed to provide an overview of the biological processes and principles that are essential for life. Students will analyze the structure and function of biological molecules, examine metabolic pathways and feedback mechanisms, describe the anatomy and physiology of plants, assess the human systems that are responsible for maintaining homeostasis in the body, and discuss population interactions within biomes and ecosystems. Throughout this course, students will incorporate the scientific method and develop critical thinking skills necessary for further study in biology.

BL1026 - Introductory Biology II •
This introductory biology course provides a solid foundation in the fundamental concepts of biology. It is a comprehensive introduction to the study of life, with a focus on reproduction, genetics, evolution, and phylogeny. Students will analyze the process of reproduction, including the mechanisms of cell reproduction, and reproductive strategies across a range of organisms. They will examine the structure and function of DNA, gene expression, inheritance patterns, genetic disorders, and the latest advances in genetic engineering. Students will assess the theory of evolution by natural selection and explore the ways in which populations adapt and evolve over time. In addition, they will analyze the evolutionary relationships among organisms, including patterns of evolutionary diversification across distinct groups of organisms.

BL1070 - Anatomy and Physiology •
This course incorporates applied anatomy and physiology of domestic animals. Students will study the relationship between structure and function beginning at the cellular level and working through all organ systems. Learning is enhanced using models and the dissection of preserved animals.
Co-requisite(s): TM1150

BL1100 - Biology
This is an introductory course in the first semester of the Natural Resources cluster designed to prepare the student for further biology related studies. Emphasis in labs and field trips will be directed to gaining an appreciation of natural ecosystems and associated life processes.

BL1120 - Biology I
This is an introductory course in the first semester of the Natural Resources cluster designed to prepare the student for further biology related studies. Emphasis in labs and field trips will be directed to gaining an appreciation of natural ecosystems and associated life processes.

BL1175 - Principles of Biology I
This is the first of two introductory courses developed for credit transfer to Memorial University of Newfoundland. The course is intended to be equivalent to MUN's Biology 1001. The course is an introduction to the science of biology, covering the fundamentals of biological concepts for successive courses including: basic biochemistry, introduction to cells and cellular organization, an introduction to cellular transport, an introduction to metabolism and enzymes, nucleic acid structure, replication and its functions, viruses and an introduction to prokaryotic organisms, Protists and Fungi. Transferable to MUN Biology 1001.

BL1176 - Principles of Biology II
This is the second in a series of two introductory courses developed for credit transfer to Memorial University of Newfoundland. The course is intended to be equivalent to MUN's biology 1002. This course concentrates on the structure and function of the Plant Kingdom and the Animal Kingdom using the flowering plant and various

invertebrates and vertebrates as examples. Transferable to MUN Biology 1002.
Prerequisite(s): BL1175 or BL1500 or MUN Biology 1001

BL1180 - Anatomy and Physiology
This course is designed to enable learners to acquire a comprehensive knowledge of gross anatomy and physiology of the major systems of the human body. In addition, learners will be instructed on the general principles of pathophysiology to facilitate understanding of the body's reaction to trauma and illness.

BL1300 - Anatomy & Physiology
This course is an introduction to the science of normal functions and phenomena of living things from the cellular to the whole body levels of organization. Emphasis will be placed on the principles of the functioning of the organisms and body systems in order to facilitate the understanding and relationship of biomedical instrumentation.

BL1330 - Anatomy •
This course is an introduction to the science of normal functions of living things from the cellular to the whole body levels of organizations.

BL1400 - Fish and Wildlife Biology •
This course involves the study of the natural history and theoretical and practical understanding of the anatomy of birds, fish, and mammals. It includes information on reproductive biology, feeding biology, behavior of fish, birds, and mammals, storage of specimens, and dissection procedures.
Prerequisite(s): BL1120

BL1600 - Human Biology
This course will provide an introduction to human biology, including a brief review of biochemistry, cellular biology, infectious processes, and human tissues. The primary emphasis will be an overview of the anatomy and physiology of the human body using a systematic approach. It is designed to provide a foundation for health science students to help the student understand the variety of medical tests, procedures, and/or drugs available for diagnosis and treatment. The fundamental concepts covered in this course will form the basis for further studies in allied health sciences.

BL1605 - Human Biology
This course will provide an introduction to human biology, including a brief review of biochemistry, cellular biology and human tissues. The primary emphasis will be an overview of the anatomy and physiology of the human body using a systematic approach. The fundamental concepts covered in this course will form the basis for further studies in allied health sciences.

BL2425 - Clinical Microbiology 1
This course builds on the general concepts of disease and basic microbiology outlined in BL2601 (Intro to Microbiology). Students study clinically relevant bacteria with emphasis on the techniques utilized to isolate and identify common pathogens in the laboratory setting. Students perform various biochemical, cultural, and chemical tests on selected non-fastidious bacteria and report test results at an introductory level.
Prerequisite(s): BL2601

BL2431 - Clinical Microbiology 2
This course consists of a systematic study of the pathogenicity, epidemiology, morphology, and laboratory identification of various common microbes associated with infectious disease. Major emphasis will be on bacteria with a brief study of clinically important yeast-like fungi.
Prerequisite(s): BL2425, ML1660

BL2441 - Clinical Microbiology 3
In this course, students continue building knowledge and skills of microbiology techniques exploring some of the organisms and specimens less frequently isolated in the laboratory. Knowledge will be further reinforced by an exploration of the routine set-up and isolation of microorganisms using a body systems approach. Emphasis will be placed on microbiology laboratory techniques, practices, standards and quality control. An introduction to advanced

microbiology techniques including molecular biology, parasitology, and virology will also be explored.
Prerequisite(s): BL2431

BL2601 - Intro to Microbiology
This course introduces students to the principles and methods of microbiology in the health sciences and provides an overview of the safety aspects of a level II microbiology laboratory. Selected topics include an introduction to the classification, structure, and cultivation of bacteria in the health science disciplines, an overview of the significant role microbiology plays in the health of the public, and an introduction to a routine microbiology laboratory.

BL3410 - Clinical Microbiology Sim 1
This course is an introduction to the isolation, identification and reporting of microorganisms isolated from clinical specimens originating from the head and neck, the genito-urinary system and other miscellaneous sources. It is at an intermediate level and is intended to introduce the process of standard techniques and methodologies used to identify common pathogens in a routine clinical microbiology laboratory. Standardization of laboratory techniques, terminology, methods, and reporting will be emphasized. Quality control is incorporated.
Prerequisite(s): BL2441
Co-requisite(s): ML2320

BL3411 - Clinical Microbiology Sim 2
This course involves laboratory isolation, identification and reporting of microorganisms from clinical specimens originating from the head and neck, the gastro-intestinal tract, and other miscellaneous sources. It is at an advanced level of understanding and interpretation. It is intended to introduce standard techniques and methodologies used to identify common pathogens in a routine clinical microbiology laboratory. Standardization of laboratory techniques, terminology, methods, and reporting will be emphasized. Quality control and quality assurance is incorporated.
Prerequisite(s): BL3410, ML2320

BL4410 - Microbiology Practicum
This course allows the student to develop technical competence while reviewing theoretical material from previous semesters. The three week hospital rotation will emphasize clinical procedures and acquaint the student with the hospital operation and administration.
Prerequisite(s): CH3511, BL3411, ML2211, ML2311, ML2511

BU2120 - Building Codes and Services
This course will provide learners with the knowledge and skills to address questions regarding public safety, fire safety, plumbing systems and ventilation systems. Learners will use various codes and standards to solve design problems for new and existing structures.
Prerequisite(s): None
Co-requisite(s): None

BU2130 - Service Learning
This course is an introduction to service learning. It explains the purpose and structure of the service learning approach to education. It also presents an overview of health and safety as it relates to building construction sites. Students will learn about the key components needed in the delivery of formalized service learning, and proper health and safety practices while working on community projects.

BU2250 - Electrical Systems
This course is comprised of lectures and labs designed to introduce the learner to building electrical systems. Design concepts and procedures are studied, with direct applications in the preparation and production of electrical systems drawings.
Prerequisite(s): PH1101
Co-requisite(s): DR2150

BU2260 - Plumbing Systems
This course introduces students to terminology and design methods used in the plumbing and fire protection aspects of building services. The course begins with an introduction to hydraulics, piping and the associated terminology, and advances to areas of water supply and distribution, sanitary drainage, storm drainage, and fire protection. The course

includes a detailed study of code requirements and the preparation of computerized working drawings.
Prerequisite(s): PH1101
Co-requisite(s): CG1800, DR3111

BU2270 - HVAC
This course is designed to introduce the student to building heating, ventilation, and air conditioning (HVAC) systems. The course begins with an introduction to historical and contemporary HVAC systems emphasizing current energy conservation. Climate, comfort, passive, and active design strategies are discussed, along with a detailed study of building heat gain and building heat loss.
Prerequisite(s): BU2260
Co-requisite(s): DR4120

BU2300 - Building Codes I
This is the first of two architectural building codes courses. The course gives a brief examination of the purpose and contents of building codes in general. It also gives an overview of how the National Building Code of Canada is formatted and how it is to be used. The course concentrates on the code requirements given in the National Building Code of Canada for houses and small buildings. Emphasis is placed on selecting and sizing building components.
Co-requisite(s): DR3110

BU2301 - Building Codes II
This course is a continuation of BU2300 – Building Codes I and concentrates on the safety requirements of buildings covered by Part 3 in the National Building Code of Canada. It is designed to help the student to interpret and apply regulations through a series of practical exercises.
Prerequisite(s): BU2300

BU2410 - Building Science I
This is the first of two building science courses. The course introduces students to the barriers of the building envelop and studies how heat and air/water flow through wood frame construction, particularly from the inside to the outside of the enclosure. It investigates steps to reduce/prevent the negative results which may result from this movement. Emphasis is placed on the selection and arrangement of building components.
Prerequisite(s): DR1405

BU2411 - Building Science II
This is the second of two building science courses. The course deals with heat, air and water movement through the building envelope particularly from outside to inside the enclosure. It examines the way different wall and roof assemblies perform with a focus on commercial construction. Students are required to solve technical problems based on building science theory. Emphasis is placed on the "barrier" concept of enclosure design with highlight of barriers in low slope (flat) roofs.
Prerequisite(s): BU2410
Co-requisite(s): DR3110

BU3300 - Building Specifications
This course deals with the interpretation and writing of specifications for building projects. A study is made of specification writing theory and procedures. Students are expected to analyse specifications for form intent. Projects include identifying technical and legal requirements and translating them into written form. Subject material includes contracts, master format, specification types, and specification writing.
Prerequisite(s): CG3230, DR4120

CA2110 - Structures I
This is the first of two courses in the application of fundamental design concepts in structural design using Canadian design standards. This course prepares the learner to analyse and design basic steel and timber structural elements. Topics include: material properties, design of tension and compression members, beams, columns, and connections.
Prerequisite(s): CF2531

CA2111 - Structures II
This is the second of two courses in the application of fundamental design concepts in structural design using Canadian design standards. This course prepares the learner to analyse and design basic cast-in-place reinforced concrete structural elements including beams and one-way slabs, columns, foundations and walls. Flexural behavior, shear, compression, serviceability and bond and anchorage requirements are considered.
Prerequisite(s): CA2110

CA2120 - Butchery I
This course will encompass basic and advanced butchery concepts. Students will learn about the structure and composition of a variety of livestock and game used for meat production, the inspection process, and fabrication of various cuts used in the culinary industry.

CA2125 - Meat and Poultry I
This course will explore the basic and advanced techniques in the processing and cooking methods of beef, veal, pork, and poultry. Dry, moist, and combination cooking methods will be practiced. Students will also learn about selection criteria for meats, marinades, rubs, and garnishes.

CA2130 - Seafood I
This course examines the fundamentals of seafood cuisine and its integration into the North American diet and restaurant industry. Students will butcher, prepare, and plate seafood. Two major classes of seafood covered in this course include shellfish and fin fish.

CA2135 - Charcuterie I
In this course students will acquire theoretical and practical skills required to make classical and modern charcuterie items. Processes used to produce charcuterie items will be explored including curing, brining, and fermentation. Students will also learn about condiments and accompaniments used to enhance charcuterie preparations.

CA2140 - International Cuisine I
This course explores the world of international cuisine and flavor and how they are integrated into North American diet and restaurant industry. Cuisines from France, Spain, Italy, United Kingdom, Mexico, and the Caribbean are examined. Topics covered include factors that influence regional cuisine, common ingredients, and signature dishes.

CA2145 - Saucier I
This course explores the foundations of saucier work. Preparation procedures and quality ingredients are key topics within Saucier I. Students will learn to prepare stocks, soups, and sauces.

CA2150 - Pastry Arts I
This course is an overview of advanced skills needed to produce various baked goods and dessert items. Students will learn about ingredients used in baking and how to perform calculations to determine amounts required for recipes. Some of the prepared items in this course include chocolate, creams, custards, pastries, and glazes.

CA2155 - Menu Planning
This course will examine the basic principles of menu development. Standardized recipes and service styles to consider when planning a menu will be explored. Students will also learn to adjust planning based on dietary restrictions.

CA2160 - Nutrition for Culinary Professionals
This course teaches the language of nutrition and the key concepts of healthy eating, nutrients, food labelling, allergies and special diets. There will also be a significant focus on the selection of ingredients, recipes substitutes and menu development to suit the needs of individuals in various food service settings.

CA2170 - TrainCan BASICS.fst
The TrainCan BASICS.fst course builds food safety competence for culinary professionals. Content within this course was developed by Canadian Food Retail and Food Services Regulation and Code, Health Canada, and the Canadian Food Inspection Agency. Upon completion of this course students will receive nationally recognized food safety certification.

CA2230 - Butchery II
This course will involve learning about advanced butchery techniques. Whole animal butchery and fabrication of specialty cuts are covered. Students will gain practical experience working with beef, veal, pork, lamb, poultry, and game.
Prerequisite(s): CA2120

CA2235 - Meat and Poultry II
This course explores advanced processing and cooking methods of lamb, veal, wild game and specialty poultry. Dry, moist, and combination cooking methods will be practiced. Students will also learn about marinades, rubs, and garnishes.
Prerequisite(s): CA2125

CA2240 - Seafood II
This course is an exploration of advanced seafood techniques utilized throughout world cuisine. Students will butcher, prepare, and plate specialized seafood. Major topics include raw seafood applications, sushi, and sous vide cooking.
Prerequisite(s): CA2130

CA2245 - Charcuterie II
In this course students will learn advanced skills required to make classical and modern charcuterie items and explore the food preserving technique of smoking. Charcuterie products that students will learn to prepare include sausages and forcemeats. Aspics and jelly preparation will also be examined.
Prerequisite(s): CA2135

CA2250 - Saucier II
This course explores advanced techniques for saucier work. Students will learn to prepare glace, specialty soups, derivative and non-traditional sauces. Service and finishing techniques are also covered.
Prerequisite(s): CA2145

CA2255 - Pastry Arts II
This course is an overview of advanced skills needed to produce various baked goods and dessert items. Students will learn to prepare various frozen desserts, specialty cakes, artisan breads and confections. Specialty requirement baking is also examined.
Prerequisite(s): CA2150

CA2260 - Cost Control
In this course the student will learn advanced mathematical skills used to determine costs associated with food establishments, food yields, budgeting, scheduling, and procurement.

CA2265 - Cuisine of Canada
This course is an exploration of Canadian cuisine. Flavors, regional cuisine, and the Canadian food industry are examined. Students will prepare and plate Newfoundland and Labrador and indigenous food products.

CA2310 - International Cuisine II
This course explores the world of international cuisine and flavor and how they are integrated into North American diet and restaurant industry. Cuisines from Scandinavia, Russia, Asia, the Eastern Mediterranean, India, and Germany are examined. Topics covered include factors that influence regional cuisine, common ingredients, and signature dishes.
Prerequisite(s): CA2140

CA2315 - Garde Manger
This course covers advanced skills required to make classical and modern cold cuisine items. Sandwiches, salads, hors d'ouerves, and the practical applications of these products are covered. Plating techniques and styles of service are also examined.

CA2320 - Urban Development I

This course is designed to provide the learner with an opportunity to apply learned theory to the design of an actual subdivision for given lot sizes, dwelling standards, zoning, and other internal and external site factors. This course also includes identification of local design regulations and the preparation of computerized drawings.
Prerequisite(s): SU1210

CA2321 - Urban Development II
This course is designed to provide the learner with an understanding of municipal water and wastewater distribution systems. Water quality parameters and piping network systems will be examined in detail. This course also includes identification of local design regulations and the preparation of computerized drawings.
Prerequisite(s): WA1230, CA2320, WA1160

CA2325 - Food and Beverage Pairing
This course explores the pairing of food and beverages to enhance the dining experience. Non-alcoholic and alcoholic beverages are examined and students will prepare nonalcoholic beverages such as coffee and tea. Pairing wine products with different types of food serves as a major topic in this course.

CA2330 - Holistic Assessment
The Holistic Assessment course reviews major topics from the Culinary Management program. The aim of this course is to assess the culinary knowledge of students and provide constructive feedback. Students will also learn about topics pertaining to the Interprovincial Red Seal examination.

CA2340 - Culinary Business Management
Students will review topics in the culinary business world as an introduction to general business management practices. Students will be introduced to general culinary business accounting and marketing practices and principles. This course provides students with the fundamental tools of financial analysis and culinary marketing.

CA2500 - Highway Technology
This course enables the learner to plan and design highway transportation systems according to local standards. Learners will be required to complete a major highway design project utilizing design software. The project comprises of route selection, design of horizontal and vertical alignment including super-elevation, preparation of plans, profiles and cross-sections, calculation of earthwork quantities, and environmental protection measures using current civil design software.
Prerequisite(s): CB2420
Co-requisite(s): WA1160

CA2810 - Soils & Foundations I
This is an introductory course in soil mechanics in which learners will acquire knowledge about the various types of soils used in the design and construction of civil projects. Identification, classification, and formation of soils will be addressed and learners will become familiar with the standard tests and procedures used to evaluate soils and their engineering properties.
Prerequisite(s): CF2711

CA2811 - Soils & Foundations II
This course will build on the knowledge acquired in CA2810 and will introduce the learner to the field of Geotechnical Design. Learners will be required to determine and analyse the effects of soil properties on bearing capacity, slope stability of soils, consolidation, and settlement. Aspects covered include: shallow foundations, pile capacity and design, foundation settlement, and slope stability.
Prerequisite(s): CA2810

CA2900 - Municipal Engineering
This course provides an introduction to zoning bylaws and zoning in general. Criteria are examined for the design and construction of roads, curbs and sidewalks, width or right of way, storm and sanitary sewer collecting systems, water distribution systems and layout of utilities (e.g., electrical, phone, cable TV). Lectures are supplemented by labs in which related problems, field trips, and the actual lot layout, design of roads, water mains, sanitary sewer and storm sewer for an urban subdivision are carried out.
Prerequisite(s): SU1325

CB2420 - Construction Methods
Construction methods will help learners to estimate construction costs and productivity rates of various types of equipment and apply previous knowledge from economics to Heavy Equipment. The course will deal with methods and operations utilized in heavy and marine construction, with emphasis placed on specifying the best equipment or process for the situation.
Prerequisite(s): MA1101

CE2280 - Modulation and Encoding
This course is designed to provide students with a foundation in the fundamental methods of modulating or encoding analog and digital signals for transmission over a modern communication system. The methods for the transmission of analog and digital signals across an analog medium are covered as well as the methods for transmitting analog and digital signals across a baseband digital medium. The impact of noise on these methods is also discussed.
Prerequisite(s): MA1101 or MA1220, CI1110 or ET1146, AE2330 or AE2360

CE2730 - RF Transmission & Antennas
This course provides a comprehensive study of the basic principles of electromagnetic wave propagation as they are applied to transmission lines, waveguides, and antennas with applications in wired and wireless communications systems.
Prerequisite(s): MA1101 or MA1220, MP2140 or ET2100 or ET1146

CE2810 - Industrial Communication Systems
This specialized course introduces the student to industrial communication protocols and systems for process control and automation systems in an industrial environment. The lab component is designed to enhance the theoretical lecture component by implementing communication methods, networks, and troubleshooting skills.
Prerequisite(s): CR1107

CE2940 - HMI & SCADA
The course provides learners with a comprehensive analysis of Human Machine Interface (HMI) development using commercial HMI software for monitoring and controlling automated machines and processes from custom designed graphical user interfaces. Learners will be introduced to the Supervisory Control and Data Acquisition (SCADA) system for process and utility industries.
Prerequisite(s): CE2810, DP3110

CE3110 - Wireless Communications Systems
This is an advanced electronic communications course focusing on modern wireless communication systems. It provides a background in radio wave propagation. A systems-level approach to the architecture, design, and operation of VHF and UHF mobile radio systems, cellular telephone systems, microwave and satellite-based communication systems is presented.
Prerequisite(s): CE2280, CE2730

CE3430 - Network Cabling
This course will provide the learner with the necessary skills to design and implement high performance cabling systems. The performance level of the system determines the type of cabling and hardware to be used, the rules to be followed and the type of testing and documentation required to certify performance and trouble-shoot the installation.

This course focuses on the physical layer of the OSI Network Model and includes the electrical and mechanical aspects of interfacing to the transmission medium and the impact on performance they may have. This includes analysis of copper cabling, fibre optics, connectors and interconnection hardware, electrical code requirements for installation, performance certification, and documentation best practices.

CF1100 - Materials and Processes I
The purpose of this course is to provide students with knowledge of the behaviour and characteristics of common engineering materials and an understanding of basic industrial processes. This will enable students to select suitable materials and fabrication methods for the design and manufacture of parts to ensure successful service.

CF1101 - Materials and Processes
The purpose of this course is to familiarize the learner with production and fabrication processes and practices used in the industrial environment. The course provides an overview of welding processes, non-destructive testing, corrosion, and casting-processes. An introduction to plastics and other engineering materials is provided.
Prerequisite(s): CF1100

CF1120 - Materials and Processes II
The purpose of this course is to familiarize the student with production and fabrication processes and practices used in industrial environments. A continuation of CF1100 – Materials and Processes I, this course will give an overview of non-metal materials used in engineering processes and an understanding of surface treatments, coatings and corrosion. Manufacturing processes include metal removal, joining processes, and casting processes.
Prerequisite(s): CF1100 or CF1160

CF2100 - Mechanics of Solids: Statics
This is a core engineering course in the Mechanical Engineering Technology program. This course introduces students to the fundamentals of problem solving using engineering analysis. This first course in Solid Mechanics deals with Newton's First Law where forces are in equilibrium. Solutions to the problems presented involve drawing free body diagrams, resolving force vectors into components, and solving equations to find reactions. The concept of internal stress is introduced and related to bending moments, simple shear and torsional shear. The lecture portion of the class will consist of the introduction of the engineering problem solving process, the conceptual material and interactive demonstrations of the engineering concepts. The lab portion will provide an opportunity to engage students in experimental methods and comparison of experimental data with theoretical values.
Prerequisite(s): PH1101, MA1101

CF2511 - Strength of Materials
This course expands on previously studied concepts of CF2100 Mechanics of Solids: Statics and provides a basis for calculations in engineering design as per complex stress and strain systems.
Prerequisite(s): CF2100

CF2530 - Strength of Materials I
This is the first of two courses in the study of statics and strength of materials in preparation for further study in design-oriented courses. Learners will learn to analyze forces in structures and basic requirements to ensure safety of structures under applied loads. Major topics include: statics, basic concepts in strength of materials, centroids and moments of inertia, design properties of materials, direct stress, deformation and design, and torsional shear stress and torsional deformation. Laboratories include tensile, compression and shear testing of various engineering materials.
Prerequisite(s): MA1101; PH1101
Co-requisite(s): MA2100

CF2531 - Strength of Materials II
This is the second of two courses in the study of statics and strength of materials in preparation for further study in design-oriented courses. Learners will learn to calculate and plot shearing forces and bending moments in beams, analyze shear stress, bending stress and deflections in statically determinate and statically indeterminate beams, analyze stresses in columns and connections, calculate combined stress in members subject to bending and direct stresses, and calculate stresses in welded and bolted connections. Laboratories include testing of beams, columns and connections under applied loads.
Prerequisite(s): CF2530

CF2545 - Mechanics of Solids
This course is included in the Petroleum Engineering Technology programs' curriculum as an Engineering science. It is part of a core of courses that introduce students to the fundamentals of applied problem solving. It enables the economical and safe selection of materials for engineering components, which are subjected to loads when in service. Theoretical work, supplemented by problem sessions, is carried out in multiple topic areas that are relevant to the petroleum engineering field of practice.
Prerequisite(s): PH1101 or PH1150, MA1101

CF2615 - Building Materials I
This course examines the properties, limitations, and application of wood and masonry as it relates to building design and construction.

CF2616 - Building Materials II
This course examines the properties, limitations, and applications of several different building materials. It is designed to help students assess and select suitable materials for a variety of situations found in buildings.
Prerequisite(s): CF2615

CF2710 - Materials and Testing I
This course has been designed to provide the learner with a working and hands on knowledge of common building materials, so that he/she will be better able to function as a technologist in the building and heavy construction field. This course will provide the learner with a basic knowledge of the characteristics, uses and application of common construction materials and the general specifications associated with each material. Materials such as concrete and aggregate; their properties, components, uses, production and construction methods will be studied. Basic theory will be supplemented by laboratory testing of aggregate and concrete done to CSA Standard. Emphasis will be placed on decision-making for the proper selection and use of the various components discussed in each material. Course work will be supplemented by field trips and in shop demonstrations.
Prerequisite(s): CM1401

CF2711 - Materials and Testing II
This course has been designed to provide the learner with the working and hands on knowledge of common building materials, so that he/she will be better able to function as a technologist in the building and heavy construction field. This course will be a continuation of CF2710 - Materials and Testing I. It will provide the learner with a hands-on approach to the testing, selection, use and application of common building materials, such as asphalt and aggregate; and tested under laboratory conditions. Wherever possible, in lab work, will be supplemented with field trips, videos and guest lectures.
Prerequisite(s): CF2710

CF3100 - Mechanics of Solids: Dynamics
This second Mechanics course expands on previously studied concepts of Statics specifically Newton's 1st Law introducing Newton's 2nd Law, kinematics, work-energy concepts, as well as relative motion and vibration. The lecture portion of the class will consist of the introduction of the engineering problem solving process, the conceptual material and interactive demonstrations of the engineering concepts. The lab portion will provide an opportunity to engage students in experimental methods and comparison of experimental data with theoretical values.
Prerequisite(s): CF2100

CF3201 - Materials and Corrosion
This course provides the learner with an introduction to physical and mechanical properties of common materials used in the petroleum and chemical processing industry. It will examine the production of steel and effects of pressure and temperature on steel alloy systems. It is designed to familiarize the learner with the major factors that influence industrial material selection. Learners will also examine corrosion and means by which corrosion is controlled and monitored in industry.
Prerequisite(s): CH1121

CF3205 - Materials and Corrosion
This course provides the student with an introduction to physical and mechanical properties of common materials used in the petroleum and chemical processing industry. It will examine the production of steel and effects of pressure and temperature on steel alloy systems. It is designed to familiarize the student with the major factors that influence industrial material selection. Students will also examine corrosion and means by which corrosion is controlled and monitored in industry.
Prerequisite(s): CH1121

CF3440 - Structural Design
This course is an introduction to structural design and strength of materials. Emphasis is placed on calculations

leading to the selection of structural members based on shear forces, bending moments, and deflection produced by static loads, with an application towards architecture and building construction.
Prerequisite(s): MA2100, PH1101

CF3620 - Building Materials III
This is the third building materials course and examines the properties, limitations, and application of several different building materials. The focus is on building materials as interior finishes and is designed to help students assess and select suitable materials for a variety of situations with an emphasis on commercial building applications.
Prerequisite(s): CF2616

CG1205 - Health Care and Safety
This course serves as an introduction to the hospital environment, its organization and management. Learners will be familiarized with the health care system of Canada. The application of safety in the hospital environment, with a special emphasis on the concepts of electrical safety, will be stressed. The learner will also be familiarized with the equipment control systems and procedures utilized by biomedical engineering departments. The concepts of quality assurance as well as standards involved in the safe use of electricity in health care institutions will be addressed. This will be done in the context of an overall quality management system. Learners will also become familiar with fire, micro-biological, infection control and environmental safety issues as they relate to the hospital environment.

CG1310 - Commercial Construction
This course is an introduction and overview of the commercial construction sector. The purpose is to give students an understanding of different levels and types of construction, the various construction phases, as well as different construction methods, materials, and claddings and where/how they are used. The basics learned in this course will be applied throughout the program.

CG1400 - Production Fundamentals
This course will expose students to the operation of a production room. Students will learn about artistic and technical illustrations and how to transfer them to flat patterns for production. They will delegate the industrial straight stitch, the four-thread overlock, the five-thread finishing machine, the industrial blind hemming machine, the double needle machine, the industrial walking foot machine, industrial fur sewing machine and the industrial gravity feed steam iron for specific aspects of the production. Product label design and fibre content label design will be covered. Students will learn to perform multi-colour screen printing on products. They will also perform costing for production jobs and apply lean manufacturing techniques to produce a product according to industry standards. Finally, students will develop skills in employee-employer relations.
Prerequisite(s): TX1400
Co-requisite(s): TX1210

CG1500 - Work Methods and Measurement
This course is designed to introduce the student to the basics of time and motion study. It will provide the student with a basic understanding of time study techniques. It comprises various topics in pre-determined motion time and work measurement systems. The intent is to develop in the student a full understanding of the elements of these systems and the capability to create and implement them. It also provides the student with the basic tools used in a lean manufacturing enterprise.
Prerequisite(s): EG1430

CG1700 - Environmental Design
This course will introduce students to the fundamentals of architectural design with emphasis on applying basic architectural principles, conventions, and sustainable building practices. It will also further develop the student's understanding of architectural practice.

CG1800 - Building Site Development
This is a two-part course that teaches students the requirements of building site development. The first section is an introduction to surveying while the second section deals with the actual site development. Knowledge of each major topic will be gained through both theory and practical work, including field work.
Prerequisite(s): DR3110

CG2110 - Supply Chain Management
This course analyzes the principles of Supply Chain Management by bringing together all of its mayor components. It covers the movement of materials and services from point of origin to point of use, involving suppliers, manufacturers, intermediaries, stores, and service enterprises.

CG2160 - Lean Methods
This is an introductory course that provides the learner with the basic tools used in a lean manufacturing enterprise. It lays the foundation for many of the topics that are done in detailed applications within the Industrial and Manufacturing disciplines. The course provides an overview of quality, production systems, operation designs and applications of the lean manufacturing philosophy of identifying and eliminating waste through continuous improvement of products and services.
Prerequisite(s): CG1500

CG2330 - Planning & Estimating I
This course is an introduction to the disciplines of cost estimating, project management, scheduling and planning for construction purposes.
Prerequisite(s): CB2420

CG2331 - Planning & Estimating II
This course is a continuation of CG2330 - Planning & Estimating I. Learners will use commercially available computer software to prepare construction cost estimates and schedules. This course will also provide the learner with the opportunity to apply technical material studied in earlier courses of the Civil Engineering Technology (Co-op) Program to the construction management process.
Prerequisite(s): CG2330

CG3230 - Procurement & Contract Administration
This course examines the fundamentals of economics, types of businesses, and the administrative process as it relates to design construction projects. It is designed to help students understand their role in the economics and administration of the design and construction industry.
Prerequisite(s): DR3111

CG3320 - Estimating for Buildings
This course is designed to provide students with a basic understanding of the various types of estimates commonly used in the building design and construction industry. This course addresses both elemental cost analysis and building construction estimating. Computer-generated spreadsheet applications are used.
Prerequisite(s): DR4120, BU2270
Co-requisite(s): PR2751

CG3501 - Production Planning
This course analyzes the principles of production management by bringing together topics of planning and approaching them as an integrated production plan, interpreting various components such as master scheduling, resource planning, manufacturing control and flexible manufacturing.
Prerequisite(s): CG1500

CH1035 - Introductory Chemistry I •
Introductory Chemistry I provides students with an overview of the fundamental principles of chemistry, including chemical elements, chemical bonding, nomenclature, measurement, solutions, chemical reactions, and organic chemistry. Students will examine atomic structure, chemical formulas and compounds, stoichiometry and the mole, and introductory organic chemistry. Throughout the course, students will develop their laboratory skills, including the proper use of laboratory equipment, data analysis, and report writing.

Co-requisite(s): MA1040

CH1036 - Introductory Chemistry II •
Introductory Chemistry II builds on the fundamental concepts introduced in Introductory Chemistry I. This course provides an overview of thermochemistry, reaction kinetics, equilibrium, acid-base chemistry, and electrochemistry.

Students will examine theoretical and experimental aspects of these topics, and continue to develop their practical laboratory skills.
Prerequisite(s): CH1035

CH1080 - Chemistry and Microbiology •
This course introduces students to organic compounds and biochemical pathways which are important in understanding the chemical reactions that occur in the body. Students will study antimicrobials and antimicrobial resistance while developing safe laboratory skills, preparing chemical solutions, and analyzing acid-base reactions as relevant to the veterinary field.

CH1120 - Chemistry
This in an introductory course designed to give students knowledge and understanding of the fundamental chemical concepts which will form the basis for further studies in science and technology.

CH1121 - Chemistry
This course will develop further the fundamental concepts of chemistry, with emphasis on those relevant to the chemistry of materials and to the processes of polymer chemistry, thermochemistry, chemical reaction rates and equilibrium, electrochemistry, and metals and alloys.
Prerequisite(s): CH1120

CH1135 - Chemistry
This is an introductory course in chemistry dealing with the fundamental laws of chemistry, physical and chemical changes, the quantum mechanical model of the atom, the electronic structure and the periodic table, the significant figures and scientific notations, measurements and units, writing and balancing chemical equations including redox equations, stoichiometry and stoichiometric calculations, gases and gas law calculations and thermochemistry and thermochemistry calculations. This course is transferable to MUN Chemistry1010.
Prerequisite(s): None, but high school chemistry is recommended. However, mathematical skills are required, and students with low marks in high school Level III academic mathematics (less than 70%) are strongly recommended to upgrade their mathematics background before undertaking this course
Co-requisite(s): None, but a mathematics course is strongly recommended

CH1140 - General Chemistry I
This course is designed for students who have previously studied chemistry, either in high school or university. It is designed to give students a knowledge and understanding of the fundamental chemical concepts which will form the basis for further studies in the field of science. Major topics are: matter - its properties and measurement, atoms and atomic theory, chemical compounds, chemical reactions, introduction to reactions in aqueous solution; gases; thermochemistry; the quantum mechanical model of the atom; periodic properties of the elements; chemical bonding I –basic Concepts; chemical bonding II additional aspects, valence bond theory and molecular orbital theory; liquids, solids and intermolecular forces. Transferable to MUN Chemistry 1050.
Prerequisite(s): CH1135 with a grade of at least 60% or at least 65% in HS Chemistry 3202. Students must have a strong background in pre-university chemistry. The main objective of this course is not to re-teach core chemical concepts but to build on them. Students with a weak chemistry background are advised to register for Chemistry 1135

CH1141 - General Chemistry II
This course is designed for students who may have career interests in chemistry or other fields of science. The course will develop further the fundamental concepts of chemistry with emphasis on practical applications. Major topics are: chemical kinetics, principles of chemical equilibrium, acids and bases, aqueous ionic equilibrium, solubility equilibrium, free energy and thermodynamics, electrochemistry and properties of solutions. This course is transferable to MUN Chemistry1051.
Prerequisite(s): CH1140

CH1165 - Applied Chemistry for Mining
In this course, students will be introduced the fundamental of atoms, elements, and compounds and how they relate to crystal structure of rocks and minerals. Students will be exposed to practical applications of chemistry to mining, mineral processing, and refining techniques. Laboratory work will be linked to the mining and mineral processing sector.

CH1355 - Intro to Clinical Chemistry

This course will introduce students to the principles and methods of clinical chemistry. It explores laboratory safety, and basic principles of analytic techniques used in the routine clinical chemistry lab.

Prerequisite(s): BL1600, ML1070, CH2340

CH2253 - Clinical Chemistry 1

This course is an intermediate level course in clinical chemistry that introduces students to the theoretical and practical aspects of the analysis of body fluids. It explores laboratory safety, quality control procedures, and basic principles of analytic techniques used in routine clinical chemistry. This course requires students to apply prerequisite knowledge and skills in laboratory sessions in the application of analytical procedures and clinical correlations for specific analytes including carbohydrates, lipids, lipoproteins, proteins, and NPNs. Quality control and its application are also studied.

Prerequisite(s): CH2340, CH1355, ML1090, MA1021, ML1660

CH2330 - Petroleum Organic Chemistry
The course provides a foundation in organic chemistry that is required by petroleum technologists working in the upstream oil and gas industry. It also covers many of the standard chemical tests used in the oil and gas industry for analyzing crude oils.
Prerequisite(s): CH1121

CH2335 - Petroleum Chemistry
This course is designed to provide petroleum technology learners with a foundation of physical, inorganic and analytical chemistry as applied to the petroleum industry. Emphasis will be placed on the development of analytical and laboratory skills.
Prerequisite(s): CH2330

CH2340 - Biochemistry
This is an introductory course in biochemistry for Medical Laboratory Technology students. The organic chemistry framework includes the study of the carbon atom, chemical nomenclature and the structure of organic compounds. Major focus is on the structure, properties, and metabolism of carbohydrates, proteins, lipids, nucleic acids, non-protein nitrogen compounds, and acid-base balance, body water/electrolyte balance and enzymes.

CH2451 - Industrial Chemistry I
This course introduces students to industrial chemistry and concepts and terms used in industrial chemistry. The focus of this course is industrial chemistry as it applies to the use and analysis of water. Scale formation, industrial chemical metallurgy, NORM, and hydrogen production are explored. Students use pH, conductivity, dissolved oxygen and other analyzers – both laboratory and process.
Prerequisite(s): CH1121

CH2514 - Clinical Chemistry 2
This course is a continuation of Clinical Chemistry 1 and consists of a study of the theoretical and practical aspects of the analysis of the body fluids. This course will complete the study of the various chemistry analytes. Emphasis is on safe work practices and quality control as manual and automated methods are explored.
Prerequisite(s): CH2253

CH2715 - Analytical Chemistry
This is an introductory course in Chemical Analysis. It consists of classical methods of quantitative chemical analysis such as gravimetry and titrimetry, as well as simple instrumental techniques used for field measurement (pH, colorimetry, conductivity, and dissolved oxygen). Students are also exposed to sampling and statistical treatment of data.
Prerequisite(s): CH1121

Co-requisite(s): MA1670

CH3450 - Industrial Chemistry II
This course is designed to provide students with the basics of organic chemistry as it is applied to the oil and gas industry. Oil refining, sweetening and treating processes are discussed. It also covers many of the standard chemical tests used in the oil and gas industry for analyzing crude oils and refinery products.
Prerequisite(s): CH2451

CH3510 - Clinical Chemistry Sim 1
This course builds upon previous topics in clinical chemistry. It requires students to apply their pre-requisite knowledge and skills in a simulated hospital laboratory setting. Emphasis is on safe work practices, automated analysis, quality control principles and result interpretation.
Prerequisite(s): CH2514, CS2311

CH3511 - Clinical Chemistry Sim 2
This is a comprehensive course in clinical chemistry that requires students to apply their pre-requisite knowledge and skills in a stimulated hospital laboratory setting. Using appropriate safety guidelines, students practice the pre-analytical, analytical and post-analytical phases of the testing process for clinical specimens. Emphasis is on development of technical competence, use of quality assurance principles and application of critical thinking skills to data interpretation and instrument troubleshooting. It is designed to prepare students to enter the clinical phase of the program at an affiliated hospital.
Prerequisite(s): CH3510, ML2320

CH4510 - Clinical Chemistry Practicum
This course allows the student to develop technical competence while reviewing theoretical material from previous semesters. The three week hospital rotation will emphasize clinical procedures and acquaint the student with the hospital operation and administration.
Prerequisite(s): BL3411, CH3511, ML2211, ML2311, ML2511

CI1110 - Signals & Measurements
This course will introduce the learner to the fundamental concepts of signals and measurements. Learners in the course will learn how to identify different types of signals, select the appropriate test equipment, take measurements, and interpret and report results.
Prerequisite(s): ET1101 or ET1140

CI1125 - Process Instrumentation and Control Systems
This course provides an introductory treatment of sensors and methods of measuring automated process variables. The student will be introduced to the underlying operating principles of industrial measurement devices, programmable logic controllers, and distributed control systems, from an operational perspective in the Oil & Gas industry.

CI1130 - Process Control I
This course provides the student with an introduction to process control terminology and diagrams as well as an introduction to process control strategies and signal transmission. It is designed to familiarize the student with the operating principles of measuring devices for pressure, level, flow, and temperature, as well as control valves used in industry.

CI1150 - Process Control II
The purpose of this course is to familiarize students with the various elements necessary in the design and implementation of process control in chemical process industries. It is designed to provide students with the basics of proportional, integral, and derivative (PID) controls as well as an overview of more advanced systems and control strategies. An overview of process automation, distributed control systems (DCS), SCADA system, and communication protocols is presented. Boiler control system will also be covered.
Prerequisite(s): CI1130

CI1210 - Controls & Automation
This course provides a comprehensive treatment of sensors and methods of measuring automated process variables. The student will be introduced to the underlying concepts and operation of industrial measurement devices and control systems.

CI1221 - BET Electromechanical Systems
This course is intended to introduce the learner to the basic building blocks of pneumatic and electromechanical systems and assemblies used in biomedical diagnostic and therapeutic devices. Although most of these primary devices will be discussed in relation to health care instrumentation, they have application and use in many commercial and industrial systems. This course will provide the learner with information needed to better understand the complex pneumatic and electromechanical systems utilized in medical devices.
Prerequisite(s): CI1110, AE2331

CI1313 - Fabrication Techniques/Network Cabling
This is a practical electrical/electronics course for students entering the primary electrical / electronics technical intersession. This course enables the student to obtain practical knowledge in soldering, wiring, network cabling, fabrication and proper use of test equipment as related to accepted procedures found in industry.
Prerequisite(s): ET1101

CI1321 - Electrical/Electronic Fabrication Techniques
This is a practical electrical/electronics course for students entering the primary electrical / electronics technical intersession. This course enables the student to obtain practical knowledge in soldering, wiring, fabrication and proper use of test equipment as related to accepted procedures found in industry. As well, students receive an introduction to environmental citizenship and ethics from an electronics industry perspective.
Co-requisite(s): ET1141

CI1360 - Basic Process Automation
In this course the participants will run existing processes to determine the types of the devices used to measure level, flow and other parameters within a plant and how the final control elements interact with the automation control system.

CI1520 - Process Analyzers I
This course examines the role of chemical analyzers in monitoring and controlling industrial processes. Statistical principles are applied to process analyzer systems and the validation of process analyzers. The operating principles of electrochemical analyzers and physical property analyzers are studied and students learn to calibrate, install and troubleshoot these analyzers as well as perform routine maintenance on them. Factors affecting corrosion and the use of analyzers in the prevention and measurement of corrosion is also studied.
Prerequisite(s): CH1121, CI2230

CI2110 - Pressure and Level Measurement and Control
This is the second core instrumentation course designed to reinforce the basic instrumentation concepts previously covered. The various types of transmitters used to measure pressure and level will be covered in detail. The control section of the course will show how the transmitters are used in a control loop.
Prerequisite(s): CI1360

CI2120 - Final Control Elements and Instrument Air Systems
This course focuses on the various types of control valves and damper operators as well as the auxiliary devices used to position and supply power to the actuator. The final section of the course covers how Instrument Air is produced for an industrial plant.
Prerequisite(s): CI1360

CI2230 - Flow and Temperature Measurement and Control
This course develops further understanding of types of control strategies and introduces students to the principles and operation of flow and temperature control systems, with an introduction to cascade and feed forward control systems.

Prerequisite(s): CI2110

CI2250 - Hydraulics
This introductory course is designed to acquaint the learner with the design and operation of industrial hydraulic systems. It includes a review of the selection and integration of the components used to build and control hydraulic circuits. Operational control and troubleshooting of basic circuits are an integral component of the course.

CI2310 - Advanced Control Strategies
This course covers advanced PID control strategies with an emphasis on boiler control.
Prerequisite(s): CI2230, MP3170, MA2100
Co-requisite(s): CI3860

CI3120 - Safety Shutdown and Machine Monitoring Systems
This course covers basic shutdown systems on boilers and then covers the safety shutdown systems found in the oil and gas industry. The course also introduces software that can be used for process and optimization.
Prerequisite(s): CI2310, CI3860

CI3200 - Statistical Process Control
This course provides the student with an introduction to statistical concepts as they relate to the chemical process industry. It is designed to familiarize the student with quality and statistical process control, descriptive and inferential statistical concepts, probabilistic methods, normally distributed data, control charts, and process capability analysis. These concepts are examined to enable the student to understand how chemical processes are controlled and improved in industry.
Prerequisite(s): MA1101

CI3400 - Biomedical Instrumentation I
This course will introduce learners to the fundamental principles inherent in the collation of bioelectric signals and familiarize them with aspects of electrodes, filters, amplifiers and transducers. Learners will also be introduced to instrumentation related to cardiac measurement and defibrillation, non-invasive blood pressure monitoring, medication infusion systems, physiotherapy modalities, and electroencephalograms. Laboratory exercises will incorporate extensive investigation of the sub-assemblies used in selected biomedical equipment. This will also include site visits to local health care facilities.
Prerequisite(s): AE2331, CI1110, CP1221, DP2120, Certificate of completion of Government of NL PHIA course, Signed and witnessed Confidentiality Agreement, Current letter of conduct and vulnerable sector clearance

CI3412 - Biomedical Instrumentation II
This course is intended to broaden the learners' knowledge of medical instrumentation by introducing more sophisticated systems such as multi-parameter patient monitoring systems, central station monitoring, instrumentation, operating room systems such as electrosurgery units and laser surgical tools, as well as an introduction to medical imaging devices.
Prerequisite(s): CI3400, CG1205, Certificate of completion of Government of NL PHIA course; Signed and witnessed Confidentiality Agreement, Current letter of conduct and vulnerable sector clearance

CI3510 - Advanced Medical Systems
This course is intended to broaden the learners' knowledge of medical instrumentation by introducing more sophisticated systems such as: hemodialysis systems, respiratory instrumentation, pulmonary function equipment as well as water treatment and oxygen generation systems.
Prerequisite(s): CI3400, Certificate of completion of Government of NL PHIA course, Signed and witnessed Confidentiality Agreement, Current letter of conduct and vulnerable sector clearance

CI3600 - Industrial Process Control
This is an introduction to Process Control Systems, designed to provide students with the basics of PID Control as well as an overview of more advanced systems.
Prerequisite(s): CI1210

CI3821 - Process Analyzers

This course will examine the role of chemical process analyzers in monitoring and controlling industrial chemical processes. The course examines the study of electrochemical, spectroscopic, chromatographic and physical property analyzers that a chemical processing technologist would be expected to routinely manage in industry. The basic operating principles, and the most common problems associated with their use, will be studied. An overview of the sampling systems associated with process analyzers and the maintenance of these systems will be covered. Laboratory work will involve calibrating, using and troubleshooting a variety of laboratory and process analyzers.
Prerequisite(s): CI1130

CI3822 - Process Analyzers II
The operating principles, calibration and limitations of various types of oxygen, flammable and toxic gas sensors are examined. The principles of operation of various compositional and light based analyzers are studied. Utilizing a variety of analyzers, the various interactions of materials and electromagnetic radiation as applied to analysis are studied. The roles of the sampling handling and conditioning system as part of analysis are examined.

In laboratories students set up, calibrate and trouble shoot various gas, compositional and spectroscopic analyzers detectors.
Prerequisite(s): CI1520

CI3860 - DCS
The purpose of this course is to familiarize the learner with the distributed control systems (DCS) and Safety Instrumented System (SIS) used by the processing industries. Learners will also learn Functional Block Diagram (FBD) programming language that is widely being used in DCS as well as Process Automation Systems (PAS).
Prerequisite(s): CE2810, CI2230, DP3110, CE2940
Co-requisite(s): CI2310

CJ2110 - Canada's Justice System
This course provides students with an overview of Canada's Criminal Justice System. The course gives students an understanding of the philosophy and principles underlying the Canadian system and then provides them with knowledge of the entire criminal process from arrest to criminal procedures to sentencing to punishment to community reintegration.

CJ2210 - Youth Justice in Canada
This course introduces the student to the specific components and functions of the youth justice system in Canada. Following a review of legislation dealing with youth crime, the course will trace the movement of the young offender through the justice system, from the commission of the offence through to the disposition and sentencing.

CL1110 - Material Balancing
This course places a strong emphasis on developing problem solving skills. Students work in a variety of engineering units. Students solve material balance problems. The stoichiometry of industrial chemical reactions is examined and calculations associated with these are performed. Properties of steam are introduced.
Prerequisite(s): CH1121, MA1101

CM1020 - English I
English I is the first of two English courses in the Trades Bridging program. The course is designed to introduce reference skills, to develop fundamental reading skills, and to introduce fundamental writing skills. Students will apply reading strategies including reading in context, skimming, and scanning.

CM1021 - English II
English II is the second of two English courses in the Trades Bridging program. Students will continue an introduction to fundamental writing skills including punctuation, mechanics, sentence construction and paragraph development. As well, this course will further develop trades-related reading and writing fundamentals and introduce technical documents applicable to the trades' field.
Prerequisite(s): CM1020

CM1060 - Essential English I •
Essential English I is a College Transition course. It is the first of two English courses designed to give students a solid

foundation in writing skills and to prepare them for success in subsequent post-secondary studies. Through varied writing assignments and revisions, students will achieve a college level of proficiency in English. Students may also meet the admission requirements for post-secondary and other College programs through the successful completion of Essential English I and II.

CM1061 - Essential English II •
Essential English II is a College Transition course. It is the second of two English courses designed to give students a solid foundation in writing skills and to prepare them for success in subsequent post-secondary studies. Through varied writing assignments and revisions, students will achieve a college level of proficiency in English that will assist in meeting the admission requirements for post-secondary and other College programs.
Prerequisite(s): CM1060

CM1070 - Communications I
The academic focus of this course will be the advancement of reading and writing skills. Students will examine the writing process including basic grammar, structural mechanics, and paragraph writing.

CM1090 - CRW I: Telling Stories
CRW I: Telling Stories focuses on the language encountered in reading and the language we use to record our reading experiences. This course is transferrable to MUN English 1090 or English 1000 and is recognized as a Critical Reading and Writing (CRW) course at Memorial University. All sections of this course follow CRW course content guidelines of Memorial University.
Prerequisite(s): Minimum of 60% in English 3201 or in the former combination of Language 3101 and a minimum of 60% one of Thematic Literature 3201 or Literary Heritage 3202. Adult Basic Education graduates must have a minimum of 60% in IC3112 and IC3321 or English 3101A, 3101B, and 3101C (to meet MUN's admissions requirements)

CM1100 - Writing Essentials •
Writing Essentials provides a comprehensive introduction to the fundamental principles of writing, focusing on grammar, punctuation, mechanics, and the construction of clear and coherent sentences and paragraphs. Through practical exercises and writing assignments, students will become equipped with the skills necessary to enhance their writing and produce polished and professional written work.

CM1115 - Communications for TV & Film
Writing and communicating in the television & film industry are critical skills for success. In this course, students will be applying effective writing skills, and will be provided a foundation in speaking, listening, and nonverbal communication in addition to developing their teamwork and organizational meeting skills. The course will emphasize script breakdown, interpreting schedules and daily sheets, and accurately interpreting and completing job-related documentation. Students will examine a variety of documents and applications that will familiarize them for working within the industry.

CM1145 - CRW II: Rhetoric
This course is an introduction to the writing and analysis of prose. Students will analyse prose writing and practise a number of writing strategies that consider a variety of audiences and purposes. The course furthers the development of writing and analytical skills acquired in CM1090 – CRW I: Telling Stories, and introduces the student to writing intended to critique, persuade, and analyze. This course is transferable to MUN English 1110 and is recognized as a Critical Reading and Writing (CRW) course at Memorial University. All sections of this course follow CRW course content guidelines of Memorial University.
Prerequisite(s): CM1090 or MUN English 1090

CM1170 - Essentials for Communication & Documentation
This course is designed to provide knowledge and skills necessary to communicate and document information effectively in the health care setting. It explores the concepts of self-awareness, culturally sensitive care, the communication process, communication techniques, and potential barriers to communicating effectively. Students will be familiarized with introductory writing skills, medical terminology, and abbreviations. There is an emphasis on the care planning process and the importance of documentation from professional, legal and employer perspectives.

CM1180 - College English I - Reading Across the College Curriculum •
This course is designed for College Transition students with the aim of enhancing reading skills and employing effective strategies to successfully meet the reading demands of their selected post-secondary program. The emphasis of the course is on the shared components of effective reading across diverse curriculum areas, while also addressing the distinct reading skills and strategies needed for various subject areas.

CM1191 - CRW II: Self and Society
This course studies a variety of texts that explore the interaction between individual desires and social identities. This course is transferable to MUN English 1191 and is recognized as a Critical Reading and Writing (CRW) course at Memorial University. All sections of this course follow CRW course content guidelines of Memorial University.
Prerequisite(s): CM1090 or MUN English 1090

CM1192 - CRW II: Imagined Places
This course aims to increase the learner's sensitivity to language through examination of the role of setting in imaginative writing. This course is transferable to MUN English 1192, and is recognized as a Critical Reading and Writing (CRW) course at Memorial University. All sections of this course follow CRW course content guidelines of Memorial University.
Prerequisite(s): CM1090 or MUN English 1090

CM1215 - Personal & Career Development Seminars
These seminars are designed to help students develop the essential knowledge and skills necessary for career development. The seminars aim to prepare students for the transition from the academic setting to the workplace setting. Emphasis will be on leadership, goal setting, job searching, interview process, and skills development. Students will also reflect on personal attributes, values, and experiences that may affect their careers.
Prerequisite(s): PC1120, CM1170, PC1130, PC1141, PC1145, PC1150

CM1220 - Communications II
This course introduces students to writing organized and well-defined essays. Building on the skills developed in Communications I, students will develop a thesis statement, outline, and essay structure, while sourcing materials and analyzing and applying a documentation style. In addition, students will create and deliver an oral presentation on an approved topic.
Prerequisite(s): CM1070

CM1240 - Business Communications I •
Clear and effective communication is essential for success in the business world. In this course, students will be introduced to the necessary skills and knowledge to communicate in a variety of business settings. Through interactive lectures and practical exercises, students will develop skills in positive and informative workplace communication, audience analysis and message composition.

CM1241 - Business Communications II •
Business Communications II is designed to further students' knowledge and competence in preparing business documents for the workplace. Throughout the course, they will develop practical skills in writing messages that communicate ideas and information to a wide range of audiences. In addition, students will be introduced to the fundamentals of informal reports including their purpose, structure, and format and will gather and analyze information, cite sources, and make recommendations.
Prerequisite(s): CM1240

CM1250 - Communications in the Workplace
This course will provide students with essential workplace communication skills. Topics covered include the communication process, effective writing, business correspondence, informal reports, oral presentations and job search techniques.

CM1270 - Communications in Health Care •
This course is designed to enable the student to communicate clearly, concisely, and correctly in both written and oral forms in the health care setting. Emphasis is placed on medical documentation and oral communication with healthcare professionals, clients, and families**.**

CM1280 - Academic Communications •
This course is designed to provide students with the foundational skills necessary for successful writing at the college level with emphasis on academic integrity. Students will develop writing skills, will apply effective research and citation techniques, and will revise their own writing to improve clarity, coherence, and quality. In addition, they will focus on creating and delivering presentations.

CM1400 - Technical Report Writing I •
This course is designed to teach technology students the fundamentals of technical reporting. Emphasis is on strategies of technical reporting, research techniques and organizational skills.

CM1401 - Technical Report Writing II •
This course is designed to help students formulate criteria for structuring informal and semi-formal reports. Various report formats will be examined with emphasis on statistical data analysis, documentation and illustration methods. Oral reporting techniques will be enhanced through problem-solving reports and the technical sales presentation.
Prerequisite(s): CM1400 or equivalent

CM1450 - Writing Fundamentals
This course is designed to introduce students to written communication in the workplace. It provides considerable practice in constructing and editing effective sentences and paragraphs as well as writing clear, concise summaries that are properly documented.

CM1460 - Writing for the Workplace
This course is designed to introduce students to written communication in the workplace and provide considerable practice in writing clear, concise summaries that are properly documented. The intent is to provide ample in-class opportunities to review writing fundamentals and improve writing skills using workplace applications.

CM1520 - Writing for the Arts •
This course will introduce students to the writing of artistic critiques, appreciations, and proposals. Emphasis will be placed on applied writing exercises that require philosophical reflection and that will expand students' vocabulary and increase their effectiveness as communicators in their field.

CM1521 - Writing for the Arts •
This course will introduce students to the practice of effective research, writing of artistic critiques, appreciations, and proposals. Emphasis will be placed on applied writing exercises that require philosophical reflection and that will extend students' vocabulary and increase their effectiveness as communicators in artistic fields.

CM1530 - Proposal Writing
In this course students will learn the necessary skills to write successful proposals. Students will formally research funding sources, identify personal areas of interest, and complete an actual proposal for submission. Students will also be expected to present, defend, and critique their proposals.

CM1550 - Creative Writing
This course provides an opportunity for students who are interested in writing poetry, short fiction, or drama to share ideas and innovations. Students will examine a variety of themes, styles, and techniques which can broaden their own creative explorations. The course encourages students to discover and develop styles appropriate to their own literary aspirations.

CM1680 - Writing for the Screen
Students will acquire advanced skills in critical narrative development, formal presentation, and the screenwriting craft. It expands on previously covered material on film direction, pre-production and narrative fundamentals to create a detailed creative synopsis or "treatment" and a screenplay in a prescribed format.

CM2100 - Workplace Correspondence •

Students will study the principles of effective writing and use technology to communicate effectively. This course includes topics that explore sentence and paragraph construction, effective workplace communications, informal reports, professionalism and technology in the workplace, and job search communications.

CM2110 - Business Writing Fundamentals •
Business Writing Fundamentals gives students the opportunity to apply the principles of effective business writing. Applications include letters, memos, e-mail and informal business report writing. This course also allows students to explore job search techniques.
Prerequisite(s): CM1100

CM2125 - Communications in the Workplace
This course will provide students with essential workplace communication skills. Topics covered include the communication process, effective writing, industry correspondence, informal reports, oral presentations and job search techniques.

CM2200 - Oral Communications • ®
Oral Communications is a comprehensive course designed to equip students with the skills necessary to become effective communicators. The course introduces students to the fundamentals of oral communication, including verbal and nonverbal communication, active listening, and public speaking. Students will identify and overcome common communication barriers as well as create effective presentations and deliver them with clarity.

CM2201 - Oral Communications
In this course, students will develop interpersonal, oral communication, and presentation skills in a team-based environment.

CM2215 - Client Relation Communication •
This course explores the communication process and focuses on effective communication in verbal and written form. In addition, students will learn workplace techniques relating to professionalism, management and job search skills.

CM2300 - Report Writing •
Report writing introduces students to the application of the skills and knowledge required to produce high-quality formal reports suitable for a variety of audiences, while providing an in-depth examination of the principles and practices of formal report writing. Students will develop their writing skills to produce clear, concise, objective reports suitable for a variety of contexts including professional and technical settings.

CM2800 - Oral Written Communication Skills
This course will provide students with instruction in the areas of writing technical reports and the delivery of oral presentations. Emphasis will be placed on the processes involved in effective writing and effective presentations as they pertain to specific technologies. Students will learn relevant skills for researching, organizing, writing and presenting technical information.
Prerequisite(s): CM1401 or CM1460

CM3020 - Evidenced Based Practice & Oral Communications •
This course will provide students with a basic understanding of medical research methodologies and an appreciation of the value of research in developing best-practice health-related guidelines. It will also provide the learners with the opportunity to conduct and evaluate research, and to present findings to an audience of peers and supervisors. Working in a team-based environment, learners will develop interpersonal, oral communication, and presentation skills.
Prerequisite(s): PA2025 or equivalent
Co-requisite(s): PA3110, PA3115

CP1011 - File Management and Security •
This course introduces the student to file management, cloud computing and computer security. Students will first perform file management utilizing a Microsoft Windows operating system using both the graphical user interface and command line. File management will then be examined utilizing cloud technologies. Students will subsequently look at overall security for a corporate and home network environment exploring how to secure data and personal

information.

CP1020 - Principles of Data Analysis •
The Principles of Data Analysis course is designed to equip students with an understanding of the fundamental principles of data analysis and the skills needed to effectively frame business problems using a set of assumptions related to the problem.

Throughout the course, students will explore the data analysis life cycle, learning about each stage in detail and its purpose. Additionally, students will learn how to frame business problems by setting assumptions that guide the data analysis process, ensuring a targeted and focused approach to problem-solving.

By the end of the course, students will possess a solid foundation in data analysis principles and business problem framing, empowering them to examine business situations, make data-driven decisions, and communicate actionable insights to stakeholders.

CP1025 - Data Analysis: Excel
Excel is a powerful tool that has been widely used for decades across industries for data analysis, management, and reporting. It is a versatile platform that allows users to quickly and easily summarize, analyze, and visualize data in various ways. This course is designed to provide students with a comprehensive understanding of Excel as a tool for data analysis. Throughout the course, students will learn how to import, clean, and transform data in Excel from a range of sources.

Students will be introduced to various functions in Excel to summarize and analyze data efficiently. Additionally, the course covers advanced techniques, including pivot tables and data modeling, that allow students to explore data in greater detail.

Students will also learn how to create dynamic dashboards and reports using Excel's visualization tools, such as charts, graphs, and slicers. Through practical exercises, students will develop skills to format and customize these visualizations to make them more compelling and insightful.

CP1030 - Statistics for Data Analysis •
Businesses and organizations require data analytics expertise to gain a competitive edge and make informed decisions. This course introduces statistical analysis and its role in data analysis. The course covers fundamental topics such as descriptive statistics, central tendency, quantitative and qualitative data, data visualization, key statistical concepts, and terms. Students will learn how to manipulate data and perform appropriate statistical tests to draw meaningful conclusions.

At the end of this course, the student will be able to apply statistical analysis techniques to real-world data, identify patterns and trends, and communicate statistical findings effectively. Additionally, students will be able to interpret the results of statistical analysis, determine the most appropriate statistical tests to use for several types of data, and assess the reliability and validity of statistics enabling them to drive business success by leveraging data for informed decision-making.

CP1035 - Programming Foundations •
Throughout this course, students will acquire a solid understanding of core programming concepts and their application in data handling and analysis. The course will begin with an introduction to the foundational elements of programming, including syntax, variables, data types, operators, and control structures such as loops and conditionals.

As the course progresses, students will delve into the essential data structures fundamental to effective data manipulation, including lists, tuples, dictionaries, and sets. They will learn how to employ these data structures to manage and analyze data efficiently. The course also provides a comprehensive overview of defining and calling functions, alongside a deep dive into understanding and using modules, to enhance code organization and reusability. Students will actively engage in practical exercises and projects, exposing them to real-world scenarios where they can apply their newfound skills.

By the end of the course, students will have acquired the ability to use programming constructs for efficient data manipulation, analysis, and conceptual understanding.

CP1045 - Visualization, ETL & Modeling •
In this course, students will immerse themselves in the pivotal components of data analytics, with a key focus on Extract, Transform, and Load (ETL) operations, utilizing a programming language such as Python or R and popular libraries such as pandas, seaborn, matplotlib and sci-kit-learn.

The course also provides an in-depth exploration of data query optimization and analysis techniques. Real-world examples integrated throughout the course will reinforce their understanding and application of data modeling and optimization concepts. Moreover, students will learn to craft compelling data visualizations through programming. They will grasp basic plotting techniques and how to represent data in various forms such as histograms, bar charts, scatterplots, and more. The course also covers the customization of these plots, fostering a more engaging and informative data presentation. Emphasis will be placed on data cleaning techniques to ensure high accuracy in analysis. This includes handling missing data, data transformation, and data aggregation, all performed via programming. Students will also delve into specific analysis techniques such as time-series analysis, linear regression modeling, and making predictions with multiple regression models.

Upon completion of this course, students will have developed a comprehensive set of skills in programming for data modeling. This will significantly enhance their capabilities in data analysis and decision-making, enabling them to create robust data models.

CP1060 - Excel: Visual Data Analysis •
Excel is a powerful tool used in many industries for managing data and creating reports. This course focuses on how to use Excel for data analysis, including importing, cleaning, and transforming data. Functions to summarize and analyze data effectively, as well as advanced techniques like pivot tables and data modeling will be covered. Students will create dynamic dashboards and reports with charts, graphs, and slicers to visualize data in meaningful ways. At the end of this course, students will be able to apply their Excel skills to analyze data, create reports, and build dynamic dashboards efficiently.
Prerequisite(s): MC1242

CP1070 - Emerging Innovations •
Business is in a perpetual state of transformation and growth. This course delves into the ever-evolving landscape, exploring the latest trends and innovations driven by the natural evolution of technologies. The course content is thoughtfully curated to introduce students to cutting-edge techniques and innovations, with a particular emphasis on their application in driving digital transformation, enhancing efficiency, enabling new business models, and fostering growth and competitiveness.

Sample topics of discussion/examination along with sample assignments and projects could include **one** of the following:

AI Applications in Business

- Discussion: Discuss AI, like machine learning and understanding language, and how it can help businesses work better and make decisions.
- Assignment: Look at a company that uses AI to figure out who their customers are, how it predicts things, or can suggest content just for you. Write about what you find.
- Project: Find a chatbot or virtual assistant that uses AI and see how it could help a business with things like talking to customers, answering questions about buying things, or helping employees learn.

Cybersecurity and Risk Management

- Discussion: Discuss the importance of cybersecurity measures, risk assessment frameworks, and compliance standards in protecting business data and assets.

- Assignment: Conduct a cybersecurity risk assessment for a company, identifying vulnerabilities, threats, and mitigation strategies.
- Project: Design a cybersecurity awareness training program for employees, covering topics such as phishing attacks, data encryption, and password security.

Innovation and Entrepreneurship

- Discussion: Explore the characteristics of successful innovators and entrepreneurs, as well as strategies for fostering a culture of innovation within organizations.
- Assignment: Develop a business model canvas for a new startup idea, outlining value propositions, customer segments, revenue streams, and key resources.
- Project: Pitch a business idea to a panel, showcasing the feasibility, market potential, and innovation behind the proposed venture.

Sustainable Business Practices

- Discussion: Examine the importance of sustainability initiatives, environmental responsibility, and corporate social responsibility (CSR) in modern business operations.
- Assignment: Analyze sustainability reports of companies in different industries, evaluating their environmental impact, social initiatives, and governance practices.
- Project: Develop a sustainability action plan for a company, including goals, metrics, and implementation strategies for reducing carbon footprint, waste generation, and energy consumption.

Digital Marketing Strategies

- Discussion: Discuss the role of digital marketing channels, social media platforms, and content strategies in reaching target audiences, building brand awareness, and driving customer engagement.
- Assignment: Create a digital marketing campaign for a product or service, incorporating elements such as SEO, SEM, social media advertising, and email marketing.
- Project: Conduct a digital marketing audit for a company, analyzing website performance, social media presence, online reputation, and competitor strategies.

Change Management and Organizational Leadership

- Discussion: Explore change management principles, leadership styles, and strategies for driving organizational change and innovation.
- Assignment: Develop a change management plan for implementing a new technology, process improvement, or organizational restructuring.
- Project: Lead a change initiative within a simulated business environment, addressing resistance, communication challenges, and stakeholder engagement.

Prerequisite(s): EP1190, CP1060, CP1011

CP1135 - SD: Technology & Tools
This course is designed to meet the specific needs of first-semester software development students, offering a thorough exploration of fundamental IT and software development concepts. It encompasses critical areas such as computer architecture, networks, command line proficiency, Linux operating systems, and version control through Git, all with a primary emphasis on their application in software development.

Throughout the course, students will engage in hands-on labs, and assignments, allowing them to apply their knowledge and skills. By the course's conclusion, students will possess a strong foundation in software development

technology and tools, empowering them to excel in their software development program.

CP1210 - JavaScript
This course introduces the student to the fundamentals of JavaScript programming and the use of JavaScript as the third pillar of modern web page/website design. The student will use the basic programming constructs to add functionality to a page and to manipulate the Document Object Model (DOM). Finally, the student will use AJAX and JSON to perform data transfers from the client to the backend server and vice versa.
Prerequisite(s): CP1850, CP1520

CP1211 - JavaScript
JavaScript is among the most powerful and flexible programming languages available and one of the most popular languages used in web development. This course will introduce students to the programming fundamentals of the JavaScript language, where students will learn basic programming constructs to add various functionality to webpages. Topics will include an introduction to HTML and CSS, JavaScript programming structures, the manipulation of the Document Object Model (DOM), and the use of AJAX and JSON to perform data transfers between the client and server.

CP1212 - Introduction to JavaScript •
JavaScript is among the most powerful and flexible programming languages available and one of the most popular languages used in web development. This course will introduce students to the programming fundamentals of the JavaScript language, where students will learn basic programming constructs to add various functionality to webpages. Then the student will explore jQuery one of the most popular libraries used to help in JavaScript development.

CP1270 - Programming Fundamentals
The course introduces the fundamental concepts of problem solving and procedural programming techniques used to design and implement computer solutions to problems in engineering and mathematics.

CP1291 - Advanced JavaScript
JavaScript is one of the world's most popular programming languages, and one of the major components of building web applications. This course is designed to expand on topics covered in CP121X JavaScript and will continue to enhance student skills and knowledge of the JavaScript programming language. Students will learn effective approaches to develop JavaScript applications and master advanced features of the language such as objects, closures, callbacks, modules, and the use of JavaScript Object Notation (JSON).
Prerequisite(s): CP1211

CP1292 - JavaScript and NodeJS •
JavaScript is one of the world's most popular programming languages, and one of the major components of building web applications. This course is designed to expand on topics covered in CP1212 Introduction to JavaScript and will continue to enhance student skills and knowledge of the JavaScript programming language. Node.js is introduced building on the students JavaScript skills enabling web application development for the front and back-end. Students will learn effective approaches to develop applications and master advanced features such as objects, closures, callbacks, modules, and the use of JavaScript Object Notation (JSON).
Prerequisite(s): CP1212

CP1295 - Advanced JavaScript
This course is designed to provide students with an advanced understanding of JavaScript programming, including its principles, concepts, and best practices. The course will cover a range of topics including advanced language features, asynchronous programming, and front-end web development frameworks. Through lectures, hands-on exercises, and project work, students will learn how to write efficient and effective JavaScript code for a variety of applications.
Prerequisite(s): CP1210

CP1340 - Object Oriented Programming
The course is designed to give the learners a thorough grounding in the principles of object oriented programming.

Additional topics include exception handling design and implementation of Java applications with Swing graphical user interface and multithreading in the Java programming environment.
Prerequisite(s): CP1270

CP1370 - Distributed Computing
This course aims to equip students with a rounded comprehension of Distributed Computing and Apache Spark. It covers a spectrum of concepts and practical implementations, showing the core principles of distributed computing and their integration within modern data processing frameworks.

Commencing with an analysis of distributed computing, students will know its relevance through practical scenarios illustrating its proficiency in managing extensive data processing operations. Exploring elements like the Hadoop Distributed File System (HDFS) and Spark, students will examine data processing functionalities incorporating transformations, actions, and fault tolerance mechanisms.

Upon completion, participants will possess the proficiency and insights needed to navigate distributed computing landscapes adeptly while harnessing the capabilities offered by Apache Spark.
Prerequisite(s): CP2280, CP1895

CP1410 - E-Commerce Web Analysis and Design •
This course introduces students to the concepts of systems analysis and design for the Web. It gives a fundamental overview of the Web site development process, and details the iterative cycle of planning, analysis, design and development, and testing. Emphasis is placed on designing an effective, user-centered, accessible commerce based Web site.
Prerequisite(s): CR1511

CP1465 - Windows Server Administration
The first of two Microsoft Server Courses, upon completion the student will have the skills and knowledge necessary to implement a core Windows Server infrastructure in an existing enterprise environment. The student will be able to implement and configure Windows Server core services, including Active Directory and networking. The student will be able to complete the tasks necessary for designing, managing, maintaining, and provisioning server services in an infrastructure.
Prerequisite(s): CR1107

CP1501 - Business & E-Commerce •
This course provides the student with an overview of business, e-commerce, business models, virtual value chains, social innovation, and marketing strategies. The course includes some of the major issues associated with business and e-commerce including security, privacy, intellectual property rights, authentication, encryption, acceptable use policies, and legal liabilities. Upon completion of this course, the student will understand the basics of business and e-commerce, social and mobile marketing, and how to develop a digital presence.
Prerequisite(s): EP1130

CP1505 - Designing Effective E-Commerce Sites •
The Designing Effective E-Commerce Sites course provides students with an opportunity to utilize and demonstrate the tools, knowledge, and skills developed during the first year of the program. Students will design and create a multimedia-rich E-Commerce Site using WordPress based on a given set of criteria. Emphasis is placed on creativity of design and effective use of technology.
Prerequisite(s): CM1401, CR1511, CP1410

CP1520 - Web Development
HTML, CSS, and JavaScript serve as the cornerstone technologies in the field of web development. Proficiency in the use and implementation of these essential tools is crucial for creating web pages and websites. This course covers essential topics in web development, focusing on HTML, Cascading Style Sheets (CSS), Forms, and JavaScript. Students will acquire the practical skills and theoretical knowledge to create and enhance web pages, develop responsive layouts, build interactive forms, and implement dynamic functionality using JavaScript.

By the end of this course, students will be able to utilize HTML, CSS, forms, and JavaScript, enabling them to develop

engaging, interactive, and dynamic websites.

CP1555 - Database Management Systems I
This course will provide the student with the necessary general understanding of Databases and Relational databases. The student will learn the basic structure of a relational database management system, how they are implemented, basic queries / SQL statements to properly and successfully retrieve, add, edit and delete the data based on given criteria.

CP1556 - Database Management Systems I
This course will provide the student with the necessary general understanding of Databases and Relational databases. The student will learn the basic structure of a relational database management system, apply database design process using entity relationship (ER) diagrams, how they are implemented, basic queries / SQL statements to properly and successfully retrieve, add, edit and delete the data based on given criteria.

CP1580 - Using Internet APIs •
Including content and services from other providers is an important aspect of web development. In this course, the student will focus on how to use the APIs of other service providers to develop a web application. Topics will include an introduction to the APIs, and OAuth. Working with third party APIs and working with E-Commerce APIs. At the end of the course students will be able to create web applications that utilizes content provided through third party API's and will perform E-Commerce transactions utilizing payment processors APIs.
Prerequisite(s): CP1292

CP1640 - Visual Basic Applications for ACAD
This course is designed to give the student exposure to programming logic and data linking between graphics information and text/numerical data. The student will develop the ability to reduce an algorithm into linear components for solution by computer. The course will concentrate on utilizing Visual Basic algorithms to perform surveying functions which automate the drafting process. Menu customization will also be covered to complete the ACAD customization.
Prerequisite(s): SU1321

CP1850 - Procedural Programming
This course is designed to give the student the logic involved in the computing process and the ability to develop an algorithm to describe the solution to a given problem, with implementation using a programming language of choice. The student should also be able to analyze, design, develop, code, and debug a solution to a programming problem based on the introductory programming concepts introduced in this course.
Co-requisite(s): MA1905

CP1855 - Introduction to Programming with Python
This course will introduce students to Python programming. Python is a widely used programming language in fields such as web development, data science, and artificial intelligence. Students will begin with the basics of writing and running python scripts, and advance through concepts such as conditional code and flow control, functions, loops, modules, testing, debugging and exception handling. Upon completion, students will be able to analyze, design, develop, code, and debug a solution to a programming problem based on provided scenarios.

CP1856 - Programming with Python
Python is a widely used programming language in fields such as web development, data science, and artificial intelligence. Students will begin with the basics of writing and running python scripts, and advance through concepts such as conditional code and flow control, functions, loops, modules, testing, debugging and exception handling. Upon completion, students will be able to analyze, design, develop, code, and debug a solution to a programming problem based on provided scenarios.

CP1895 - Advanced Python Programming •
In this course, students will learn advanced Python programming concepts and features, expanding upon the fundamental skills acquired in the Introduction to Programming with Python. Core concepts include a variety of structures such as dictionaries, stacks, queues, sets, trees, and algorithmic complexities and the application of object-oriented design principles to build software using the appropriate data structures. Content will focus on the applied

use of Python to solve modern-day problems utilizing one or more popular frameworks.

Prerequisite(s): CP1855 or CP1856 or CP1850

CP1923 - Computer Hardware and Troubleshooting I
This course is designed to expose the students to the basic components of a computer system, operating system, and methods of troubleshooting. The student will learn how to: evaluate, install, configure, troubleshoot, and specify all basic computer components such as CPUs, Memory, and Storage Devices. It will also cover such topics as: Operating systems, computer repair fundamentals, chipsets, buses and expansion slots. Students will gain a complete, step-by-step approach for learning the fundamentals of supporting a computing infrastructure and for learning the fundamentals of supporting and troubleshooting computer hardware and software.

CP1927 - Computer Hardware and Troubleshooting II
The second of two hardware courses, this course equips students with essential skills to manage and maintain operating systems on various devices. Students will install, configure, secure, and maintain Windows, exploring advanced options to optimize performance. The course covers the Windows start-up process, troubleshooting techniques, and effective customer service strategies.
Students will also be introduced to the macOS operating system key features and maintenance practices.

By the end of this course, students will be proficient in managing operating systems.
Prerequisite(s): CP1923

CP1935 - Systems Analysis I
This course introduces students to the concepts of Systems Analysis and Design utilizing an object-oriented approach. The aim is to provide the student with a practical, hands-on skill set of the latest object-oriented design method using the Unified Modeling Language (UML) using the Unified Process. The course is laboratory oriented allowing the student to develop real design for use with Object Oriented programming languages. It reviews all phases from an object-oriented approach but concentrates on the various types of UML modeling.
Prerequisite(s): CP1850 or CP1855 or CP1856

CP1946 - Systems Analysis II
The second Systems Analysis course explores methods and frameworks used in IT project management, emphasizing the alignment between information systems and business needs. It covers project selection processes, including various visualization tools like breakdown structures, Gantt charts, and network diagrams. Students will explore Agile methodologies, including Scrum frameworks, user stories, MoSCoW prioritization, and how these contribute to Agile project development. Practical sessions using Jira software enable hands-on experience in Agile project creation and sprint management.

The course explores managing programming projects, discussing cultural impacts on software development teams, types of documentation, software testing methodologies, and installation procedures for information systems. It also examines change management, addressing resistance to change, roles in change initiatives, and Prosci's 3-Phase Process. Lastly, Programming Patterns are explored, elucidating their significance, common categories, and implementation of various Design Patterns like Abstract Factory, Singleton, and Observer, among others.

Upon completion, students will proficiently manage IT projects by aligning them with business needs, implement Agile methodologies using tools like Jira, and effectively manage software development teams. They'll adeptly handle change management initiatives and apply diverse programming patterns to design robust and scalable software solutions.
Prerequisite(s): CP1935, CP1895

CP2000 - Embedded Linux
This course will provide the student with an introduction to the Linux operating system and its use in electronic instrumentation. The student will be instructed in the use of the command line environment as well as the maintenance and support of embedded Linux.

CP2010 - Frameworks •
Frameworks speed up the development process. They have the added benefit of helping teams work with standardized workflows and notations. Students will learn to use the JavaScript framework VueJS to build fast responsive web applications. Students will also use the CSS framework TailwindCSS to style their websites so that it has a unique look and feel.
Prerequisite(s): CP1292

CP2015 - BI & Visualization •
In today's data-driven business environment, data analytics has become an essential competence for companies and organizations to remain competitive and facilitate informed decision-making. This course equips students with the necessary knowledge and abilities to proficiently use Power BI for data analytics, encompassing data preparation, modeling, visualization, analysis, and asset deployment and maintenance. Adopting a practical approach, students will generate efficient data analytics solutions using Power BI.

By the end of this course, students will be proficient in using Power BI for data analytics, comprising data preparation, modeling, analysis, and report generation. They will be capable of analyzing and visualizing data from multiple sources using Power BI and distributing reports to others.

CP2020 - Machine Learning •
In this course, students will delve into the broad applications of machine learning. They will learn to identify and address complex problems using machine learning pipelines. They will gain hands-on experience in essential stages of these pipelines, including data preprocessing, feature engineering, and data splitting, along with the selection and tuning of models.

The curriculum will encompass both supervised and unsupervised machine learning tasks, such as classification, regression, clustering, and anomaly detection. Students will also familiarize themselves with various machine learning algorithms such as Logistic Regression, Support Vector Machines, k-nearest neighbors, Decision Trees, Random Forest, and XGBoost.

Key concepts of model optimization, such as the bias/variance trade-off and hyperparameter tuning, will be discussed in detail. By the end of the course, students will be able to create and fine-tune machine learning models, paving the way for effective data-driven problem-solving.

CP2025 - Data Gathering •
Information exists in many formats and locations. How data is stored varies greatly, from compact Comma Separated Values (CSV) files for small datasets to distributed file systems like Hadoop Distributed File System (HDFS) for larger datasets. It includes structured data in SQL databases and unstructured data in log files, resulting in a diverse range of storage options and data formats. This course provides students with a broad overview of prevalent data sources and equips students with the expertise to interface effectively with these different data repositories.

Students will extract information from database tables by employing select database queries, joins, groupby, and having clauses. Additionally, they will employ subqueries to carry out aggregate calculations. They will utilize NoSQL databases such as MongoDB and manage file-based data formats using the versatile capabilities of scripts. In addition, they will explore distributed data storage mechanisms, encompassing HDFS, Apache Spark, and a Statistical Analysis System (SAS).

Upon completion of this course, students will have honed the capability to source, refine, and manage data from a broad spectrum of origins.

CP2030 - AWS Cloud Development •
The Amazon Web Services (AWS) Cloud Development course is designed to give students the technical knowledge and skills required for building secure, reliable cloud-based applications using the AWS technology. The students are introduced to AWS and will use the broad range of tools available such as global compute, storage, databases, analytics, application and deployment products and services. With these tools, students will be able to help businesses scale and build applications with increased flexibility, scalability, and reliability.
Prerequisite(s): CP1895 or CP1292

CP2035 - Applied Data Analytics •
This course centers on the application of data analytics to real-world situations. Students will be guided to build several end-to-end projects where they will be given a data set and a problem statement. They will learn how to collect, clean, transform, analyze, and visualize data using appropriate tools and programming languages. Completing projects that cross all sectors, students will complete at least one project with unstructured data and at least one project will deal with data related to the healthcare sector.

Additionally, the course will teach students how to communicate their insights and findings effectively to stakeholders. This will be achieved through the creation of informative and aesthetically pleasing data visualizations, reports, and dashboards.

An important aspect of the course will be the focus on best practices for building machine learning models. By the end of the course, students will be proficient in delivering data-driven insights that can drive positive outcomes for organizations, utilizing both their technical skills and their ability to communicate effectively.
Prerequisite(s): CP1020, CP1025, CP1030, CP1035, CP1045

CP2045 - Capstone •
Capstone courses serve as a platform for students to exhibit their command of a subject, applying their accumulated knowledge in a practical and significant manner. This Data Analytics capstone course is designed to allow students to demonstrate their comprehensive understanding of the subject through a culminating project. The project can be one from industry or one assigned by the College. If it is an industry-driven project, prior faculty approval must be provided to ensure it meets the scope, depth, and focus required to meet the course outcomes.

Throughout the course, students will collaborate in small groups, employing all the skills and knowledge acquired during their program to conduct an extensive analysis. This endeavor will necessitate a deep understanding of the data at hand and effective communication of their findings.

Upon completion of the project, each group will present their work to a panel of experts, receiving valuable feedback that further solidifies their learning experience.

By the conclusion of this course, students will have demonstrated their ability to apply the skills obtained throughout their studies to address a real-world problem in their chosen industry. Additionally, they will have refined their critical thinking, problem-solving, project management, and presentation skills—attributes essential for thriving in any professional environment.
Co-requisite(s): CP1020, CP1025, CP1030, CP1035, CP1045, CP2015, CP2020, CP2025

CP2070 - Social Media Management •
This course is designed so that students will use digital/social/mobile marketing's true value to enhance business for consumers, managers, and other corporate stakeholders. It will provide students with the relevant knowledge, perspectives, and practical skills required to develop marketing strategies that leverage the opportunities inherent in social media and consumer-to-consumer social interactions for achieving business and marketing goals. Students will learn the use of social media to increase brand awareness, identify key audiences, generate leads, and build meaningful relationships with customers. Students will be equipped with general theories and knowledge when it comes to social media marketing; and how to utilize new and constantly updated social media marketing strategies for businesses. By the end of the course, students will know how to implement a successful content strategy for Facebook, Instagram, Twitter, Snapchat, Pinterest, LinkedIn, HootSuite and YouTube.

CP2075 - Digital Analytics •
This course exemplifies how marketing analytics are the foundation to digital marketing. Students will learn how analytics is the language used to optimize and connect results across all digital marketing tactics (search, social media, email, display, video, etc.). The technical and soft skills of analytics will be highlighted through theory and practical application to better understand data analysis. Upon completion of the course, the student will be able to explain and apply the logic of optimization and attribution in business analytics. The student will be able to apply the practical tools and techniques of business analytics and run field experiments in digital environments using A/B testing. The student will also practice web analytics for better business decision-making.

Prerequisite(s): CP1580, CP2070

CP2080 - Salesforce Development •
This course will introduce the student to skills and concepts that are essential to develop in the Salesforce echo system. Upon completion of this course, the student will be able to create business to consumer ecommerce websites quickly using Salesforce B2C Commerce.
Prerequisite(s): CP2010

CP2085 - Orientation to the EWeb Work Exposure •
The work exposure is an integral part of the Enterprise Web Development program's curriculum. Work exposure opportunities are arranged by the Work Exposure Coordinator for the program but ultimately must be secured by students in competition with all applicants for the position. This course focuses on content that will assist students in finding a meaningful placement and prepare students for a career in enterprise web development by fine-tuning the skills cultivated throughout the program.

CP2110 - Advanced Electronic Spreadsheets •
This course allows students to build on the basic concepts and applications of electronic spreadsheets. Students will create, format and print advanced worksheets and graphs and will incorporate advanced functions and macros into their spreadsheets. They will summarize, consolidate, and analyze data using a variety of spreadsheet features. They will also use tables and data tools features to manipulate data. They will be able to create and format new professional business document using a variety of spreadsheet features and analyze the data to make appropriate business decisions.
Prerequisite(s): CP2310

CP2115 - Computer Applications
Production tools throughout many industries benefit from the use of digital software. Common software integrations that help create an organized and productive work environment include file management, word processing, spreadsheets, and online and mobile applications. Providing students with digital literacy knowledge, and how these production tools work, is important to promote successful academic studies throughout the college experience and provide essential skill sets that can be applied in the workplace.

CP2205 - Advanced PHP Laravel •
This course will introduce the student to skills and concepts that are essential to develop and maintain a web application using the Laravel PHP framework. Upon completion of this course the student will be able to create powerful database-driven websites quickly in a scalable, re-usable, repeatable way.
Prerequisite(s): CP2426

CP2280 - Object-Oriented Programming in Java •
This is a course in object-oriented programming for students with no experience with Java but some knowledge of a strongly typed language. Examples and assignments typify standard business applications. The course stresses key object-oriented design concepts and their implementation rather than exhaustive coverage of the Java language itself.
Co-requisite(s): CP1850 or CP1855

CP2290 - Advanced Windows Enterprise Server
Building on the skills developed in CP1465 Windows Server Administration, this course enhances the student's ability to administer a Microsoft Server. It focuses on the skills and knowledge necessary to administer an of administering server infrastructures within enterprise-level settings

Through hands-on practical exercises, students will not only build upon the foundational skills acquired in the previous course but also explore more complex aspects of server administration such as hybrid networking, hybrid-cloud, and MS Azure.

By the conclusion of this course, students will emerge with the expertise needed to confidently administer robust server infrastructures within enterprise environments, contributing to the smooth operation and data integrity of organizations relying on Microsoft Server technologies.
Prerequisite(s): CP1465

CP2310 - Electronic Spreadsheets •
This course will introduce students to the concepts and applications of electronic spreadsheets. Students will create, format and print enhanced worksheets and graphs, and will incorporate functions into their spreadsheets. They will also use table features to format and analyze data.

CP2315 - Cloud Developer
The Amazon Web Services (AWS) Academy Cloud Developing course offers a comprehensive exploration of cloud-based development, encompassing key facets vital in today's tech landscape. This course immerses students in a rich learning environment, incorporating instructor-led sessions, digital lectures, practical demonstrations, and engaging activities to master a range of crucial topics. From securing access to cloud resources and crafting flexible NoSQL solutions to developing REST APIs and leveraging event-driven serverless architectures, students navigate a curated scenario-based approach. Hands-on labs and guided projects empower learners to build diverse infrastructures, honing their skills in working with containers, messaging services, and workflows for function orchestration. Emphasizing security throughout, the course delves into crafting secure applications on AWS and automating deployment using CI/CD pipelines.
Prerequisite(s): CP1895

CP2426 - PHP •
This PHP programming course uses open source software, PHP, and a database, to provide the student with the applied skills to build professional-quality, database-driven Web sites. By integrating PHP and the database with HTML and CSS frameworks, the student will develop the skills to build interactive Web sites with authentication and security.
Prerequisite(s): CR1511, CP1292, CP3510

CP2530 - Data Structures & Algorithms
This course builds on the foundation provided by Programming Fundamentals and Object Oriented Programming. It introduces the fundamental concepts of algorithm analysis and design as well as dynamic data structures. Prerequisite discrete mathematics concepts are introduced as appropriate.
Prerequisite(s): CP1340

CP2561 - Java Programming II
This is a second course in Java for students who have already completed a one-semester course in object-oriented programming in Java. Examples and assignments typify standard business applications. The course stresses using object-oriented design concepts to develop relatively sophisticated applications in Java. Topics include but are not limited to:

- Installing the Java Development Kit (JDK)
- String Processing
- Graphics and Java2D components
- Event-handling; Exception Handling
- Multithreading
- File and Stream I/O
- Internet Networking
- Multimedia
- Utilities Package and Bit Manipulation
- Collections API

Prerequisite(s): CP2280

CP2640 - Desktop Publishing •
Using desktop publishing software, students will prepare newsletters, flyers and other publications which require professional design elements such as columns, boxes, tables, various font faces and styles, rules, and graphic pictures.
Prerequisite(s): DM1200 or MC1260

CP2730 - Project Management and Analysis
This course is designed to help the student understand the workings of project management/analysis and understand its importance to improving the success of information technology projects. The student will complete a major project that concentrates on project management/analysis as it applies to the infrastructure support area. Project management software, such as Microsoft Project, will be used throughout the course to complete coursework.
Prerequisite(s): CR1107

CP3010 - Server Side Programming

The course is designed to build upon existing JavaScript skills and to provide a comprehensive overview of web application development using Node.js by focusing on the core competencies required to develop Node.js applications for the enterprise. Students will learn the fundamentals of server-side web development using MongoDB (a NoSQL database), Express.js (for building web servers), and Node.js. These tools and concepts will introduce students to models of software development that can apply to any web development environment, including the application server (node.js), Model View Controller (MVC) frameworks using Express.js, front-end frameworks (e.g. Angular), and databases (MongoDB). The course includes setting up a node.js environment, building web APIs and full-stack JavaScript applications, and following good application development practices.

Prerequisite(s): CP1895, CP1520, CP1295

CP3105 - WordPress •
WordPress is the most popular content management system in use on the web today. There are millions of webpages served by WordPress each day. WordPress allows sites to include web content like forums, media galleries, e-commerce stores and much more. Students will install WordPress, WordPress themes and WordPress plugins. Students will also create custom themes and custom plugin to add functionality to a WordPress site.
Prerequisite(s): CP1410, CP2426

CP3125 - Command Line and PowerShell
Interacting with the operating system without using a GUI requires the use of text commands in a shell environment; this is called a command line. Navigating the command line is an essential skill for the computing professional. In this course the student learns to interact with, configure and troubleshoot the operating system using command line processes and PowerShell. The student will learn by the "hands-on" application of the commands and procedures.

CP3155 - UI/UX Design •
This hands-on course enables the students to develop a strong foundational understanding of user interface (UI) and user experience (UX). Students will avail of user research and User-Centered Design (UCD) approaches and utilize them to design common user-interface elements in custom interactive functionalities. Students will also learn what UX is as well as the fundamentals of UX design and how to include in all digital products and services. Students will demonstrate successful practices in User-Centered Design (UCD) and use personas, user research and user stories. Discussion of issues surrounding usability on the Web including knowledge management and web strategies. Emphasis is placed on adherence to Web standards and accessibility guidelines and how to effectively use Web analytics to refine site design.
Prerequisite(s): CR1511, CP1580, CP1505

CP3416 - Database Management Systems II
This course builds on the first course of database management systems (DBMSs) and introduces concepts common to all DBMSs. Students will apply database designing processes using entity relationship (ER) diagrams and normalizing the database. Students will implement "stored program development" utilizing multiple SQL statements enhancing database productivity and work with the data definitions of SQL. The role of the Database Administrator will be

explored enabling the securing of the database and assignment of privileges. Finally, this course introduces big data and NoSQL databases.
Prerequisite(s): CP1555, CP1856 or CP1850

CP3417 - Database Management Systems II
This course builds on the first course of database management systems (DBMSs) and introduces concepts common to all DBMSs. Students will apply database design process for normalizing the database. Students will implement "stored program development" utilizing multiple SQL statements enhancing database productivity and work with the data definitions of SQL. The role of the Database Administrator will be explored enabling the securing of the database and assignment of privileges. Finally, this course introduces big data and NoSQL databases.
Prerequisite(s): CP1556, CP1856 or CP1850

CP3470 - IM Systems Analysis and Design •
Business systems and applications provide the foundation for the completion of transactions and management of case files. Increasingly, the organization's record of authority is being held in databases or combined with unstructured data in Electronic Records Management Systems. The IM Systems Analysis and Design course prepares students to participate in the complete system development life cycle (SDLC) of IM related projects. It gives a fundamental overview of the effective analysis and design of business-related problems. It also concentrates on requirements definition, feasibility and design considerations utilizing the traditional SDLC methodology and methodology that is unique to IM.
Prerequisite(s): OP1390, CR1050

CP3490 - Software Engineering
The course introduces learners to the principles of software engineering, object oriented modeling and analysis of large software systems using unified modelling language (UML) and different phases of software life cycle: requirements, analysis, design, implementation and testing. Development of a significant software system is a crucial part of the course.
Prerequisite(s): CP2530

CP3510 - Relational Database Design •
This course introduces concepts common to all database management systems in such a way that the student can function in a meaningful and knowledgeable manner in any data processing environment where database concepts are implemented. The theoretical concepts are put into practice using current database architectures and technology.

CP3520 - Databases
The course introduces learners to the principles of database design and implementation as well as administration of database management systems. Discrete mathematics prerequisites are introduced as appropriate. Development of significant database system is a crucial part of the course.
Prerequisite(s): CP2530
Co-requisite(s): CP3490

CP3521 - Web Programming
The course is designed to give learners a thorough understanding of Web technologies. Topics include client-server architecture and protocols. Server side topics include JavaScript and PHP scripting languages, AJAX, Java servlets and security.
Prerequisite(s): CP3490, CP3520, CR1107

CP3540 - Applied ASD Project
This project course enables students to demonstrate the application of knowledge and skills developed throughout their program of studies. Students taking this course will work in teams on a project, under the supervision of a faculty supervisor, and will perform the following:

1. an in-depth analysis of a problem that requires a software solution developed
2. a design and implementation of the problem solution
3. presentation of their solution

The focus of this course is on presenting a clear concise solution with brief supporting documentation. This project can be one from industry or one assigned by the College. If it is an industry-driven project, prior faculty approval must be provided to ensure it meets the scope, depth and focus required to meet the course outcomes.
Prerequisite(s): CP1935, CP2561, CP1291

CP3566 - Applied Java Programming
This is the third course in the Java sequence and will extend a student's Java knowledge to include web applications. Many of today's popular Java web frameworks are built on top of the Servlet and Jakarta Server Page specifications and base libraries. To fully understand how these frameworks, operate, and to be able to take full advantage of the facilities they offer, students will learn the foundations that these frameworks are built on. This course will explore how it is possible to build a web application using these fundamental technologies, as well as learning techniques to manipulate databases using Java Database Connectivity (JDBC), and the creation of web components utilizing the latest Java web frameworks (examples may include Spring, Struts, Java Server Faces, GWT, etc.). Students will demonstrate deploying web-based frameworks that are secure and stable and fully support API and web services.
Prerequisite(s): CP2561, CP3417

CP3810 - iPhone Application Development
This course introduces students to applications development for iOS devices and is structured around tools, frameworks and programming language(s). Topics include Model-View-Control paradigm, Objective-C, storyboards, constraints and layouts, outlets and actions, navigation controllers, segues, UIView, UITableView, UIScrollView, UIPageView, UICollectionView, UITabBar and UISegmented controllers, networking, telephony, maps and webview, persistent data, SQLite and Sprite kit.
Prerequisite(s): CT2530, CP3490
Co-requisite(s): CP3831

CP3831 - Computer Graphics and Game Development
This course introduces students to computer graphics using OpenGL libraries and professional game engine to develop 2D/3D games.
Prerequisite(s): CT2530

CP4110 - Introduction to Machine Learning
Introduction to Machine Learning is designed to equip students with an understanding of what machine learning is and how it should be applied in various contexts. Through a combination of theoretical concepts and hands-on exercises, students will learn about different categories of machine learning algorithms, as well as the requirements and advantages of each, enabling them to excel in situations where regression and classification are required to solve a problem.

Students will have the opportunity to work with real-world datasets and machine learning toolsets from industry. Best practices in machine learning will be emphasized to ensure responsible and impactful use of advanced algorithms.

Upon completion of this course, students will have developed the skills necessary to deploy prevalent machine learning algorithms, enhance model performance, optimize accuracy and efficiency, and effectively employ machine learning techniques with real-world datasets and intricate problem scenarios. This includes developing the ability to discern suitable algorithms and strategies tailored to diverse data types and tasks.

CP4115 - AI Applied Ethics, Law & Governance
This course introduces students to selected ethical and legal frameworks relevant to artificial intelligence and machine learning, in the context of its societal, economic, and environmental implications and applications. It prepares students to look beyond the technology and applications and question when, where, and how artificial intelligence should be applied. Through case studies and a project, this course equips students with knowledge of diverse legal mandates and privacy practices. They will be able to make informed decision-making, policy development, and navigate ethical considerations within the realm of AI.

CP4125 - Deep Learning & Neural Networks I
Deep learning has revolutionized the field of artificial intelligence, enabling machines to learn complex patterns from

data and make intelligent decisions. This course is designed to introduce students to the world of artificial neural networks. This course introduces the concept of Artificial Neural Networks (ANNs) with multiple layers (also known as Deep Learning), its ethical considerations, how to improve ANNs using Optimization and Hyperparameter Tuning, and how to use pre-existing models with Transfer Learning.

This course combines lectures, hands-on programming assignments, group discussions, and project work. Students will work on practical projects involving deep learning and neural networks, enabling them to apply their knowledge to real-world scenarios. Ethical considerations and best practices in deep learning will be emphasized throughout the course to ensure the responsible and impactful use of deep learning techniques.
Prerequisite(s): CP4110

CP4130 - Natural Language Processing
Natural language processing (NLP) is a branch of artificial intelligence (AI) for making human language accessible to computers. These tasks are incredibly useful in several fields including healthcare, legal, customer service, and insurance.

This course explores text understanding and keyword-based information retrieval, foundational aspects that power various modern computing applications and their interfaces.

Natural language processing algorithms must be both efficient and robust to be useful. Algorithms and data structures used to solve key NLP tasks efficiently will be introduced, including utterance understanding and generation and language acquisition, in both major algorithmic paradigms used today (rule-based and statistical).
Prerequisite(s): CP4110
Co-requisite(s): CP4125

CP4135 - ML with Distributed Computing
In the era of information explosion, the ability to manage and process vast amounts of data is crucial for modern applications, particularly in the fields of artificial intelligence and machine learning. The course *Machine Learning with Distributed Computing* builds upon previous courses in Distributed Computing (focusing on technical aspects like the Hadoop Distributed File System and Apache Spark) and equips students with the knowledge and practical skills required to handle large-scale datasets and leverage distributed computing frameworks. Students will learn to build data pipelines for artificial intelligence (AI) and machine learning (ML) applications and utilize powerful big data tools for efficient model training and inference.

This course combines lectures, hands-on lab sessions, group discussions, and project work. Students will have the opportunity to work with large-scale datasets and implement data pipelines for AI and ML applications. The course also addresses security and governance considerations in big data projects, ensuring that students are well-equipped to handle real-world big data challenges responsibly and effectively.
Co-requisite(s): CP4110

CP4140 - Deep Learning & Neural Networks II
Deep learning has revolutionized the field of artificial intelligence, enabling machines to learn complex patterns from data and make intelligent decisions. Building on the knowledge gained in the first course, this course is designed to dive deeper into artificial neural networks. This course explores the concepts of Convolution Neural Networks (CNNs) for image processing, Recurrent Neural Networks (RNNs) for Natural Language Processing, Generative Adversarial Networks (GANs) for generating human-like output, and the latest trends and research in Artificial Neural Networks (ANN).

This course combines lectures, hands-on programming assignments, group discussions, and project work. Students will work on practical projects involving deep learning and neural networks, enabling them to apply their knowledge to real-world scenarios. Ethical considerations and best practices in deep learning will be emphasized throughout the course to ensure the responsible and impactful use of deep learning techniques.
Prerequisite(s): CP4125

CP4210 - Computer Vision & Image Processing
Computer vision is a transformative field of artificial intelligence that empowers machines to interpret and

understand visual information from the world around us. "Computer Vision and Image Processing" enables students to build advanced models for image analysis, object detection, pattern recognition, and image segmentation. This course explores the practical applications of computer vision in fields such as autonomous systems, healthcare, and other domains utilizing different image datasets and computer vision techniques. The course emphasizes the development of advanced computer vision models and their applications in diverse scenarios.

At the end of the course, students will be able to build advanced computer vision models, detect objects, recognize patterns, and apply computer vision in domains such as medical image analysis.
Prerequisite(s): CP4110
Co-requisite(s): CP4125

CP4220 - Emerging Trends in AI and ML
The dynamic field of AI and ML is in a perpetual state of transformation and growth. This course delves into the ever-evolving landscape, exploring the latest trends and innovations driven by the natural evolution of these technologies. The course content is designed to familiarize students with the latest techniques and innovations in AI and ML, emphasizing their practical application and their integration into the broader technology ecosystem.
Sample topics of discussion/examination along with sample assignments and projects could include:

- Recent Advances in AI and ML:
    - Assignment: Research and present a case study on a recent breakthrough in AI or ML, discussing its significance and potential applications
    - Project: Develop a machine learning model using a state-of-the-art algorithm, showcasing how it can be applied to a real-world problem

- AI in E-commerce:
    - Assignment: Analyze and critique the use of AI in personalizing product recommendations for e-commerce websites.
    - Project: Build a recommendation system for an online retail platform, incorporating AI to improve user experience and boost sales

- AI in IoT (Internet of Things):
    - Assignment: Explore how AI is enhancing IoT devices and their ability to collect and process data
    - Project: Design and develop an AI-powered IoT application or device that demonstrates the benefits of AI integration in the IoT ecosystem

- AI for Business Process Automation:
    - Assignment: Investigate how AI is being employed to automate and streamline business processes across industries
    - Project: Identify a specific business process in a chosen industry and create an AI solution to automate and optimize it

- Emerging AI Startups and Innovations:

- Assignment: Research and present an analysis of a promising AI startup, including its innovations and potential impact on the industry

- AI and ML Integration in Web Development:
  - Assignment: Examine the integration of AI and ML in web development, discussing practical applications and advantages
  - Project: Build a web application that incorporates AI or ML features, such as content personalization or natural language processing

- AI in Healthcare:
  - Assignment: Investigate the role of AI in healthcare, highlighting applications in medical imaging, diagnosis, and patient care
  - Project: Develop a healthcare-focused AI model, such as a disease prediction system or medical image analysis tool

- Explainable AI (XAI):
  - Assignment: Explore the importance of XAI in AI model interpretability and accountability
  - Project: Develop an AI model with explainable features, and create a visualization tool to interpret its decision-making process

Prerequisite(s): CP4110, CP4115, CP4135
Co-requisite(s): CP4125

CP4230 - Applied AI & ML Capstone
The capstone project course empowers students to apply the knowledge and skills acquired throughout their academic program. In this course, students collaborate in teams, guided by a faculty supervisor, to undertake the following tasks:

1. Conduct a thorough analysis of a real-world problem that demands the development of an AI and ML software solution.
2. Design and implement an effective solution to the identified problem.
3. Create comprehensive documentation and deliver a presentation of their solution.

The project may either originate from an industry partner or be assigned by the college. For industry-driven projects, prior faculty approval is required to ensure they align with the course's objectives in terms of scope, depth, and focus. This AI and ML Capstone Project offers students a holistic experience, encompassing the entire project lifecycle, from problem identification and analysis to design, implementation, and culminating in a comprehensive final presentation. It equips students with practical skills and deepens their knowledge in the field.
Prerequisite(s): CP4115, CP4135, CP4210, MN1520
Co-requisite(s): CP4140

CP4282 - Programming for Mobile Devices
This course focuses on creating apps for mobile devices. Throughout the course, the fundamentals of mobile app development for various platforms are explored. Topics covered include app architecture, user interface design, data

management, and optimization techniques. Students will create functional and user-friendly mobile applications.

By the end of this course, students will be equipped with the practical skills to program mobile applications.
Co-requisite(s): CP2561 - may have been completed as a prerequisite

CP4305 - Orientation to the ASD Work Exposure
The work exposure is an integral part of the Accelerated Software Development program's curriculum. Work exposure opportunities are arranged by the Work Exposure Coordinator for the program but ultimately must be secured by students in competition with all applicants for the position. This course focuses on content that will assist students in finding a meaningful placement and prepare students for a career in IT by fine-tuning the skills cultivated throughout the program.

CP4450 - Research and Statistics
This course introduces generalized research skills along with an introduction to the basic principles of quantitative statistics commonly encountered in the Information Technology environment. Coursework will assist students in finding credible topics typically found in information technology-related published research. In addition, students will be exposed to statistical topics that will enable the interpretation of descriptive statistics and develop confidence in the analysis of quantitative and qualitative research.

CP4471 - Emerging Trends in Software
This course covers trends in software development that arise from the natural evolution of the field. Topics are selected with the aim of exposing the student to the new and/or evolving techniques and/or technologies used in software development.
Prerequisite(s): CP3417, CP2280, CP1935

CP4475 - Emerging Trends and Innovation •
Technology is constantly changing and evolving. This course explores trends and innovation that arise from the natural evolution of the field. Topics are selected with the aim of showing the student new and/or evolving techniques and/or innovations used in enterprise web development.

Sample topics of discussion and examination could include:

- Mobile Commerce
- Enterprise computing
- Social E-Commerce
- Collaborating and project management
- Leadership and technology
- Artificial intelligence
- Augmented reality
- Interactive product visualization
- Big data
- Analytics

Examples of assignments and projects could include:

- Case study on a new technology in an organization
- Industry needs analysis

- Implementation plan for new technologies
- Utilization of the new technology
- Industry technology presentation
- Industry driven project

Prerequisite(s): CP2030, CP1505, CP1292, CP1895, CP1501, CP3155, CM1401, MA1905, CR2800, CR1355, CP1580 and CP2075, CP2080 or CP2205, CP3105

CP4477 - Emerging Trends & Innovation in ASD
Technology is constantly changing and evolving. This course explores trends and innovation that arise from the natural evolution of the field. Topics are selected with the aim of showing the student new and/or evolving techniques and/or innovations used in software development.

Sample topics of discussion and examination could include:

- Artificial intelligence
- Augmented Reality
- Virtual Reality
- Interactive product visualization
- Big data
- Analytics
- Computer and Network Security
- Cloud Systems
- Game Programming
- Machine Learning

Examples of assignments and projects could include:

- Secure a full stack web application from a variety of security threats through a framework of penetration testing.
- Develop Web based multiplayer online game
- Develop Unity Game Engine video game
- Develop an Augmented Reality / Virtual Reality entertainment application
- Develop an Augmented Reality / Virtual Reality medical application
- Develop applications which analyze data sets to make predictions using a Machine Learning model
- Develop a Music Recommendation Engine based on Data Analytics
- Build a Data Portal app using Twitter Data
- Industry driven project

Prerequisite(s): CP3416, CP1895, CP1291, CP1935, CP2561

CP4485 - Emerging Trends in DB and Web Dev
Technology is constantly changing and evolving. This course explores trends and innovation that arise from the natural evolution of the field. Topics are selected with the aim of showing the student new and/or evolving techniques and/or innovations used in modern database design and integration with the rest of the web development stack.

Sample topics of discussion and examination could include:

- Frameworks: Flask, Django, Node.js
- SQL DBMS: MySQL, PostgreSQL, SQLite
- NoSQL databases such as: MongoDB
- Front-end: HTML/CSS/JavaScript
- User authentication: OAuth
- Deploying backend code from local machine to servers
- Automated management

Examples of assignments and projects could include:

- Front end web development using HTML/CSS and JavaScript
- Bridging SQL and NoSQL
- Server-less cloud-based databases
- Developing a web server which reads and writes data from and to a database server and allows user interaction using a front-end website
- Building a user authentication system using the OAuth framework to authenticate users and store user specific data
- Building a fully featured web application that includes the following components:
    - A front-end website using HTML/CSS and JS
    - A database server
    - A user-authentication system
    - A back-end server to server the website and interacts with the database server

Co-requisite(s): CP1890*, CP3416*, CP1210 - *These courses may have been completed as prerequisites

CR1020 - Desktop Application Support
Technology is constantly changing and evolving. This course explores trends and innovations that arise from the natural evolution of the field. Topics are selected with the aim of showing the student new and/or evolving techniques and/or innovations used in modern database design and integration with the rest of the web development stack.

Sample topics of discussion and examination could include:

- Frameworks: Flask, Django, Node.js
- SQL DBMS: MySQL, PostgreSQL, SQLite
- NoSQL databases such as: MongoDB

- Front-end: HTML/CSS/JavaScript
- User authentication: OAuth
- Deploying backend code from local machine to servers
- Automated management

Examples of assignments and projects could include:

- Front end web development using HTML/CSS and JavaScript
- Bridging SQL and NoSQL
- Server-less cloud-based databases
- Developing a web server which reads and writes data from and to a database server and allows user interaction using a front-end website
- Building a user authentication system using the OAuth framework to authenticate users and store user specific data
- Building a fully featured web application that includes the following components:
    - A front-end website using HTML/CSS and JS
    - A database server
    - A user-authentication system
    - A back-end server to server the website and interacts with the database server

Co-requisite(s): CP1895, CP3417, CP1295

CR1030 - Linux Server Administration
Linux runs everywhere; devices such as desktop computers, smartphones, routers, web servers, supercomputers, TVs, refrigerators, and tablets to name a few. This course deals with the use and administration of a Linux based system. Students will explore the various tools and techniques commonly used by Linux system administrators and end users to carry out their day-to-day work in a Linux environment. The course is designed for computer users who have limited or no previous exposure to Linux. Upon completion of this course students should have a good working knowledge of common Linux tools, from both a graphical and command line perspective, allowing them to easily navigate through any of the major Linux distributions.

CR1050 - IM Computer Technologies
This course focuses on the concepts, tools and technologies commonly used to manage the information life cycle in today's business environment. Through this course, students will apply concepts related to file/form creation and management, organization and storage, data analytics and presentation and reporting. Technologies include Microsoft Excel, Adobe, and Treesize. Subjects include Productivity Software, Email Management, Forms and Templates, Document Imaging, Electronic Signatures, Search and Management Processes and Tools, Virtual Work, Data Management, File Disclosure Management and Presentation and Communication Tools.

CR1107 - Network Fundamentals
This course introduces the technology, configuration, and skills required to connect individuals, devices, and corporations in an efficient and secure manner to share information and ideas and collaborate on a regional and global scale. It will provide an overview of networking technologies using international connection standards and will introduce network numbering, protocols, security, and capacity planning.

CR1120 - Introduction to the Field of IT and Ethics
This course will provide the student with an information technology industry overview, information on both

Occupational Health and Safety and the Workplace Hazardous Materials Information System (WHMIS) as well as an introduction to ethics and best practices in the Information Technology field.

CR1130 - Intro to the Field of SD
In this course, software development students will gain a fundamental grasp of the Information Technology (IT) industry and vital workplace fundamentals. By equipping students with these essential insights, the course ensures they have the groundwork necessary for a successful and ethically-driven software development career.

CR1260 - Client Service for the IT Industry
This course focuses on the role of an information technology employee in providing quality technical client service in any given situation. Students will develop the skills they need to interact effectively with clients, either face-to-face, on the telephone, in writing or on the web. Some of the topics covered will be Quality Client Service; Communicating with Clients; Handling Difficult Clients; Solving and Preventing Problems; Working as a Team; and Managing Stress and Burnout.

CR1355 - OS and Network Technologies •
This course provides the student an introduction to operating systems and network technologies. Students will gain an understanding of Networking and cloud computing technologies and processes will be introduced so the learners are able to recognise the impact that distributed infrastructures have upon application development. Students are introduced to a broad range of operating system concepts that cover both Windows, Linux, and mobile environments. Students will learn to document and apply the skills in a software development environment to enhance performance, reliability and security.

CR1511 - Website Development •
This course will introduce students to the key concepts of HTML and CSS. The student will begin creating basic web pages and move on to creating full websites. The student will then enhance web pages with more advanced layouts, embedded fonts, audio, video and responsive design. The student will use basic web design principles and create a website using the content management system WordPress.

CR1531 - Web Design II
Students will gain the skills to develop and modify client-side websites. Focusing on design issues as opposed to programming skills, students will learn how to develop sophisticated page layouts and images for websites. Students will also be introduced to intermediate programming in Hypertext Markup Language (HTML) and Cascading Style Sheets (CSS).
Prerequisite(s): CR1530

CR1535 - Web Design I
Students will gain the skills to design and develop a basic user interface (UI)/user experience (UX), with an emphasis on design issues over programming skills. They will be introduced to basic programming using artificial intelligence (AI) and will learn how to develop sophisticated page layouts and images for UI/UX.

CR2130 - Enterprise Client Management
Enterprises, regardless of size, require the appropriate tools necessary to manage the potentially large numbers of variations of clients and server systems within the organization. In this course, the student will utilize Microsoft's Configuration Manager to increase IT productivity and efficiency through the use of features such as secure and scalable applications, software updates, operating system deployments, compliance settings management, and inventory management. At the end of the course, students will be able to plan, install, use and troubleshoot Configuration Manager for enterprises.
Prerequisite(s): CR1107, CP2290

CR2231 - Microsoft Exchange Server
Since its inception as a text messaging service for locally-connected computers, email has evolved into a globally-connected information sharing and collaboration system. Understanding the interconnection between clients, servers, and other networked email systems is vital to maintaining business communications.

This course focuses on the planning, installation, configuration, and support of a Microsoft Exchange Mail Server. This

would include mail concepts, server installation, client configuration, server management and configuration message of delivery in a multiple-site environment, troubleshooting, and security.
Prerequisite(s): CR1107; CP1465

CR2242 - Information Systems Security
Information systems have become mission-critical storehouses of information, and in many cases, the only storage medium for this information. These systems must be secured from accidental and intentional loss of data. This course introduces the concepts and configuration tasks required to create a secure network infrastructure.
Prerequisite(s): CR1107, CP1465, CR1030

CR2252 - Intro to Amazon Web Services
Introduction to Amazon Web Services (AWS) is intended for students who seek an overall understanding of cloud computing concepts independent of specific technical roles. It provides a detailed technical overview of what the AWS cloud is, its basic global infrastructure and architectural principles. Students will explore core characteristics of deploying and operating in a cloud platform as well as basic security operations, compliance aspects and working with the shard security model.
Prerequisite(s): CR1107, CR1030, CP1465

CR2265 - Virtualization
Current business environments are more dependent than ever on highly-available, secure, scalable, and cost-effective platforms to support datacenter requirements. Virtualization maximizes hardware cost effectiveness and is now part of every corporate datacenter, and support personnel are required to provision these services on a daily basis.

This course features intensive hands-on training that focuses on installing, configuring, and managing VMware vSphere® 7, which includes VMware ESXi™ 7 and VMware vCenter Server® 7. This course prepares you to administer a vSphere infrastructure for an organization of any size.

Through a mix of lecture and hands-on labs, students will configure and optimize the VMware vSphere® 7 features that build a foundation for a truly scalable infrastructure, and you discuss when and where these features have the greatest effect.
Prerequisite(s): CP2290, CR2511

CR2270 - CSN WT Orientation
Work terms are an integral part of the CSN program's curriculum. Work term opportunities are arranged by the Work Term Coordinator for the program, but must be secured by students in competition with all applicants for the position. This course focuses on fine-tuning the skills learned throughout their program of studies and aids them in finding a meaningful placement and becoming an asset to that organization.

CR2402 - Switching, Routing & Wireless
Using the concepts learned in CR1107 – Network Fundamentals, this course provides the skills required to securely configure switches, routers, and wireless connection points to deliver fault-tolerant, scalable, and efficient connections to the network fabric. These skills will include, VLANs, Inter-VLAN Communication, Spanning Tree, Switch Security, EtherChannel, DHCP, FHRP, WLAN, and Static Routing.

Prerequisite(s): CR1107

CR2511 - Advanced Linux Server Administration
Designed for system administrators with some prior Linux experience, this advanced course builds upon fundamental Linux server administration skills. Through hands-on instruction, students will master the installation, configuration, security, and maintenance of Linux systems in networked environments. The curriculum covers essential administrative tasks like user management, file system manipulation, security policy implementation, and software/package management. Additionally, students will gain expertise in administering critical network services such as web servers, email, DNS, NFS, Samba, and database servers. Comprehensive exercises throughout the course solidify knowledge and cultivate practical proficiency.
Prerequisite(s): CR1030

CR2530 - Web Design III
Students will gain the skills necessary to work as part of a team and develop more advanced websites. Students will be working on more complex projects where the role of the designer is to work with clients, audiences and team members to develop more sophisticated design solutions.
Prerequisite(s): CR1531, GA1351

CR2805 - Application Security
As a programmer or developer, the importance of creating secure applications cannot be overstated. Software security deals with the management of malicious attacks by identifying potential vulnerabilities in software and taking the necessary precautions to guard against them. This course will provide the student with a general understanding of application security and how to apply the concepts to their coding workflow.

CR2903 - Enterprise Network Security & Automation
Building upon the skillset obtained in CR2402, this course describes the architectures and considerations related to designing, securing, operating, and troubleshooting enterprise networks. The course covers wide area network (WAN) technologies and quality of service (QoS) mechanisms used for secure remote access. Software-defined networking, virtualization, and automation concepts that support the digitalization of networks are introduced. Students will gain the skills required to configure and troubleshoot enterprise networks and learn to identify and protect against cybersecurity threats. They are introduced to network management tools and learn key concepts of software-defined networking, including controller-based architectures and how application programming interfaces (APIs) enable network automation.
Prerequisite(s): CR2402

CR2950 - Emerging Trends in IT Infrastructure
This course covers new trends in IT infrastructure that arise from the natural evolution of the field. Topics are selected with the aim of exposing the student to the new and/or evolving techniques and/or technologies used in the design and maintenance of the IT infrastructure.
Prerequisite(s): CP1927, CR3456, CR2242, CP2290, CR2903, CR2511

CR2970 - Capstone Project
The Computer Support and Networking program provides the student with a broad knowledge base in the design, implementation and support of modern computer network infrastructures. The Capstone Project is a culminating, performance-based assessment that incorporates major disciplines of the program and focuses on critical thinking, problem solving, teamwork, research skills, oral communication and literacy.

Working in a team and under the supervision of a faculty member the student will perform an in-depth analysis of a given computer systems infrastructure and develop a design or re-design plan that meets the goals identified in the analysis. The student will develop a document that incorporates a complete network design configuration and present his/her findings.

Projects will be selected in consultation with a faculty member and may include an industry partner.
Prerequisite(s): CP2730, CP2290, CR2903, CP1927, CR2511, CR2242, CR3456

CR2980 - Capstone Project
The capstone project course enables students to demonstrate the application of knowledge and skills developed throughout their program of studies. Students taking this course will work in teams on a project, under the supervision of a faculty supervisor, and will perform the following: 1) an in-depth analysis of a problem that requires a software solution developed, 2) a design and implementation of the problem solution and 3) full documentation and presentation of their solution. This project can be one from industry or one assigned by the College. If it is an industry-driven project, prior faculty approval must be provided to ensure it meets the scope, depth, and focus required to meet the course outcomes.
Prerequisite(s): CP1946, CP2561, CP3417, CP1295, CP1520, CM2200

CR3456 - Scripting with Bash
System configuration and maintenance is a primary responsibility for support personnel. Many of the required tasks are repetitive and can be time consuming and error-prone. Scripting provides support personnel with the tools to

automate processes; saving time and reducing configuration errors. This course provides the requisite skills to create and maintain complex scripts to manage computer systems using the Linux Bourne Again SHell (BASH).
Prerequisite(s): CP3125
Co-requisite(s): CR1030

CR3540 - Capstone Project •
The capstone project course enables students to demonstrate the application of knowledge and skills developed throughout their program of studies. Students taking this course will work in teams on an IM project, under the supervision of a faculty supervisor, and will perform the following:

1. an in-depth analysis of a business case that deals with an information management issue in an organization or a work integrated learning project with an industry partner
2. the creation and presentation of an analysis document
3. the creation and presentation of a project plan
4. the creation and presentation of a design document
5. a presentation of their solution

Prerequisite(s): CP3470, OP1600, OP1410, PR2700, OP1401, IM2100, IM2110

CR4100 - Foundations of InfoSec
This course will cover a range of baseline security topics, including the basics of computer networks, vulnerabilities, attacks, security policies, and cryptographic principles. Security fundamentals that form the foundation of modern information security practices will be discussed, including Confidentiality, Integrity, and Availability (CIA), the principle of least privilege, and layered security models. Topics will include a broad introduction to computer security, cyber-attacks and techniques, encryption, security policies and data classification, and network and vulnerability scanning.

CR4105 - OS Security: Windows
This course focuses on new risks, threats, and vulnerabilities associated with the Microsoft Windows operating system, emphasizing on the most recent versions of Windows (both desktop and server variants). Content will encompass the use of tools and techniques to decrease risks arising from vulnerabilities in Windows operating systems and applications. Students will gain hands-on experience related to Windows OS hardening methods, application security, and incident management procedures, comprised of the latest Windows security strategies and techniques.

CR4111 - OS Security: Linux
This course takes a comprehensive, hands-on, look at the security challenges that can affect a Linux server or workstation. Students will learn how to assess security risks in an enterprise Linux environment and choose the best techniques, approaches, and tools to increase security and harden systems. Course content will explore best practices associated with the deployment and monitoring of attack detection tools and examine the process of developing Linux security policy and response strategies.

CR4115 - Network Security I
The network is the front line in the cyber security war, and network administrators need to be ready to defend it. In this course, students will learn the tactical skills necessary to design and manage a secure network and gain a solid understanding of defensive security. This includes building practical skills to implement a variety of network defense strategies such as managing assets and ensuring the integrity of operating and file systems. Topics covered ensure comprehension of data security, properly configuring networking technologies, and the ability to install defensive software to enhance confidentiality, integrity, and availability. The course covers all major domains in such a manner that the student will be able to appreciate the way network security mechanisms have evolved, as well as gain insight into the fundamental workings relevant to each domain. It is a blend of academic and practical wisdom, supplemented with tools that the student can readily access and will provide a comprehensive hands-on experience. Upon

completion, students will demonstrate a solid foundation of network security and the tactical expertise to secure data and build defenses in an enterprise network.

CR4120 - Management of InfoSec
This course focuses on the key managerial aspects of information security and assurance. Students will develop both the information security skills and practical experience that organizations are looking for, as they strive to ensure more secure computing environments. Coursework will prepare a student to become an information security management practitioner, able to secure systems and networks in a world where continuously emerging threats, ever-present attacks, and the success of criminals, illustrate the weaknesses in current information technologies. Topics covered include access control models, information security governance, and information security program assessment and metrics. Reflecting on the most recent developments and up-to-date information in the field, the course addresses national and international laws and international standards like the ISO 27000 series. Students will also be familiarized with the latest information on NIST, ISO and security governance as well as emerging concerns like Ransomware, Cloud Computing and the Internet of Things.

CR4200 - Wireless & Mobile Security
Mobile devices have jumped to the forefront of the corporate business world. With the current trends of Bring-Your-Own-Device (BYOD) and telecommuting, smart phones, tablets, and other mobile computing devices have become irreplaceable tools in the business environment. Students will investigate the evolution of wired and wireless networking and explore the mobile revolution that took users from clunky analog phones to smart devices that people, and organizations depend upon. Although most view the resulting changes as a net positive, both wireless and mobile networking have introduced significant security vulnerabilities to networking in general.

Students will analyze network security threats, considerations, and the implications of the always on, ever-present aspect of these devices, with a particular emphasis on wireless and mobile security. Using case studies and real-world applications and examples, the course will explore risk assessments, threats, and vulnerabilities of wireless networks, as well as the security procedures that should be put in place to mitigate breaches. Students will examine the strategies and procedures currently in place and look ahead at the future of wireless and mobile device security. Content will include basic security measures that satisfy the needs of small office/home office (SOHO) networks, as well as more advanced concepts in wireless security unique to the needs of larger organizations.
Prerequisite(s): CR4115

CR4205 - Virtualization and Cloud Security
This course focuses on the planning, implementation, configuration, and support of a security model for a cloud-based environment. Many organizations are now utilizing virtualization to deploy their own private clouds in which to run their internal shared services. As organizations migrate to the cloud, and become increasingly reliant on cloud-based IT, malicious threat actors are continuously engineering ways to access valuable data by manipulating safeguards and breaching the security layers of cloud environments. Accessing files and applications over a cloud will prompt a revision of current security architecture, policies, and processes, as using a cloud environment, while convenient, can pose additional security challenges. Content will enable students to establish skills and learn tools that will contribute to the development of a cloud security skillset and prepare them to apply those skills in a real-world setting.
Prerequisite(s): CR4100

CR4210 - Network Security II
The computer network has increasingly become more and more complex and so has the threats to its security. This course is focused on helping the network defenders understand how to effectively deal with issues that challenge the security of a network by presenting a defensive stand to network security. Continuing with the progression of topics covered in Network Security I, subject matter will enhance the skills of a network defender. These abilities include: how to analyze the internal and external network security threats, how to proactively minimize threats by developing necessary security policies, designing appropriate defense strategies, the implementation of effective security mechanisms, and responding to security incidents in a timely manner. The emphasis is on the understanding of various network security elements, updating the already deployed security mechanisms, spotting any known or possible vulnerabilities, and hardening security implementations using various tools. This includes a thorough understanding of the defense mechanisms that are most widely used such as firewalls, IDS, digital signatures, the secure configuration of various every-day applications, and a comprehensive set of policies that are to be enforced in the network to secure it from network breaches. At the end of the course, students will be able to implement network

defense strategies, and privacy impact assessments.
Prerequisite(s): CR4115

CR4215 - Defensive/Offensive Strategies I
Computers around the world are systematically being victimized by rampant hacking. This hacking is not only widespread but is being executed so flawlessly that attackers may compromise a system, steal everything of value and completely erase their tracks. As technology advances and organizations increasingly depend on technology, information assets have evolved into critical components of survival.

This course is an introduction to defensive and offensive cybersecurity strategies. Students will learn active defense strategies that require organizations to anticipate attacks before they happen by detecting and responding to threats in real-time. Reactive defense strategies (also known as incident response) will also be explored, with a focus on limiting the damage caused by an attack while also collecting information to understand and prevent against similar future attacks.

Concepts will be re-enforced by practical work utilizing current software and security techniques.
Prerequisite(s): CR4100, CR4105, CR4111

CR4220 - Incident Response
Today, many organizations are concerned about data breaches that occur due to targeted cyberattacks, malware campaigns, zero-day vulnerabilities, and ransomware attacks. This course addresses various underlying principles and techniques for detecting and responding to both current and emerging cybersecurity threats. Students will learn how to handle various types of incidents, risk assessment methodologies, and the assorted laws and policies related to incident handling. After completing the course, students will be able to use technical incident response techniques, create incident handling and response policies, and deal with different types of security issues and threats such as malware, email security, network security, endpoint, web application security, cloud security, and insider threat-related incidents. In addition, students will explore computer forensics and its role in handling and responding to incidents. Also covered are incident response teams, incident reporting methods, threat hunting, the kill chain, modern AI applications for incident handling, and incident recovery techniques.
Prerequisite(s): CR4100, CR4105, CR4111

CR4305 - Defensive/Offensive Strategies II

The most damaging incidents occur when organizations lose control of information and when they must make critical decisions based on finite intelligence while also focusing on limiting damage. This course is the second of two courses that focus on defensive and offensive strategies and will continue from where Defensive/Offensive Strategies I ended.

Emphasis will be placed on gaining practical knowledge of how to protect and defend an organization. Common attacks and techniques will be explored, with the inclusion of a thorough examination and use of the popular tools used by attackers, and how such attacks can be carried out using ordinary and readily available resources.

Prerequisite(s): CR4215

CR4310 - Applied Cybersecurity Project
This project course enables students to demonstrate the application of knowledge and skills developed throughout their program of studies. Students taking this course will work in teams on a project, under the supervision of a faculty supervisor, and will perform the following:

a. an in-depth analysis of a problem that requires a cybersecurity infrastructure solution
b. a design of the problem solution
c. implementation of the problem solution
d. presentation of their solution

The focus of this course is on presenting a clear concise solution with brief supporting documentation. This project can be one from industry or one assigned by the College. If it is an industry driven project, prior faculty approval must be provided to ensure it meets the scope, depth and focus required to meet the course outcomes.

Prerequisite(s): CR4215, CR4200, CR4205, CR4210

CS2311 - Research Methods and Statistics
This is an introductory course intended to cover general research reading and writing found in published research along with an introduction to the basic principles of quantitative statistics commonly encountered in the health care environment. The overall intent is to help students find and begin to understand health research literature, begin to perform and interpret descriptive statistics, and develop confidence in the interpretation of quantitative research. The course has two main goals: to help students make sense of the research they can be expected to encounter in their professional practice, and to develop a deeper understanding of the commonly encountered descriptive statistics within the clinical environment.

CS2500 - Project Management
This course focuses on planning projects and on acquiring and utilizing the resources necessary to complete these projects. Students use project management and budgeting software to apply planning and management principles to a particular project.

CS2630 - Wilderness Survival
This course is designed to teach the student the necessary skills required to travel and survive in a wilderness setting. It includes practical and theoretical information on wilderness survival basics, trip planning and management, emergency survival skills and wilderness hazards. Students will successfully complete a 3-day field practical simulating a wilderness emergency scenario.

Completion of Wilderness Remote First Aid Certification is required prior to taking this course.
Prerequisite(s): SU1150

CT2300 - Applied Programming
This is a course designed to introduce the technology student to the concepts of problem solving using computer programming. The course will be taught using a high level language such as C or C++. Students will write programs to solve problems within their related disciplines and will learn the concepts of troubleshooting and problem solving. The course covers the following areas: structured programming concepts, data types, decision statements, loop and iteration procedures, Input/Output procedures, and files.
Prerequisite(s): MA1101 or MA1220 or CE1140

CT2530 - POSIX Operating Systems
The course introduces learners to the fundamentals of operating systems including process, memory, I/O management, file system and virtualization. Examples will be taken from UNIX. C programming language is overviewed as well as shell scripts.
Prerequisite(s): CP1340
Co-requisite(s): CE1210

CY1010 - Intro to Mental Health Issues
This course introduces students to the various aspects of mental health and encourages steps that can be taken to promote and maintain positive mental health. It explores what mental illness has meant across time and cultures, examines the major groups of mental illnesses, and gives learners a chance to understand what their perceptions of mental illness are by addressing the concept of stigma.

CY1011 - Intro to Child & Youth Care
This course is an introductory course to the field of child and youth care. Students will explore the professional tasks of a child and youth care practitioner and the challenges as well as the rewards of being a member of this profession. An overview of the needs of children and youth, the types of agencies providing service, governing legislation, professional roles, and future trends and issues will be studied.

CY1041 - Mental Health & Addictions
Students will be introduced to adolescent development and other risk and protective factors associated with substance and mental health problems in youth. They will learn to identify substance use, mental health issues and concurrent disorders in youth and to apply appropriate treatment approaches effective for youth with substance and

mental health problems.
Prerequisite(s): PS1140, PS1145, LD2220

DB2100 - Intro to Disability Studies
This course is designed to provide students with an overview of the history of disability, as well as an understanding of current human rights legislation, which provides a context and a value base for students to explore the field and refine a personal value system. The course also provides a general understanding of various types of disabilities, and allows students to explore the types of support that may be needed by individuals and families, as well as the various roles they may choose to take in order to facilitate inclusion and citizenship of persons with disabilities.

DB2110 - Disability Studies
This course explores many of the issues and challenges which are faced by persons with disabilities and their families as they attempt to participate in their communities as equal citizens. Students will analyze the issues, explore alternatives, and develop a vision of the changes needed for full participation. Furthermore, students will examine strategies which can be used in building inclusive communities.

Prerequisite(s): DB2100

DE1110 - Applied Research
The course is designed to provide a good understanding of a model for definition, analysis, and solution of technical problems; and to develop the student's ability to (i) apply diverse methods and strategies in project analysis, (ii) prepare and deliver effective oral technical presentations, and (iii) define and plan a major applied research project.
Prerequisite(s): CM1400, CM1401

DE1200 - Operations Research
This introductory course is designed to provide basic understanding of certain concepts of operations research and the role that these analyses play in decision making.
Prerequisite(s): MA1101

DE2350 - Project Management
This is an introductory course that provides the student with a basic foundation in the concepts, tools and techniques of formal project management.

DE3110 - Project Controls
This course analyzes the principles of Project Controls by bringing together all of its major components. It covers the control of projects from project conception to commission. Specifically it incorporates cost engineering, total cost management, cost estimating, planning and scheduling, and cost control. This course is intended to demonstrate how good cost controls afford a company influence over cash flows and profits.
Prerequisite(s): DE2350

DE3300 - Information Systems Design
This course covers the application of computer information systems to industrial engineering problems, with particular emphasis on computer network resource management, database management and application software.

DE3505 - Decision Making in Engineering
This course covers the role of decision making in engineering as an integral part of the broader topic of project management. This course is an extension of earlier courses where skills in information management are introduced. The lectures cover some theories and tools used in decision making while assignments and a project will be used to apply these tools in practice.

DM1200 - Document Production I •
This course includes keyboarding, file management and basic document formatting. Keyboarding speed on unseen straight copy material is developed using three (3) minute timings. Students will use word processing software to produce the following documents: notices, announcements, signage, basic correspondence, basic tables, and basic reports. Students will also use presentation software to prepare basic presentations.

DM1210 - Document Production II •
This course develops keyboarding speed and accuracy. Keyboarding speed on straight copy material is developed using five (5) minute timings. This course further develops proficiency in document production using intermediate word processing applications and presentation applications. Students will also apply skills in the production of intermediate business correspondence, tables, forms, reports, and presentations, and reinforce their skills in file management.
Prerequisite(s): DM1200

DM1300 - Transcription •
This course introduces skills in machine transcription and/or using transcription software and reinforces grammar and punctuation skills. Emphasis is placed on applying proofreading and language skills: grammar, punctuation, and spelling. Decision-making skills are introduced through the transcription of basic business documents.
Prerequisite(s): DM1200, CM1100

DM1311 - Legal Transcription I
This course develops competency in transcribing documents and using transcription software. Emphasis is placed on transcription accuracy and on grammar, punctuation, and word usage competency. Students' decision-making skills are enhanced through the transcription of legal documents for general legal procedures, adult criminal matters, civil litigation, and incorporation.
Prerequisite(s): DM1300

DM1400 - Medical Transcription I •
This course introduces the student to the use of transcription and word processing software to prepare accurate medical reports. Focus is placed on the correct use of medical vocabulary to edit for clarity, conciseness, and accuracy while applying industry standards in health documentation. Development of a personal reference library will enable the student to apply advanced decision making skills.
Prerequisite(s): DM1300, DM1210
Co-requisite(s): TM1100

DM1405 - Medical Transcription II •
This course further develops the ability of students to transcribe medical documentation, correspondence, and specialized reports accurately and efficiently for a variety of medical specialties. Transcription drills will be used to enhance proficiency in medical transcription with speed and accuracy.
Prerequisite(s): DM1400, TM1100
Co-requisite(s): TM2100

DM2200 - Document Production III •
This course combines keyboarding development, document production, word processing, and presentation software to improve proficiency in document production. Keyboarding speed on unseen straight copy material is developed using five minutes timings. Students will reinforce their skills in the production of advanced business correspondence, tables, reports, specialized business documents, and presentations.
Prerequisite(s): DM1210

DM2220 - Legal Document Production I
This course combines keyboarding development, word processing concepts, and legal document processing for general legal procedures, adult criminal procedures, civil litigation, and incorporation. Keyboarding skills are developed for five-minute timings with an emphasis on accuracy.

This course teaches students the format and function of various legal and business documents including correspondence, memoranda, accounts, contracts, court documents, and corporate papers. Documents are produced with speed, efficiency and accuracy to create a precedent folder to use as a guide to legal documentation in both the classroom and the workplace.
Prerequisite(s): DM1210

DM2240 - Document Production IV •
This course combines keyboarding development and document formatting using a project/simulation

approach. Keyboarding speed is developed using five (5) minute timings. Students will be expected to develop and use critical thinking and decision-making skills, and to process and produce documents at an advanced level using Microsoft Office. Students will also perform tasks that require the integration of various software packages i.e. word processing, spreadsheets, presentations, electronic mail and calendar.
Prerequisite(s): DM2200, CP2310

DM2421 - Legal Transcription II
This course increases students' transcription competency by building on concepts learning in Legal Transcription I. Emphasis is placed on accuracy and speed in the transcription of business correspondence and legal documents. Decision-making skills are refined through transcription of legal documents including real estate, wills and estates, and family law.
Prerequisite(s): DM1311

DM3251 - Legal Document Production II
This course builds on the basic legal format learned in Legal Document Production I. Students are introduced to documents required when handling real estate transactions, youth criminal matters, wills and estates and family law matters. Using a case approach, students follow and interpret instructions to produce documents. Keyboarding skills are further developed for five-minute timings with emphasis on speed and accuracy. Students continue to develop a precedent folder for use in the classroom and the workplace.
Prerequisite(s): DM2220

DP1110 - Digital Systems I (Logic)
This course introduces learners to the field of digital electronics. They will be taught design and diagnosis techniques applicable to digital electronics.
Prerequisite(s): ET1101 or ET1141
Co-requisite(s): ET1146 (ESET program only)

DP1310 - Introduction to PLCs
This is an introductory course in programmable logic controllers (PLC) covering the fundamental concepts of digital, numbering systems, logic, gates, circuits, simplification, arithmetic elements, latches, flip-flops, counters, the components in a typical PLC system, configuring, addressing, and programming. The laboratory component will develop understanding and skills related to circuit construction & operation and ladder logic programming & troubleshooting.
Prerequisite(s): ET1280

DP1840 - Motors, Generators and Starting Systems

This course will give the student an overview of the principles of AC and DC motors. The student will be able to differentiate between AC/DC motors. AC/DC generators and alternator theory will also be covered, including construction and maintenance of engine starters (electrical). The inspection and servicing procedures for starting systems will also be covered in this course.

DP2110 - Digital Systems II (Interfacing)
This course provides the student with knowledge of the hardware and software associated with digital systems and interfacing requirements for communication from a PC to external environments. Advanced FPGA technologies will be used to interface hardware devices. Interfacing using pneumatics will be used to expand the knowledge of interfacing from electronics to mechatronics.
Prerequisite(s): DP1110, CT2300 or CP1270

DP2120 - Digital Systems II (Interfacing)
This course provides the student with knowledge of the hardware and software associated with digital systems and interfacing requirements for communication from a PC to external environments. Advanced FPGA technologies will be used to interface hardware devices. Interfacing using pneumatics will be used to expand the knowledge of interfacing from electronics to mechatronics.
Prerequisite(s): DP1110, CT2300 or CP1270

DP2435 - Digital Systems II
This course provides the student with knowledge of the hardware associated with digital systems and interfacing requirements for communication from a PC to external environments. Interfacing to pneumatic systems will also be introduced.
Prerequisite(s): DP1110, AE1265

DP2540 - Advanced PLCs
This is an advanced course in programmable logic controllers (PLC) covering timers, counters, data manipulation, comparison, conversion, arithmetic instructions, word logic instructions, shift registers, rotate registers, sequencers, and analog inputs and outputs. The laboratory component will further develop and strengthen the understanding and skills related to circuit construction & operation and ladder logic programming & troubleshooting.
Prerequisite(s): DP1310

DP3110 - PLC
This course introduces the learner to the general concepts and programming techniques for digital, analog and peer to peer communications associated with programmable logic controllers (PLC) used in the instrumentation applications.
Prerequisite(s): DP1110, CI1360
Co-requisite(s): CE2810

DP3200 - Embedded Controller Applications
The course will reveal why microcontrollers exist in so many products today. It explains the basics in microcontroller design through actual applications and will describe the differences between microcontrollers and microprocessors. Instruction is given in different techniques for making the best use of the microcontrollers' resources. Hands-on experience is provided in the lab environment.
Prerequisite(s): CT2300 or CP1250 or CP1270, DP2410 or DP2110 or DP2120

DR1220 - Engineering Drawing
Through participation in this course, students will acquire the fundamentals of using Revit to produce a partial set of wood-frame construction residential house plans (floor plans, main section, and front and side elevations). Students will also learn Part 9 of the National Building Code of Canada to enable them to design a basic wood-frame structure.
Prerequisite(s): EG1110, EG1430

DR1250 - CADD Drawings
This course is a continuation of the DR1220 course and will build upon the skills learned in the DR1220 course. Through participation through this course, learners will acquire skills in the use of Revit and Civil 3D by producing working drawings for small commercial building and site development. This will be accomplished through expanding on topics covered in DR1220 and covering topics specific to structural steel and concrete structures, as well as site plans and parcel development.
Prerequisite(s): DR1220

DR1405 - Architectural Technology
This course is an introduction to the Architectural Engineering Technology with emphasis placed on wood frame construction. Many concepts affecting building design and construction are discussed and how they are applied to construction documents.

DR1770 - Basic Drawing and Sketching for NDT
This course provides an introduction to orthographic projections sketching, sectional and primary views. It also introduces the techniques of plan reading and drawing. This course provides training for a NDT Technician Certification. This will include both in class and practical training.

DR2150 - Architectural Drawings
This course is an introduction to Architectural Drawing conventions and applications which focuses on the rationale used in producing the technical drawings needed for conventional wood-frame construction. Emphasis is placed on general drawings such as floor plans and elevations in this course.
Prerequisite(s): EG1255, DR1405

DR2320 - Eng. Graphics for Electrical
This course covers the more advanced commands used in the AutoCAD drafting package, with application examples from across the electrical engineering technology curriculum that require the use of AutoCAD.
Prerequisite(s): EG1170

DR2350 - Engineering Graphics for Instrumentation
This course follows the Engineering Graphics course completed in the first year of Engineering Technology. It covers the more advanced commands used in the AutoCAD drafting package, with application examples from across the Instrumentation and Controls Engineering Technology curriculum that require the use of AutoCAD.
Prerequisite(s): EG1430

DR3110 - Working Drawings I
This course is an introduction to building construction techniques, architectural working drawings and detailing. It is designed to enable the student to become involved in the creation and proper use of working drawings. Course material takes the form of lectures, projects, and analysis of such projects.
Prerequisite(s): EG1255, DR2150, BU2410
Co-requisite(s): BU2300, BU2411

DR3111 - Working Drawings II
This is a course dealing with renovation/retrofit projects and an introduction to small load bearing masonry construction. It is designed to enable the student to become a functional part of a group involved in the creation and proper use of working drawings. Course material takes the form of lectures, group projects, and group analysis of such projects.
Prerequisite(s): DR3110, BU2300, BU2411
Co-requisite(s): BU2301

DR3310 - CAD/CAM
This is an introductory course in manufacturing technology. In this course, learners are introduced to fundamentals of computer-aided design and manufacturing (CAD/CAM). Emphasis is placed on theory and practice in the metal fabrication industry through computerized numerical control (CNC) shape cutting.
Prerequisite(s): EG1310, WD1450

DR3720 - Tool Design I
This course is an introduction to tool design and tool making practices. It will provide the student with the basic knowledge required to design simple types of tooling required within the Manufacturing industry.
Prerequisite(s): CF1120, TM1320

DR3721 - Tool Design II
The continuation of DR3720 Tool Design I, this course will expand on tool designing methods used in the sheet metal and plastic industries. The course will allow students to create tool design drawings for sheet metal and plastic components. Hands-on lab application will use a Vacuum Former, Injection Molder and Rapid Prototyper.
Prerequisite(s): DR3720, TM1320

DR3810 - Advanced Processes
This is an advanced course using equipment available at the Manufacturing Technology Centre. The course uses the Project Engineering approach to manage all aspects of the production run for a assembled component. Production planning, production scheduling, Machine allocation, Documentation control and Quality Control are used to deliver a hands-on, project-based team approach to emulate working environment similar to industry.
Prerequisite(s): SP1731
Co-requisite(s): DR3720

DR4111 - Working Drawings IV
This is the fourth in a series of working drawing courses. The course uses the same building as in Working Drawings III. Students are required to solve technical problems based on theory and knowledge gained in other courses. This

course focuses on details of technical design problems not incorporated in previous working drawing courses.
Prerequisite(s): DR4120

DR4120 - Working Drawings III
This is the third course in a series of working drawing courses. The focus is on larger structures with a variety of building envelopes including glass and metal curtain walls and composite metal panel systems. Students are required to solve technical problems based on theory and knowledge gained in other courses. More emphasis is placed on details than in other courses.
Prerequisite(s): DR3111, BU2301, BU2411, EG2255

DT1100 - Drone Technology
In this course, students will explore current and future technology, uses and the legal and ethical ramifications of using unmanned aerial vehicles.

EC1110 - Microeconomics •
The course objectives are to develop an understanding of the economic institutions and environment under a market system of exchange and the response made to decisions arrived at by individuals, businesses, and governments. Specifically, the course examines business organizations and why the attitudes of buyers and sellers determine the prices, quantities, and distribution of the output of goods and services.

EC1125 - Economic Fundamentals
Students will be introduced to fundamental micro and macroeconomic theory with a focus on Canadian issues. Microeconomic topics include scarcity, demand, supply, and markets. Macroeconomic topics include national output, inflation, unemployment, economic policies, and international trade. Students will be prepared to interpret and communicate economic information.

EC1140 - Microeconomics
This is a course in Microeconomics that is intended to prepare the student to take additional courses in economics which make use of Microeconomics tools of analysis. In addition, the subject matter of this course will help in understanding some of the concepts, problems, and arguments that are presented in other courses or in the public press. When new projects or changes are announced by the government or private sector, you will have a set of tools of analysis that will allow you to be more informed as to what is involved in the decision making process; your tool kit will allow you to see some implications that may not be readily apparent to the general public. This will place you in a better position to ask relevant questions, whether you like or dislike the initiative. The course will cover the following topics: Scarcity and Opportunity Cost, Demand and Supply, Elasticity, Household Demand, Marginal Utility, Indifference Curves, Production Functions, Short-Run and Long-Run Cost Functions, Perfect competition in the short-run and in the long-run monopoly.
Prerequisite(s): Preferably High School Level III Academic Mathematics or Advanced Mathematics and acceptable score on Mathematics Placement Test or MUN Mathematics 1090.

EC1150 - Introduction to Macroeconomics
This course is designed to introduce students to macroeconomics. Topics that will be covered include national income accounting, aggregate income analysis, money, banking and foreign trade. The course examines the physical and monetary aspects of international trade, money, banking and monetary policy; the gross national product, national expenditure components, business cycles and fiscal policy. The emphasis is on Canadian examples where possible. Transferable to MUN Economics 2020.
Prerequisite(s): High School Level III Academic Mathematics or Advanced Mathematics and acceptable score on Mathematics Placement Test or MUN Mathematics 1090.

EC1210 - Macroeconomics •
This course is designed to introduce students to the principles of macroeconomics, including the physical and monetary aspects of international trade; money, banking, and monetary policy; the gross national product, national expenditure components, business cycles, and fiscal policy. The emphasis is on a problem solving approach and Canadian examples where this is possible.

EC1700 - Economics

This course covers the basic principles of engineering economy with application to engineering economic decision making. The various methods for economic analysis of alternatives are investigated as well as depreciation methods and income tax consequences.
Prerequisite(s): MA1101

EC1750 - Construction Economics
This course will give the learner the knowledge necessary to make decisions based on economic alternatives. It will introduce the learner to the fundamentals of cash flow equivalences and methods of comparison for different alternatives. It will take into account depreciation and the effect of inflation on the evaluation of alternatives. The learner will also be able to compare public sector projects based on benefit-cost analysis.
Prerequisite(s): MA1101

EE1180 - Curriculum I
This course offers an in-depth exploration of play as an integral component of quality early learning and child care programs. Students will learn about the theory, function and value of play. There will be an emphasis on developing and refining basic skills that help the adult engage in quality play experiences with children. Students will explore play with sand, water, blocks, and manipulatives. Students will also be introduced to the management of time, routines and transitions to ensure quality play experiences for children.

EE1181 - Curriculum II •
The student will develop knowledge of the major theoretical models and approaches currently being used in early learning and child care curriculum. In accordance with provincial standards, the students will develop a working knowledge of the emergent curriculum approach. Students will learn to develop and maintain a developmentally appropriate learning environment as the basis of the emergent curriculum. The student will develop basic skills in the planning, facilitation, documentation and reflection of experiences within an emergent curriculum. A child-centred, active learning approach to curriculum is emphasised. Throughout this course the unique learning styles, individual differences and interests among children will be emphasized and used as a basis for individualizing the curriculum.
Prerequisite(s): EE1180

EE1290 - Positive Behaviour Guidance •
This course provides a foundation for understanding and guiding children's behaviour. Students will learn the principles of guidance and strategies needed to guide behaviour in positive ways. The focus will be on understanding behaviour and implementing techniques that foster positive relationships and self-esteem, and create opportunities for learning.

EE1340 - Child Development I •
This is an introductory course in child development. Students will learn terminology related to child development as a foundation for advanced exploration of developmental stages in childhood. Students will also explore the basic principles of child development and learning. An introduction to the concept of child observation is provided as a foundational concept for the study and practice of early childhood education.

EE1341 - Child Development II •
This is a course in child development that focuses on increasing students' understanding of developmental milestones and growth patterns in toddlerhood and early childhood (2 to 6 years of age).
Prerequisite(s): EE1340

EE1360 - Observation •
The early childhood education student must be committed to the goal of supporting and enhancing children's development. Becoming a skilled observer is a reliable way to collect valid information about each child's skills, abilities, and their interests and needs. Students will develop knowledge and skills to purposefully observe, record, and interpret child behaviour. Through practical application of a variety of methods to gather observational data, the student's knowledge of children's development, interests, and needs will be enhanced. Students will be able to select appropriate observation methods, interpret and analyze their findings, and apply this knowledge to planning a developmentally appropriate program.
Prerequisite(s): EE1340

EE1420 - Creative Experiences I •
This introductory course will provide students with a foundation for creating early learning and child care curriculum. Students will learn about developmentally appropriate experiences in creativity, art, literature and dramatic play. Using a hands-on, participatory approach, students will be provided with opportunities to explore and experiment with related mediums and materials. Students will cultivate a personal sense of wonder and inquiry. The goal is for the student to develop practical play skills that can be applied throughout the early learning environment.

EE1421 - Creative Experiences II •
This introductory course will provide students with a foundation for creating early learning and child care curriculum. Students will learn about developmentally appropriate experiences in music, movement, outdoor play, science, and numeracy. Using a hands-on, participatory approach, students will be provided with opportunities to explore and experiment with music, movement, nature, science, and numeracy. Students will cultivate a personal sense of wonder and inquiry. The goal is for the student to develop practical play skills that can be applied throughout the early learning environment.

EE1440 - Family Studies I •
This introductory course in family studies provides students with a basic understanding of the modern Canadian family as a foundation for learning about partnerships between parents and early childhood educators. It stresses the significance of positive relationships. Students will become familiar with strategies that promote parent-educator partnerships and communication to create and maintain family-centered and culturally sensitive early childhood education.

EE1441 - Family Studies II •
Effective responses to families' needs require an understanding of the demands and stresses on families. Students will learn about a number of family stressors, methods families use to cope, and supports that may be provided for children and families.
Prerequisite(s): EE1440

EE1480 - Inclusion I •
This is an introductory course on the philosophy, principles, and appropriate practices of inclusion in early childhood programs. Students will learn about the characteristics of inclusive environments, the roles of those involved, and the use of Individual Support Service Plans.
Prerequisite(s): EE1360, EE1340

EE1481 - Inclusion II •
This course will discuss variations in developmental ability as a foundation for developing and implementing strategies for supporting all children in an inclusive early learning environment. Students will have an opportunity to learn about atypical or delayed cognitive, speech/language, physical/motor, sensory, and social/emotional development as well as health impairments. The causes, red flags and developmental impact of developmental deviations will be explored. There is a focus on identifying strategies that the early childhood educator can use to create developmentally appropriate learning environments, activities and materials.
Prerequisite(s): EE1480, EE1181, EE1341

EE1870 - Community Resources •
Strong connections with the community are essential to quality early learning and child care programs. Students will reflect on the importance of community to the health and wellbeing of children and their families. The concept of empowering families to utilize community supports is introduced. Students will identify a broad range of community resources, with opportunities for in-depth examination of specific community resources such as health care professionals, family resource centres, and non-profit organizations. Students will develop the competencies necessary to utilize these resources to support their work as early childhood educators.

EE2040 - Family Child Care •
This course is designed to equip students with the knowledge and skills necessary for providing child care in a home-based setting that may include a mixed aged group of children. Through the lens of family child care, students will learn about child development and well-being, health, safety and nutrition, guiding children's behaviour, self-care and wellness, as well as the components of running a home-based business. In-depth discussions and practical

assignments will provide opportunities for students to become competent in providing high quality family child care.

EE2180 - Curriculum III •
This advanced curriculum course provides students with the opportunity to participate in an in-depth exploration of approaches to curriculum. Students will be able to explain the primary theories related to development and learning, as well as advanced curriculum models. Students will have an opportunity to relate this knowledge to advanced planning, facilitation and documentation strategies, including webbing, the Project Approach, and learning stories.
Prerequisite(s): EE1181

EE2255 - Advanced Behaviour Guidance
This course offers a more in-depth exploration of guidance theory and its application to the study of children with emotional and behavioural challenges. Students will learn about possible causes and resulting challenges for children. Students will develop practical skills in the prevention and management of challenging behaviour in a team approach. The goal is to develop the skills and an inventory of resources so that educators are able to effectively support children with behavioural challenges.
Prerequisite(s): EE1290; EE1360

EE2260 - Introduction to Child Care Administration •
This is an introductory course in early childhood education program administration. The aim of this course is to provide an overview of administrative principles and procedures needed to successfully operate high quality, inclusive early childhood education programs. Knowledge of provincial legislation and regulations, and factors which contribute to quality provide the foundation for developing practical skills related to governance, development and evaluation of quality programs, financial and staff management, menu planning, and working in partnership with parents and the community.
Prerequisite(s): EE2180

EE2340 - Child Development III •
This is an advanced course in child development. Students will examine primary theories related to child development and learning as a foundation for advanced curriculum planning. Students will have an opportunity to examine the sequential progression of primary developmental skills from birth to age 12 years. The focus is on developing a working knowledge of the theories, principles, and stages of child development for application in early learning and child care curriculum.
Prerequisite(s): EE1341

EE2350 - Professional Practice •
This course bridges the student to the profession of Early Childhood Education. Students will examine the roots of the early childhood education field as a basis for the study of the current state of early childhood education in Newfoundland and Labrador, Canada and internationally. Students will develop a strong sense of professionalism as an early childhood educator. The goal is to enhance the student's capacity to envision and advocate for advances in the sector as an early childhood educator.

EE2470 - Infant Development & Care •
This is an introductory course in infant care. It focuses on the unique needs of infants and how these needs can be met through a developmentally appropriate approach to programming and responsive care during the first two years of life. This approach takes into consideration the developmental needs and individual and cultural differences among infants, as well as the critical role of the infant-educator relationship. Particular attention is paid to the various roles of the educator in the design, planning, implementation, and evaluation of a developmentally appropriate physical, social-emotional, and cognitive environment for infants. The importance of establishing positive relationships and open communication patterns with parents will be highlighted in the course.
Prerequisite(s): EE2340, EE1360

EE2500 - School-Age Development & Care •
This is an introductory course in school-age care. Students will develop knowledge and skills for working with children ages five through twelve. The course focuses on the unique needs of school-age children and how these needs

are met through a developmentally appropriate approach to programming. Students learn about child development patterns and milestones in middle childhood and early adolescence as a foundation for understanding the principles of inclusive school-age care. Particular attention is paid to the various roles of the early childhood educator in the design, planning, implementation, and evaluation of developmentally appropriate physical, social-emotional, and cognitive environments for school-age children.
Prerequisite(s): EE1341, EE1181

EE3010 - Leadership •
This course explores team building and leadership within the field of early childhood education (ECE). Students will gain a thorough understanding of the responsibilities of the administrator in addition to skills that are necessary to lead in early learning and child care environments.

EE3015 - Relationship Building •
In this course, students will discuss strategies to build trusting relationships by engaging family, culture, traditions and community into the program. In addition, ethical approaches in the workplace will be addressed.

EE3020 - Culture & Diversity •
Students enrolled in this course will develop an in-depth understanding and respect for culture, diversity, and inclusion. Throughout this course, students will gain knowledge, skills, and tools that will support them in promoting and supporting culture, diversity, and inclusive practices within child care environments. The knowledge, skills, and tools presented in this course will assist early childhood educators create a more inclusive and respectful environment for children, families, and employees. In addition, issues such as access, equality, and social justice will be explored.

EE3025 - Mentoring in ECE •
Mentorship within the field of early childhood education is defined as a reciprocal, relationship-based and process-oriented professional learning experience between two individuals. The purpose of the relationship is to learn and improve professional practice through reflection, self-directed learning and collaboration. This course will explore aspects of mentorship with a particular emphasis on provincial legislation, early childhood learning framework, and curriculum design and implementation.

EE3030 - Governance in ECE •
Governance in early childhood education is the establishment of policies and continuous monitoring of their proper implementation by the licensee, administrator, and/or board of directors. In this course, students will explore the role of government, social policies relating to child care, program organization, and the role of licensee and administrator as they relate to accountability, decision making, risk management, and supervision.

EE3035 - Financial Management in ECE •
This course provides students with an overview of the financial responsibilities of an administrator in early child care environments. Combining theory with hands-on learning, students will learn about the importance of financial management, and will have the opportunity to work on financial management tasks such as budgeting, record keeping, and payroll.

EE3040 - Human Resources in ECE •
Human resource management in the early childhood education field includes hiring and mentoring early childhood educators so that they become more valuable to the organization. This course explores many aspects of human resource management, including recruitment, employee selection, facilitation, professional development, retention, and performance appraisals.

EE3045 - Conflict Resolution •
The goal of this course is to provide administrators with practical conflict resolution skills. Students will learn techniques and strategies that will help resolve conflict. Understanding and utilizing these techniques and strategies will help administrators manage types of conflict in the early learning environment.

EE3050 - Current & Emerging Trends •
In this course, students will examine current and emerging trends affecting young children, families, and the

profession. Students will explore professionalization, emerging curriculum trends, the use and effects of technology in the field, programming, shifting demographics, government initiatives, and the benefits and challenges of assessment.

EE3055 - Reflective Practice in ECE •
This course is intended for students to reflect on previous learning and explore opportunities for further studies. Students will select and complete an independent learning project on a relevant topic of interest. Examples could include (but are not limited to) the development of a portfolio, addressing a gap that currently exists in the early childhood education workplace, or in-depth research of a topic covered in a previous course. This course is required to be taken in your last semester.

EE3100 - Foundations of Inclusion •
In this course, students will delve into critical aspects of fostering an inclusive environment in Canada, with a focus on Newfoundland and Labrador. Students will develop necessary skills to apply prevention strategies which provide the framework for inclusive practices. Students will become equipped with practical tools to promote supportive learning while accommodating the diversity of all learners.?

EE3105 - Working with Diverse Families •
This course explores essential aspects of cultivating meaningful connections with families in diverse contexts. Students will become equipped with skills to create an inclusive, empathetic, and collaborative approach when working with families. They will develop ways to establish meaningful connections by applying the principles of family-educator partnerships, building strong relationships for the benefit of the child.

EE3110 - Adv. Health, Safety & Nutrition •
This comprehensive course focuses on advanced concepts in health, safety, and nutrition, with an emphasis on children with special health care needs. Students will gain in-depth knowledge and practical skills related to providing optimal care for children requiring additional supports, addressing their unique challenges, and fostering a positive and inclusive environment.

EE3115 - Common Support Needs •
This course is designed to provide a comprehensive analysis of common support needs commonly identified in early learning and child care environments, and to equip students with effective strategies for supporting these diverse needs. By exploring key diversities, students will gain the competencies required to create inclusive environments that foster the optimal development of all children.
Co-requisite(s): EE3100, EE3110, EE3105 *These courses may have been completed as prerequisites

EE3120 - Trauma and Loss •
This course provides a holistic examination of trauma and loss, focusing on practical applications for those working with children in early learning and child care settings. Students will develop enhanced comprehension of the multifaceted effects of trauma and will cultivate approaches to support the mental health and well-being of children in their care.
Co-requisite(s): EE3100, EE3105, EE3110 *These courses may have been completed as prerequisites

EE3200 - Inclusive Program Planning •
This course empowers early childhood educators with the ability to plan effective curriculum for children with support needs. Through a combination of theory and practical applications, students will gain the confidence to create inclusive, responsive, and developmentally appropriate learning experiences for all children in early learning and child care settings.
Prerequisite(s): EE3100, EE3105, EE3110, EE3115, EE3120

EE3205 - Inclusive Environments •
This course explores the influence of environment in shaping children's learning experiences. With a focus on Universal Design for Learning (UDL), practical approaches are applied that empower early childhood educators to create inclusive spaces where children can thrive, regardless of their learning style.
Prerequisite(s): EE3100, EE3105, EE3110, EE3115, EE3120

EE3210 - Challenging Behaviors •

This course offers a comprehensive exploration of early childhood development with a focus on addressing challenging behaviours through specific models and approaches. Students will develop skills to support specific challenges to create a nurturing and supportive environment, in addition to implementing positive behaviour plans.

Prerequisite(s): EE3100, EE3105, EE3110, EE3115, EE3120

EE3215 - Assessment in Early Learning •
This course is designed to provide early childhood educators with the knowledge and skills to implement effective assessment strategies. Students will apply assessment methods customized for early childhood, ensuring that each child's unique strengths and development areas are addressed. From observational techniques to age-appropriate tools, students will enhance their assessment practices that inform individualized care and learning plans.
Prerequisite(s): EE3100, EE3105, EE3110, EE3115, EE3120
Co-requisite(s): EE3200, EE3205, EE3210 *These courses may have been completed as prerequisites

EE4005 - Play With(in) Nature •
Outdoor play is an integral part of early learning programs. Through hands-on experiences and reflective practice students will explore pedagogical approaches to supporting outdoor experiences, such as risky and adventurous play and all-season, all-weather play. Topics will also include examining equity, inclusion, and sustainability in relation to outdoor play, place-based inquiry learning, and the role of documentation in supporting and extending child-nature connections and play.

EE4010 - Social Justice in ECE •
This course examines inequity through a social justice framework. Students will be introduced to critical theory, build an understanding of the ways power and privilege create and perpetuate inequality, and examine pedagogical and relational approaches to supporting and examining equity and justice in early childhood education (ECE) curriculum and practice. Ethics in relation to social justice will also be explored.

EE4015 - Pedagogical Documentation •
This course introduces pedagogical documentation as a tool for critical reflection, supporting intentionality in ECE practice, and making learning visible. Students will examine approaches to analyzing and making meaning of documentation, translating pedagogical documentation into curriculum making with colleagues, children, and families, and explore documentation as a tool for supporting relationship building, advocacy, and innovation in ECE.

EE4020 - Research in Early Childhood Education •
Interpreting, analyzing, and conducting research are integral to being a reflective educator. Through reading and evaluating research in the field of early childhood education, students will gain an understanding of the design and analysis process of research with an emphasis on qualitative methodologies. Validity, reliability, trustworthiness, ethics, and involving children in in research will also be covered. Students will begin to frame a research question and proposal.

EE4025 - Supporting Well-being and Belonging •

Well-being and belonging are essential to social-emotional development in the early years. This course examines factors that contribute to infant and child social-emotional wellness and the significance of using trauma-informed and anti-bias lenses in creating a sense of belonging. Students will gain insight on self-regulation, the relationship between physical literacy and emotional wellness, impacts of adverse experiences on children and families, and the role of responsive relationships. An emphasis is placed on designing, planning, and implementing environments that promote social-emotional wellness and belonging. Students will also develop strengths-based strategies and collaborative teaming practices to support the resilience and well-being of children and families.

EE4030 - Policy, Ethics, and Advocacy •
This course examines current political and theoretical perspectives in ECE (Early Childhood Education), and their influence on the sector. Topics include exploring global and local narratives in Early Childhood Education; discourses shaping conceptualizations of childhood, family, and ECE pedagogy and practice; and early childhood as spaces for reconceptualizing dominant discourse through the practice of democratic politics and approaches to ethical practice.

Advocacy will also be explored as a tool for community dialogue and for highlighting a localized vision of child care based on the values and perspectives of children, families, and early childhood educators.
Prerequisite(s): EE4010

EE4035 - Inclusion III •
The effectiveness of inclusive early childhood education (ECE) is dependent on building collaborative relationships within a child's community of care. Using principles of family-centered and culturally responsive practice, this course explores multiple perspectives of inclusion, assessment, and intervention in early childhood education. Students will also examine the significance and complexity of building partnerships with children, families, and other professionals to support meaningful participation, equity, and inclusion.

EE4040 - Indigenous Peoples and Education •
Framed by the *Truth and Reconciliation Commission of Canada (TRC): Calls to Action* and the *United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP)* this course examines Canada's colonial history and legacy, and approaches to engaging with these documents in early childhood education practice. Indigenous created media and resources will be explored to support educator professional learning and for developing culturally appropriate curriculum and practice. Students will also examine individual and collective responsibility for reconciliation *with* Indigenous children, families, colleagues, and community.
Prerequisite(s): EE4010

EE4045 - Educator as Researcher •
In this course students will carry out capstone project that may take the form of (though not limited to) action-based research or a pedagogical inquiry. Classes will be discussion based. Students will share their final project in a public presentation. This course should be completed in the student's final semester.
Prerequisite(s): EE4015, EE4020

EE4050 - Multiliteracies in ECE •
This course explores literacy beyond reading and writing, and includes the oral/auditory, visual, and gestural ways that meaning is created, communicated, and interpreted through play, the arts, curriculum, and classroom design. Through hands-on experiences and reflective practice, students will critically examine the role of multiple literacies in creating and interpreting meaning through creative expression, experimentation, and literacy-based experiences. Documentation and using Multiliteracies to support inquiry-based learning will also be touched on.

EG1110 - Engineering Graphics
This course focuses on basic engineering graphics principles and standards to effectively communicate technical graphical design and also provides the foundation for more advanced engineering graphics concepts.

Engineering graphics is the predominant means by which accurate information is communicated within industries pertinent to all engineering technology disciplines. From the simplest in-the-field sketch to the most advanced 3-D model, each may constitute a legal document.

EG1160 - Technical Graphics
This course focuses on basic engineering graphics principles and standards to effectively communicate technical graphical design and also provides the foundation for more advanced engineering graphics concepts. Engineering graphics is the predominant means by which accurate information is communicated within industries pertinent to all engineering technology disciplines. From the simplest in-the-field sketch, to the most advanced 3-D model, each may constitute a legal document.

EG1170 - Engineering Graphics & CAD
Engineering graphics is the predominant means by which accurate information is communicated within all engineering technology disciplines. This course focuses on basic engineering graphics principles and standards to effectively understand and communicate technical information, from the simplest in-the-field sketch to more advanced 2D drawings. In this course, students will learn traditional hand sketching techniques and receive an introduction to the fundamentals of Computer Aided Drafting software (AutoCAD). Using these skills, and their understanding of engineering graphics standards, students will create multi-view drawings, pictorial drawings, sectional view drawings, as well as primary auxiliary views.

EG1235 - Engineering Graphics & CAD
In this course, students will be introduced to the reading, understanding and production of engineering sketches and drawings in two dimensions. Focus will be on the production of drawings using standards from civil and mining engineering industries. Topics will include file management, converting sketches to engineering drawings, drawing setup, drawing construction and modification, scaling, creating dimensions, using area fills, symbol creation, drawing documentation and presentation. This course uses a current release of computer-aided design software commonly used in industry.

EG1255 - Architectural Graphics I
This course is the first in a series of Architectural Graphics courses designed to provide students with a greater knowledge of AutoCAD. It will build on the fundamentals of AutoCAD learned in EG1170 Engineering Graphics & CAD with a focus on Architectural Workings Drawings. This course will emphasise the importance of adhering to specific graphic standards and students will be required to create drawings that comply with the standards outlined in the Architectural Engineering Technology (AET) Office Manual. Finally, students will be introduced to 3D AutoCAD and will create isometric drawings.
Prerequisite(s): EG1170

EG1310 - Applied CAD
This is an applied CAD-based drafting course designed to provide learners with the ability to interpret and prepare mechanical and structural drawings which extend the principles presented in EG1110 and EG1430.
Prerequisite(s): EG1430

EG1315 - Architectural Graphics II
This course is an introduction to Building Information Modeling (BIM) concepts. Students will use 3D modelling techniques to incorporate building related information into a small residential wood frame model. Course will focus on modelling basics as students create, modify, and model residential construction assemblies.
Prerequisite(s): EG1255
Co-requisite(s): DR2150

EG1321 - Drawing Interpretation
This course is designed to provide the learners with the ability to interpret and prepare drawings used in specialized areas of mechanical engineering. Learners will prepare and interpret assembly, piping, welding drawings and P&ID.
Prerequisite(s): EG1110

EG1430 - AutoCAD Essentials
Computer Aided Drafting software is a tool that enables you to produce engineering drawings more accurately and with greater efficiency. It also facilitates the ability to share files with other software programs. This course is designed in a pedagogical format by presenting the fundamental concepts at the beginning and moving toward the more advanced and specialized features of AutoCAD. It is also designed with the understanding that the student has the engineering graphics fundamentals necessary to apply the AutoCAD software. Applications and examples have an inclination towards many different technology disciplines.
Prerequisite(s): EG1110

EG1435 - AutoCAD Essentials for GSET
Computer Aided Drafting software is a tool that enables you to produce engineering drawings more accurately and with greater efficiency. It also facilitates the ability to share files with other software programs. This course is designed in a pedagogical format by presenting the fundamental concepts at the beginning and moving toward the more advanced and specialized features of AutoCAD. This course is also designed to focus on Computer Aided Drafting (CAD) techniques for geomatics/surveying applications.

EG2120 - Applied Engineering Drafting

This course will cover drafting and design skills enabling students to design basic circuit components, apply them to circuit analysis and interpret blueprint drawings for Electronic System Engineering Technologists. Students will design a Printed Circuit Board using electronic CAD simulation software.

EG2255 - Architectural Graphics III
This course is a continuation of more complex Building Information Modeling (BIM) concepts. Students will use 3D design visualization to incorporate all building related information into multi-level models. From these modeling techniques, students will focus on the development of presentation graphics, working with shadows and sun studies, and completing simple photorealistic renderings.
Prerequisite(s): EG1315
Co-requisite(s): DR3110

EG2350 - Architectural Graphics IV
This is the fourth course in a series of Architectural Graphics courses that allow the student to explore advanced BIM topics. Students will customize features of BIM software to improve project efficiency. Students will explore advanced modeling techniques, overriding graphic views, 2D detailing, and preparing construction documentation for commercial applications. Students will also use advanced concepts and procedures in the presentation of animated drawings (walk-throughs) and virtual images which are used for client project visualization.
Prerequisite(s): EG2255
Co-requisite(s): DR3111

EL1150 - Introduction to Folklore
The role that tradition plays in communication, art and society will be discussed through an examination of folklore materials from Newfoundland and Labrador and the English-speaking world. Through assignments, students will identify and reflect on folklore in their own lives and the lives of others. Transferable to MUN Folklore 1000.

EL1320 - Folklore Studies
This course is an examination of the traditional cultures of Europe and North America with special reference to Newfoundland and Labrador. A selection of the following areas will be covered: settlement patterns, architecture, work and leisure patterns in the folk community, calendar customs, rites of passage, folk religion, folk medicine, language and folk culture, folk costume, foodways and folk art. Transferable to MUN Folklore 2401.
Prerequisite(s): Normally Folklore 1000: Introduction to Folklore is the prerequisite for this course; this can be waived with special permission of the head of the Folklore Department.

EL1360 - Introduction to Anthropology
This course is an introduction to the field of social and cultural anthropology. Taking a cross-cultural approach to the study of society and culture, the focus of this course will be on the global issues of ecology, technology, economy, politics, kinship and ideology. This course will also examine linguistic anthropology, but the emphasis will be on how we use language for human communication rather than on formal linguistics. We will consider how human societies go about solving some of the fundamental problems of human existence. How do we make a living? What forms of social organizations do we take part in and why? How do we think about the universe and our place in it? We will compare some of the social and cultural systems we have in our society with those found in other societies. In this manner we can hope to learn valuable lessons about how people from other cultures attempt to solve existential problems and at the same time see our own social and cultural formations in a new and more critical light. Transferable to MUN Anthropology 1031.

EL1420 - Introductory French I
This is an introductory course designed for students with little or no previous knowledge of French and for those who wish to review basic vocabulary and structure. The course uses mainly the present tense, but also includes an introduction to the past tense (passé composé with "avoir"). EL1420 has a 500-word vocabulary, and covers the most common situations of daily life. Transferable to MUN French 1500.
Prerequisite(s): None or up to Core French 3201

EL1430 - Introductory French II
This course teaches the use of past tenses and more advanced structures. Students begin to read short texts which are faithful to the original, to write longer compositions, and to explore more complex situations. Transferable to MUN French 1501.
Prerequisite(s): EL1420 or MUN French 1500 or French Immersion 3202

EL1440 - Introductory French III
In EL1440, it is assumed that students already have a knowledge of basic vocabulary, grammar and constructions of French, in particular the use of the present tense in regular and irregular verbs, and the use of past tenses. This course continues to practice those tenses, but concentrates on the forms and uses of the future, the conditional and the subjunctive tenses. Students are expected to achieve and maintain a high level of accuracy in spelling, grammar and pronunciation. The work of composition and intensive vocabulary building continues, and students are expected to engage in more advanced oral practice. Transferable to MUN French 1502.
Prerequisite(s): EL1430 or MUN French 1501 or Early French Immersion 3202

EL1530 - Fine Art Printing
Students will gain an understanding of the relationship between a digital photographic file and an electronic printer. Particular attention will be paid to the relationship of the file and a final presentation print.

EL2414 - Indigenous Peoples of North America
This course addresses the diversity and the commonalities of Indigenous Peoples experiences in North America. There are three main themes: definitions of Indigenous Peoples in the North American context (including a working definition of the "North American context"), contemporary and historical issues affecting Indigenous Peoples of North America (including land claims and modern treaties, political mobilization, reconciliation, representation of Indigenous Peoples), and a survey of North American Peoples with an emphasis on Newfoundland and Labrador. This course is transferable to MUN Anthropology 2414.

EN1110 - Soil Fundamentals

This is an introductory course in soil science and hydrogeology, designed specifically for the Environmental Engineering Technologist. This course exposes the students to the basic concepts of soil science, soil sampling and analysis, and soil classification. Students learn about soil types, soil properties, soil classification, and standard tests and procedures used to evaluate soil properties. Students learn how to conduct site and subsurface investigations through introductory concepts of hydrogeology where they learn to measure and calculate hydraulic conductivity, soil permeability, bore hole sampling, and elements of erosion control encompassing Darcy's Law. Emphasis is placed on an understanding of the occurrence and movement of groundwater in a variety of geologic settings and the effect of human activity on that movement. Other topics include types of aquifers, properties of porous media, groundwater flow, and pump testing of aquifers. The laboratory component of the course explores soil testing methods and analytical problems related to lecture topics.

EN1120 - Environmental Management
This course is environmental management for Geomatics/Surveying Engineering Technology Students. This course gives the student knowledge of how humans can live, develop, and properly use the earth's resources while understanding the many environmental issues. The solving of various environmental problems, identifying and discussing how related provincial and federal regulations apply as well as steps to improve and conserve our natural and urban environments, will form the bases of this course.

EN1210 - Geomatics I (Practical)

This course is designed to expose students to concepts of field navigation. This field-oriented course introduces students to practical navigational skills using map, compass, and GPS.

EN1220 - Industrial Hygiene
This course introduces the student to the fundamentals of Industrial Hygiene. It will provide the student with an understanding of the methods of recognition, evaluation, and control of health hazards involving toxic chemicals and dusts in the workplace. This course prepares students to apply Industrial Hygiene techniques to monitor air quality, and conduct Hazardous Materials Assessments in the Health, Safety and Environment (HSE) field.
Prerequisite(s): EN2321, EN1520

EN1230 - Geomatics II (GIS)
This course is designed to provide students with an overview of Remote Sensing and Geographic Information Systems

(GIS) technology. It is designed to introduce basic principles and skills associated with remote sensing; orthophotography interpretation and GPS technology are addressed through lectures and practical applications. Students are exposed to satellite imagery, processes and products and the role of GIS technology in natural resources applications. Students will gain valuable skills and hands-on experience to support resource-based GIS projects typical in the workforce. Using vector-based GIS data models, students will create databases, manage spatial and attribute data, generate map-based and tabular outputs, and perform geographic analysis. The course culminates with a major GIS project designed to reinforce the skills covered in the course.
Prerequisite(s): EN1210

EN1520 - Environmental Sampling
This course provides the student with the fundamentals of environmental sampling techniques pertaining to procedures, protocol, equipment, and standardized procedures. "Fate and Effects" monitoring will be used as a practical approach to determine the effects of pollution impacts on our environment.

EN1531 - Water Quality

This course introduces students to various aspects of water quality and provides an in-depth review of the Canadian Water Quality Guidelines. This course expands upon the students' knowledge of analytical chemistry techniques and emphasizes introductory microbiology and toxicology techniques, including exposure to the parameters of a local water treatment plant. Students are introduced to the diversity of microorganisms, their relationship to environmental technology, and the basic lab techniques used to identify and enumerate them. This course prepares students to apply their technical knowledge to monitor water quality, domestic and industrial water and wastewater treatment systems, site remediation projects, and to prepare relevant water quality reports.

Prerequisite(s): CH2715, EN1520

EN1600 - Env. Site Assessment I
This course, oriented to the needs of the environment industry, introduces the student to the local, provincial, and federal environmental legislation, regulations, guidelines and policies that apply to environmental site assessment. The site assessment process is introduced with emphasis on case studies involving a range of projects. It will focus on the CSA/CCME phased approach with projects including a Phase 1 assessment of a local facility.

EN1601 - Env. Site Assessment II
This course will introduce students to the concepts, principles, methods, and techniques involved in reclamation of a site that has been abandoned, accidentally contaminated, or requires a clean-up to conform to environmental standards. This comprehensive course will allow students to make use of course work previously completed in other courses to design a site remediation plan.
Prerequisite(s): EN1600, EN2300, EN1110

EN2120 - Environmental Citizenship
This course is designed to foster environmental awareness and promote sustainable development. It provides an opportunity for students to discuss, debate, analyze and study current topics related to the use and management of natural resources. Students will be encouraged to consider various perspectives, and offer potential solutions to local, national and global environmental challenges.

EN2300 - Environmental Law
This course is oriented to the needs of the environmental industry and introduces the students to Municipal, Provincial, and Federal Environmental Policy, Legislation, Regulations, and Guidelines. The Canadian Justice System framework is introduced with emphasis on case studies involving Environmental Law. Courtroom terminology, proceedings, legal documentation, environmental protection, due diligence, and personal and corporate liability will be reviewed in detail.

EN2321 - Occupational Health and Safety
This course enables students to demonstrate knowledge of basic environmental principles and legislation and/or regulations governing the protection of the environment and workplace, together with understanding hazardous materials, how to control them, and developing the necessary skills to work safely.

EN2410 - Environmental Sustainability
This course is designed to foster environmental ethics and sustainable development. It provides an opportunity for students to discuss, debate, analyze, and study current controversial issues related to the use and management of natural resources. Students will be encouraged to consider various perspectives and offer potential solutions to local, national, and global environmental challenges.

EN2545 - Water & Waste Water Treatment
This course deals with water and wastewater management and treatment. The first part of the course focuses briefly on water and wastewater collection and measurement. The second part of the course focuses on water treatment, in-plant abatements, and treatment of wastewater flowing from industrial settings. The course will include characteristics of primary and secondary wastewater treatment processes as it relates to overall plant operations. Monitoring procedures and methods of analysis are covered in theory and laboratory sessions. Current and innovative water and wastewater treatment processes are discussed and evaluated, with special attention given to provincial and federal environmental acts and regulations, and how this is related to decision making.
Prerequisite(s): EN3111, EN1531

EN3110 - Environmental Engineering
This course is designed to acquaint the learner with the major areas of pollution control and mitigation. Learners will gain an appreciation of the issues concerning sustainable development, gain familiarity with environmental legislation and risk management systems, as well as various environmental hazards in the workplace. Environmental concerns due to air pollution and noise pollution will be discussed, as well as solid waste management and wastewater treatment.

EN3111 - Environmental Engineering I

This is the first of two Environmental Engineering courses in the program which introduces the basic engineering and science framework needed to understand and predict environmental processes and to understand the link between human activity and environmental sustainability. The course emphasizes role of the engineer in protecting human health and the environment. The course also touches on pressing environmental issues and their impact on society, including the role of engineers to impact public perception, policy, and legislation. This course introduces concepts of environmental engineering, mass and energy transfer, and water resources, as well as an introduction to practices, theories, and applications relevant to hydraulics and hydrology.
Prerequisite(s): MA1100

EN3120 - Environmental Engineering II
This is the second of two Environmental Engineering courses in the program which introduces the basic engineering and science framework needed to understand and predict environmental processes and to understand the link between human activity and environmental sustainability. This course focusses on air pollution and solid waste management for municipal and industrial applications. The first section of the course places emphasis on practices, theories, and applications relevant to meteorology, and industrial air pollution and control technologies. The second section of the course concentrates on the management of municipal, industrial, and hazardous solid waste, and related control technologies. Special attention is given to best management practices and how they are related to decision making.
Prerequisite(s): EN3111, EN1520

EN3200 - Environmental Impact Assessment
This course, oriented to the needs of the environment industry, covers the basics of the environmental assessment procedure. The course carries on from the Environmental Law course where a broad overview of the legislation is presented. Students review the assessment legislation in detail and develop the tools needed to perform an environmental impact assessment. Students then perform a case study to assess a small local project.
Co-requisite(s): EN2300

EN3300 - Environmental Auditing
This course will enable the student to: assure compliance with relevant Federal, Provincial, and Municipal requirements; identify, evaluate, and reduce environmental risks and liabilities; and conduct an environmental audit

of a local industrial operation. Students will investigate the concepts and procedures of environmental audits, energy audits, waste audits, safety audits, ISO 14001 registration audits, and environmental management systems audits.
Prerequisite(s): EN2300, EN1600

EN3400 - Environmental Management and Protection
This course introduces students to the fundamentals of resource management. It examines common pollutants found in industries in Newfoundland and Labrador. It explores the various pieces of legislation that apply to industrial pollutants in the province. Pollution reduction and treatment are also studied.

Prerequisite(s): CH3450 or CH2330

EP1100 - Entrepreneurial Studies •
Students will acquire the necessary skills and techniques to develop a sound business plan. This course is designed to develop an appreciation of small business, particularly as it relates to understanding the entrepreneurial process. Areas covered will include market assessment, financing alternatives, organizational structuring, and planning techniques. In addition, a feasibility study will be required to establish the demand for a particular growth sector in the economy.

EP1110 - Introduction to Business •
This course will introduce students to business systems, forms of business ownership, production, marketing, finance, personnel and labour relations, international business and small business ownership. Students will describe and compare aspects of business, economics, and finance, including the functional areas of a business.

EP1130 - Business for Information Systems •
This course provides students with an overview of business principles and practices relevant to the Information Technology. Students will be introduced to the functional areas of business and the processes within each function. Emphasis will be placed upon awareness and literacy of each functional area as they apply to the local and national markets.

EP1190 - Business Solutions •
This course explores essential topics in business management and technology, focusing on key areas that drive success and innovation in modern organizations. The course covers business success strategies, business intelligence, business operations, and innovation. By engaging with a blend of case studies and assignments, students will develop an understanding of different features of business management, technological progress, and strategic decision-making.
Prerequisite(s): MR2100

EP1320 - Entrepreneurship •
Working in small teams, students will develop a new business idea for either a private sector for-profit business, or a social enterprise. Ideas for this business opportunity will be generated through an ideation process. Students will prepare a 'lean canvas' for their business idea and will present this one-page business pitch early in the semester for feedback. Students will use secondary research and apply the skills and knowledge gained from their prior learning to complete a secondary research assignment and a business proposal report. Students will formally present their business idea to a simulated independent panel of industry experts. The course includes co-circular entrepreneurship events. Guest lecturers will share their entrepreneurial experiences with students.

EP2000 - Entrepreneurship in Practice
Students will acquire the necessary skills and knowledge to assess and determine their potential as an entrepreneur. This course is designed to assist students in developing an understanding of the importance of small business in our economy; in exploring new business ideas and opportunities; and in developing and understanding the tools available for planning a business. Areas of study will include the entrepreneurial mindset and process, feasibility studies, marketing plans, market assessment, financing alternatives, legal considerations and business plans.

EP2010 - Business of Journalism
In this course, students will assess their potential as journalism entrepreneurs. They will analyze start-ups and examine platforms, delivery models, ideas, and opportunities. Students will evaluate methods of monetization and

explore ways to maximize their reach and profitability. Areas of study will include the entrepreneurial mindset and process, feasibility studies, market assessment, financing alternatives, and business plans.

EP2150 - Entrepreneurship •
This is an introductory course that analyzes aspects of entrepreneurship and the link between entrepreneurs and small business. It presents a fundamental approach to planning and operating a firm incorporating basic steps in business management and explains how each step can best be accomplished.
Prerequisite(s): CP2310 or MC1242

EP2200 - Business Planning •
This is an advanced-level course in developing a comprehensive business plan. The student will identify a business idea, product or service, conduct an industry analysis, and develop plans for operational and human resources, marketing, and finance. The student will also conduct a risk assessment and present their plan to a panel of industry experts. The student will apply knowledge from previous terms in a practical manner.
Prerequisite(s): EP2250

EP2250 - Market Feasibility •
This is an advanced course in the use of primary and secondary research techniques and analysis. The student will explore secondary research analysis, competition and demand analysis, project site and area evaluation, and estimates of operating results. The student will be required to produce and present a research report establishing the feasibility for an opportunity or a particular growth sector in the economy. Topics for this report will be based on personal selection or on a mentoring process with a potential or present business owner. This plan is developed based on two prior years of Business Management education and is intended in part to prepare the student to own or operate a small business.
Prerequisite(s): AC2260, CM2300, EC1110, MA1670

EP2415 - Management Information Systems
This course is designed to equip students with the essential knowledge and skills to understand how information systems are designed, implemented, and managed within organizations. Such understanding is crucial in bridging the gap between technical and business aspects of software development. It empowers developers with the ability to create software solutions that align with organizational needs and objectives, enhancing their strategic thinking and problem-solving capabilities. The benefits of such a course are twofold: software developers become valuable assets who can communicate effectively with management, translating technical requirements into business terms, and developers also acquire the proficiency to design software that seamlessly integrates into an organization's broader information infrastructure. This, in turn, enhances career prospects and promotes greater effectiveness in software development projects within the organizational context.
Prerequisite(s): CP1935

EP4000 - Entrepreneurship
Working in small teams, students will develop a new business idea for either a private sector for-profit business, or a social enterprise. Ideas for this business opportunity will be generated through an ideation process. Students will prepare a 'lean canvas' for their business idea and will present this one-page business pitch early in the semester for feedback. Students will use secondary research and apply the skills and knowledge gained from their prior learning to complete a secondary research assignment and a business proposal report. Students will formally present their business idea to a simulated independent panel of industry experts. The course includes co-circular entrepreneurship events. Guest lecturers will share their entrepreneurial experiences with students.
Prerequisite(s): CP4450, MN1520, CR4120

ER1000 - Intro Const/Indus Electrician
This course is designed to provide students with an overview of the construction/industrial electrician trade. In the course, students will be given an overview of the trade and learn about trade safety requirements. Students will also learn about the tools and equipment associated with the trade as well as the types of computations that Electricians perform to successfully complete their work. Students will also have an opportunity to engage in hands-on experience.

ER1010 - Const/Indus Electrician

In this course students with learn the basic knowledge required of an industrial electrician. Most of the topics discussed and the skills developed throughout the course are within the repertoire of every industrial electrician and are in accordance with the National Building Code of Canada (NBCC). Competence in the topics covered in combination with practical experience will provide a solid foundation for anyone who wishes to master the trade. The hands-on experience provided throughout the course will increase each participant's ability to anticipate next steps while being fully engaged in the task at hand. To this end, students will work on a project determined by CNA to practice the proper and efficient use of industrial electrician tools and equipment and apply the industrial electrician skills learned throughout the course.
Prerequisite(s): HE1621

ET1100 - Electrotechnology I
This is an introductory course in electrical theory covering the basic concepts of electricity, DC circuit analysis and magnetism. The laboratory work is designed to develop skills in the construction of electrical DC circuits and use of electrical measuring instruments as well as reinforcing theoretical concepts.

ET1101 - Electrotechnology
This is a continuation of the Electrotechnology course taken in the first semester. It covers the basics of A.C. theory and the application of this to solve circuits containing resistance, capacitance and inductance. An introduction to transformers and polyphase A.C. circuits is also included.
Prerequisite(s): ET1100

ET1120 - Electronics for Audio
Electronics for Audio is a Sound Recording & Production course. It is designed to prepare students for entry into work in the sound recording and production industry. It will provide the basic knowledge needed to perform circuit analysis and, more importantly, allow the student to design, modify, and test circuit designs necessary in their field. In addition, once completed, students should be able to troubleshoot existing electronic devices and connect them correctly and safely.
Co-requisite(s): MA1100

ET1141 - Introductory Electric Circuit Analysis
This is an introductory course in electric circuit analysis covering the fundamentals of Direct Current (D.C.) and Alternating Current (A.C.) electricity. Students will be exposed to fundamental electric quantities, fundamental electric circuits, and analysis techniques for circuits containing resistance, capacitance, and inductance. The laboratory work is designed to develop skills in the construction of electric circuits, use of electric measuring instruments and reinforce theoretical concepts. An introduction to transformers is also included.
Co-requisite(s): MA1220

ET1146 - Advanced Electric Circuit Analysis
This course in electric circuit analysis covers advanced theoretical network concepts. An introduction to polyphase A.C. circuits is also included.
Prerequisite(s): ET1141

ET1170 - DC Circuit Fundamentals
This is an introductory course in electrical theory covering the basic concepts of electricity, series, and parallel circuits, magnetism, inductors, capacitors, and associated DC transients. The laboratory work is designed to develop skills in the construction of electrical circuits and use of electrical measuring instruments as well as reinforcing theoretical concepts.

ET1280 - AC Circuit Fundamentals
This is a continuation of the DC Circuit Fundamentals course taken in the first semester. It includes DC network analysis techniques (Mesh, Nodal, and Superposition) and equivalent circuit techniques such as Thevenin's and Norton's theorem. This course covers the basics of AC theory, and the application of the impedance concept to solve circuits containing resistance, capacitance, and inductance. The power triangle is also covered along with methods of reducing power factor. An introduction to transformers is also included.

Prerequisite(s): ET1170, PH1100

ET2100 - Electrotechnology
This course covers advanced topics in AC and DC circuit analysis as well as an introduction to DC machines and transformers. It will provide the necessary background for students to enter second year Electrical and Electronics programs.
Prerequisite(s): ET1101, MA1101

ET2150 - Advanced Circuit Analysis
In this course, learners will review techniques of differential equations, first order and second order: integral combinations; growth and decay problems; the analysis and solution of source free RL and RC circuits; driven RL and RC circuits using differential integral calculus; sinusoidal analysis; the concept of phasors, and steady state response. The learner will learn mathematical techniques and apply these to the concepts to analyze and solve differential equations.

Topics include waveform analysis and synthesis, time domain analysis, solution of differential equations using LaPlace transforms, application of LaPlace transforms to solve electric circuits, and derivation of transfer functions. In addition, the following topics will be covered in this course: Fourier expansion of periodic function, even and odd, Fourier analysis of waveforms and their application to electrical signals, and impulse response.
Prerequisite(s): MA2100, ET1151 or MP2140

EY1200 - Ecosystem Ecology
This course identifies the current ecological classification models that are utilized provincially and nationally. This course investigates the ecological relationship of a variety of ecosystems that occur in Newfoundland and Labrador. This course will examine the ecological components and focus on identification of these components and the structure, function and adaptations of specific organisms.
Prerequisite(s): BL1400

EY2110 - Ecology
This course focuses on basic ecological principles and concepts, ecological sampling techniques, with field and laboratory exercises carried out in an appropriate environment. It involves significant and relevant field work, as well as the preparation of a report on terrestrial and aquatic ecosystems, populations, species interactions, and ecological communities.
Prerequisite(s): BL1100

EY2210 - Silvics/Dendrology I
This is an introductory course to trees and shrubs both native and introduced to Newfoundland and Labrador. Species identification, classification and distribution are studied in detail. The influence of the environment upon the growth and reproduction of trees, stands, and forests are explored. Forest site analysis and classifications are studied in detail.
Prerequisite(s): BL1120

EY2211 - Silvics/Dendrology II
This is an advanced course of study in Forest Ecology. Forest site analysis and classification are studied in detail. The influence of forest genetics, the physical and biotic environment, upon the forest ecosystem are covered. Native and exotic tree/shrub identification is a key component within the course.
Prerequisite(s): EY2210, FR1330
Co-requisite(s): FR2360, FT1401

EY2510 - Population Ecology
Concepts of population dynamics and modeling and applications in fish and wildlife management.
Prerequisite(s): BL1400, RM1401, RM1500

FH1200 - Principles of Physical Fitness
This course provides an introduction to principles of physical activity. Students will study the human anatomy with particular reference to skeletal and muscular systems of the human body, principles of training, exercise and weight

control, fitness theory and active living and use of pedometers in physical activity. The course is designed for potential fitness leaders and active living programmers.

FH1230 - Physical Activity Programming for Older Adults
This course provides students with an introduction to physical activity programming for the older adults. It is designed to enable students to plan and evaluate a variety of programs for older adults based on current knowledge and trends.

FH1340 - Health & Safety •
This course will address the attitudes and knowledge early childhood educators must have in order to support the health and safety needs of children and themselves. Students will develop a working knowledge of policies and practices that adhere to provincial legislation and standards with regards to the health and well-being of children, and the establishment of positive habits and attitudes toward health and safety. Students will recognize symptoms of ill health and determine appropriate care for a sick child in a group setting. Students will recognize safety hazards and plan to minimize risk. Students will explore the issue of child maltreatment and recognize their responsibilities as early childhood educators with regards to recognition and reporting.

FH1360 - Childhood Nutrition •
This introductory course addresses the fundamental concepts of nutrition. Students will study the basic nutrients and learn about the recommended intake for children. Students will develop a working knowledge of Canada's Food Guide and utilize this knowledge in the planning and preparation of healthy snacks and meals for children. Students will examine food allergies, intolerances, and other special dietary concerns for children along with addressing nutritional issues in childhood. There will be a focus on nutrition education and creating a positive eating atmosphere. In addition, students will have become familiar with kitchen safety and sanitation.

FH1500 - Personal Wellness •
Optimal wellness is critical to a student's success in the workplace and in life. Students will be introduced to the eight dimensions of wellness: physical, mental, social, spiritual, intellectual, environmental, occupational and financial. Students will determine their own 'wellness level' and be encouraged to make healthy lifestyle choices. The goal is for the student to achieve a sense of balance in life which is attained through high levels of understanding and being active in each dimension of wellness.

FM2100 - Fluid Mechanics
This is an introductory course in fluid mechanics designed to develop knowledge of the laws and principles governing fluid mechanics and the ability to apply this knowledge in analyzing related engineering applications. The course also provides a base for advanced courses in piping design, ducting design, and fluid power systems.
Prerequisite(s): PH1100

FM2102 - Fluid Mechanics
This is an introductory course in fluid mechanics designed to develop knowledge of the laws and principles governing fluid mechanics and the ability to apply this knowledge in analyzing related engineering applications. The course also provides a base for advanced courses in piping design, ducting design, and fluid power systems.
Prerequisite(s): PH1101 or PH1150

FM2200 - Mechanics
This course provides the fundamental concepts required for the understanding and development of basic engineering sciences and builds on the principles developed in Physics PH1100. This first course in mechanics concentrates on relevant concepts of statics and how these concepts may be applied for conducting stress analysis of simple structures and components.
Prerequisite(s): MA1700, PH1100

FM2340 - Fluid Dynamics
This is an intermediate Fluid Mechanics course designed to develop both the knowledge and the laws and principles governing Fluid Mechanics and the ability to apply this knowledge in analyzing related engineering applications. The course extends on Fluid Mechanics FM2100 and provides the foundation for advanced courses in piping design, ducting design and fluid power systems.

Prerequisite(s): FM2100

FM3100 - Fluid Power
This is an intermediate level course designed primarily for students in the Electrical and Mechanical Engineering Technology Programs.
Prerequisite(s): PH1101, EG1520 or TM1310 or DR2320 or DR2350

FM3200 - Machine Design I
This course is an introduction to the primary considerations in the design of machines as they relate to each other, to their operators and to the environment. Machines will be seen as converters of energy and as the extension of human power. The composition and characteristics of machines will be presented. The underlying principles of mechanics of machines and strength of materials will be demonstrated enabling the student to participate in the design of machinery. The student will gain practical manufacturing exposure and experience.
Prerequisite(s): CF2540 or CF2100

FM3220 - Machine Design
Machine design concepts extended by introducing students to typical industrial application components used for machine design. The ability to follow accepted industry practice in the design, specification and selection of standard machine design components is emphasized.
Prerequisite(s): FM3200

FN1140 - Introduction to Finance
This course develops the concepts for the financial foundation of all upper-level finance courses. The course is designed to provide an introductory level of finance concepts and their use in business decisions. In this course the student will explore the importance of finance in business. Topics include simple and compound interest, debt amortization, annuities, bonds, and capital budgeting. Students will use a financial calculator or spreadsheet to make financial management decisions.

FN2110 - Business Finance •
This course is an intermediate course in the complexities of business financial management. The learner will explore financial analysis and planning, working capital management, capital budgeting, and long-term financing. The course will integrate both short-term and long-term financial considerations, as well as concepts from accounting, statistics, and economics.
Prerequisite(s): AC2260, FN1140

FN2111 - Business Finance II
The purpose of this course is to extend knowledge and understanding of finance principles by focusing on various problems and decisions confronting the financial manager. Specific topics include sensitivity analysis, corporate planning models, financial statement analysis and forecasting; short and long-term financing; capital budgeting; dividends and dividend policy; options, swaps, futures, forwards, firm valuation; and mergers and acquisitions. The student will conduct an in-depth study of issues and tools that financial managers use in financial planning and strategic management. The course will use real-world cases to teach the material.
Prerequisite(s): FN2110

FN2160 - Investments - An Overview
Students are expected to be familiar with the different investment avenues available to investors who are interested in optimizing their return on their investments. This course will address the concept of risk management and its application to the average investor and will provide an overview of the different investment strategies and their potential risks and returns.

FR1230 - Forest Fire Management
This introductory course will cover topics on all aspects of forest fire management from prevention, pre-suppression preparedness, detection, to suppression. Throughout the course students will study historical forest fire reports and legislation to prepare a forest fire prevent plan. Fundamental information on fire behaviour, forest fire weather

indices and the Canadian Forest Fire Danger Rating System will be covered to build requisite knowledge for wildland fire operations. Basic knowledge on fire suppression will be covered and supported with practical field exercises to expose students to typical duties of wildland fire fighters. Portions of this course will be delivered online through CIFFC, under the direction of the NL Forest Service. The CIFFC course modules will provide students with course certificates to support the building of the student's forest fire training portfolio. The CIFFC course modules also serve as prerequisite courses for the S-131 Crew Member Course required for students and graduates pursuing Wildland Fire Fighting employment with the NL Forest Service. Knowledge and skills gained in this course will be applied to a wildland fire simulation project in FT1400 (Spring Camp).
Co-requisite(s): FT1400

FR1330 - Natural Resource Measurements I
This course is designed to introduce the basic principles, skills and techniques in the sampling and measurement of natural resources with emphasis on forests and wildlife. Students will become competent in the use of the various tools and equipment used in the measurement and evaluation of natural resources. The application of map and compass, GPS, and aerial photographs through field exercises, in the evaluation of natural resources, is a key component of the course.
Prerequisite(s): SU1150, MA1100

FR1331 - Natural Resource Measurements II
This advanced-level course in the principles of natural resources measurements places emphasis on the design, conduct and application of a variety of survey methods to assess forest characteristics. The application of statistical analysis to timber cruises, forest inventories, growth prediction and site classification is the central focus. Students will use GIS and GPS technologies to support cruise design and field-sampling activities throughout the course. The measurement of forest products is addressed, as is the assessment of non-timber values of the forest ecosystem.
Prerequisite(s): FR1330, MA1670, FT1400
Co-requisite(s): FR1560

FR1400 - Wood Products
This course deals with the importance of the wood products industry in our society. The identification characteristics and uses of Canadian woods are studied. As well, the physical and mechanical wood properties, testing of wood properties and the technical requirements for various wood products are studied. The measurement and grading of lumber products are introduced. The Canadian taxonomy of wood products is used to guide students through the broad range wood products produced. Knowledge and skills gained in this course is used in FT1400 (Spring Camp) sawmill study project.

FR1560 - Timber Harvesting I - Roads
This second-year course uses skills learned in Forest Surveying for the collection of field notes for various labs - especially road location. Students are introduced to forest road construction terms, environmental guidelines, and planning and operating practices. Students plan, map, conduct a reconnaissance, and lay out a forest road.
Prerequisite(s): SU1710, FT1400
Co-requisite(s): FR1331, FT1401

FR1561 - Timber Harvesting II
This course is a follow-up to Timber Harvesting I course that covers road construction in the woods. This course deals mostly with harvesting and trucking forest products. Emphasis is on environmental management of woodlands operations as well as logging system productivities and costs.
Prerequisite(s): FR1560

FR2340 - Hydrology
This course has been designed to provide students with principles and application methods related to water resources. The content extends from a review of hydrological processes and principles in general, through detailed analysis of the water cycle in particular and finally to linking of theory to practical applications. The applied aspects of this course center on field and office methodology used to assess water resources from the perspective of input, storage and output at the watershed level. The relationship between water, forests and humans is a central theme.
Prerequisite(s): FR1330

FR2350 - Forest Entomology/Pathology
This course involves the study of the major forest enemies of North America (excluding fire). Emphasis will be placed on insects which damage or benefit the forest and on biotic and abiotic causes of forest disease. Prevention and protection measures of above are covered. Field collection and diagnosis are emphasized, stressing the importance of signs leading to early detection.
Prerequisite(s): EY2210 , FR1330

FR2360 - Silviculture
This course involves a study of a wide range of silviculture practices as applied to the establishment and tending of forest stands. This includes the design, conduct and monitoring of operational programs in planting, seeding, site preparation, tree seed procurement and improvement, and nursery production as well as stand manipulation including pre-commercial thinning, commercial thinning, pruning, and other vegetation control methods.
Prerequisite(s): FR1330
Co-requisite(s): EY2211, FT1401

FR2430 - Wildlife Management
An introduction to basic Wildlife Management principles, concepts and techniques as they relate to big game, fur bearers, small game, waterfowl, inland fishing, non-game and endangered species. Lectures concentrate on principles and concepts while labs are designed for students to apply techniques and learn identification and life history.
Prerequisite(s): FR1330

FT1235 - Mineral Resources Field Camp
In this course, students will work individually, and in groups, to apply a broad range of problem-solving skills learned during the first two semesters of the program. All first year mining students must attend this eight (8) to ten (10) day intensive field exercise in the two weeks following the end of the Winter semester - attendance at all projects is mandatory. Students will complete a variety of projects related to mine safety, geologic mapping, mining, surveying, mine ventilation and/or geophysics, both on and off campus. Safety aspects will be of utmost importance to consider during completion of all related projects.
Prerequisite(s): GE1210, MT1210, SU1230

FT1240 - Surveying Field Camp
This one-week field camp is used to immerse students taking the Geomatics/Surveying Engineering Technology (Co-op) Program in the field applications of Geomatics data collection, mensuration, and presentation. The work is done in a group setting where team collaboration is essential for completing assigned projects. The planning, execution, checking and successful completion of the group projects is emphasized.
Prerequisite(s): SU1315, SU1505
Co-requisite(s): SU1325

FT1260 - Multidisciplinary Field Camp

This camp is a hands-on session where the data gathering skills learned throughout the Geomatics/ Surveying Engineering Technology (Co-op) program are reinforced by practical field work. The camp will involve different projects with each project involving a different aspect of the program. The projects will be designed to gather and process data and compile the data into maps and a report. Maps and reports will be submitted to instructor(s) and are produced based on industry standards.

Prerequisite(s): SU2330, SU1545

FT1400 - Forestry Field Camp
A two-week field camp is conducted at the end of the Intersession Semester. This camp is designed to enable students to take part in major practical exercises using standard practices of measurement and data collection in an operational setting. Throughout the two-week period, the proper care of equipment, safety practices, and basic skills such as map interpretation, compassing, vegetation identification, ecosystem analysis, etc. are emphasized. Major topics reinforce prior learning from the second semester and intersession. This camp is conducted in Central NL to broaden the learning environment, within the program, by exposing students to natural ecology and unique for types of this region.

Prerequisite(s): SU1710, SU3210, FR1330
Co-requisite(s): FR1230

FT1401 - Forestry Tour/Camp
This one-week field tour is designed to provide students the opportunity to visit and study a number of special forestry facilities and operations across the province. Throughout this study tour students will gain valuable first-hand information on business intelligence and technical knowledge applied throughout the forest sector. Students will also gain knowledge on the diversity of career opportunities for forest technicians. The experiences gained on the tour will enrich classroom studies in multiple courses during the final year of the program. Visits include a number of unique facilities and operations including NL Provincial Tree Nursery at Wooddale, NL Forest Fire Protection Centre, Thomas Howe Demonstration Forest, large-scale industrial sawmill sector, value-added forest products business sector, industrial forest harvesting operations, and silviculture operations.
Co-requisite(s): EY2211, FR2360, FR1560

FT1410 - Fish and Wildlife Field Camp
This course is an 8-day field camp conducted at the end of the Intersession semester. This camp is designed to enable students to take part in major practical exercises using standard practices of measurement and data collection in an operational setting. Throughout the 8-day period the proper care of equipment, safety practices, and basic skills such as map interpretation, compassing, vegetation identification, trapping, and other fish and wildlife techniques are emphasized. Major topics reinforce prior learning from the second semester and intersession.
Prerequisite(s): FR1330
Co-requisite(s): RM1400, RM1500

FT1430 - Fish & Wildlife Field Camp II
A one-week camp conducted during the third semester. This camp is designed to enable students to participate in research/project being undertaken by a major external agency (National Parks, Canadian Forest Service, Provincial Wildlife and DFO). Students are involved in the accumulation of field data for these projects. This camp is designed to avail of a diversity of field data collection (dependent on partnering agency) to provide students to ability to work in a field setting.
Co-requisite(s): RM2200

FV1110 - History of Cinema
This course offers an examination of the history of provincial, national and international cinema from its beginnings to the present. Through lecture, observation, and critical examination, students will be exposed to the evolution of styles, cinematic techniques and the institutional culture of film providing students with a background in the general history and development of the medium.

FV1210 - Digital Filmmaking Techniques I
This is a technical course for Digital Filmmaking students. The course is designed to give students the knowledge and skills needed to use and understand the equipment required to produce professional films. The focus is on the camera as a tool while learning how to manipulate it to create and design a professional quality image.
Co-requisite(s): FV1260

FV1221 - Short Film Production I
This Intersession will constitute an intermediate practicum in the course work covered in the first and second semester. Each student will be given one of the many different positions found on a film crew and will be responsible to complete all tasks associated with that position for the purpose of producing a film. At the end of the semester, the film produced will then be presented to an audience.
Prerequisite(s): FV1230; SN2420; FV1210; FV1235; CM1680; FV1280; FV1285
Co-requisite(s): FV1290

FV1230 - Overview of the Film Industry
Students will learn about the operations of filmmaking and digital production from pre-production through delivery. Students will also have opportunity to gain a greater understanding of the fundamental processes, personnel, job descriptions and role responsibilities within a complex industry. These fundamentals such as set etiquette, protocols and safety practices are explored along with professional expectations while working as a member within a

competitive and hierarchical structure.

FV1235 - Director Studies I
This course will give students the knowledge needed to produce their own films. They will learn techniques on how to work with crew members and actors to convey their creative vision as well as an understanding of all the different documentation needed to plan a film shoot. Each student will produce their own narrative film.
Co-requisite(s): FV1285; CM1680

FV1260 - Introduction to Post Production
This course will introduce students to the practical exploration of editing options and theoretical knowledge required when using a post-production suite to perform picture and sound editing.
Co-requisite(s): FV1210

FV1280 - Lighting & Grip
Students will learn the practical skills associated with the lighting and grip department and their operation in the motion picture environment. Students will explore basic electrical theory, different types of light fixtures and connections, cable management, rigging techniques, camera support equipment, light shaping equipment and techniques as well as reading and creating lighting schematics.

FV1285 - Picture & Sound Editing
This is an intermediate editing course designed to expand upon the post-production workflow and software. Students will complete a number of editing assignments designed to encourage creativity and technical skill development.
Prerequisite(s): FV1260
Co-requisite(s): FV1235

FV1290 - Digital Filmmaking Techniques II
Students will become familiar with professional digital cinema cameras and camera accessories associated with cinematic production techniques. Through practical exercises, students will gain a working knowledge of the capabilities, limitations and technical issues of modern digital filmmaking.
Prerequisite(s): FV1210

FV2000 - Art Direction & Production Design
This course will provide students with an understanding of the Art Department on a film production. Students will learn the basics of design, costuming, set construction, decorating and props. They will be expected to read scripts and research time periods while designing a look.
Prerequisite(s): HY1130
Co-requisite(s): FV2010

FV2010 - Digital Cinematography
This course will cover the digital cinematography aspects of filmmaking. This includes the technical application of industry standard digital filmmaking equipment along with the theoretical language of cinema.
Prerequisite(s): FV1280

FV2020 - Live TV & Webcasting
Students will use industry-standard television production studio equipment to create single and multi-camera programing and webcasting.
Prerequisite(s): FV1290, FV1280

FV2030 - Director Studies II
This is an intermediate course where students learn the roles and responsibilities of the film producer: script selection, director and crew recruitment, actor negotiations, pitching investors, director-producer collaboration, publicity and distribution.
Prerequisite(s): FV1235

FV2040 - Film Industry & Certifications
This course will prepare students to fully understand the film industry and all the “key players” within it as well give

students a collection of short-form courses that will supply sanctioned certifications required for film production union referral status.
Prerequisite(s): FV1230

FV2050 - Advanced Documentary
This is an advanced "project-oriented" course that will teach students the demands of development, funding, distribution, legal and copyright issues. Students will also learn the advanced techniques used in a documentary film production.
Prerequisite(s): FV2210; FV1285

FV2060 - Colour Correction/Sound Design
Designed for intermediate to advanced studies, this course will help students learn how to put the finishing touches to their work. Colour correction, grading, sound design and mixing are all necessary skills accompanied with the avid suite. Students will develop a greater understanding of colour theory and how to use it properly in the development of a film as well as learning how to design a sound mix for their films with the ultimate goal of giving their final films a professional look and sound.
Prerequisite(s): FV1285
Co-requisite(s): FV2070

FV2070 - Director Studies III
This course is designed to give students a better understanding of how the Director works with the post-production crew as well as how to promote and present a finished film to an audience. Each student will be responsible for completing their own individual final film projects while working together to present during the Final Film Festival.
Prerequisite(s): FV2030; MM1400
Co-requisite(s): FV2060

FV2080 - Short Film Production II
This is the second and final Intersession of the program and will constitute an advanced practicum. Students will apply acquired technical skills and theoretical knowledge to plan and shoot a short narrative film.
Prerequisite(s): FV1221
Co-requisite(s): PD1110

FV2210 - Documentary Filmmaking
This "project-oriented" course will introduce students to the world of documentary filmmaking. Students will practice research techniques and write treatments while obtaining necessary skills required for producing high-quality documentaries.
Prerequisite(s): FV1210
Co-requisite(s): FV1285

FW1130 - Field Placement I •
This six-week field placement course is designed to provide students the opportunity to apply their knowledge and skills to an entry level position in the tourism sector.

The supervising program instructors will assist students in securing a suitable and approved placement. The instructors will evaluate student progress in conjunction with the field placement supervisor. Arrangements and expenses for transportation, lodging, and meals are the sole responsibility of the student.
Prerequisite(s): TR1150, TR1140, TR1145, TR1215, TR1225, HR1215

FW1140 - Field Placement II
This field related course is designed to assist students in obtaining additional occupational experience at the supervisory / management level, working with a supervisor or manager. This course is a six-week field placement for students pursuing a Tourism & Hospitality Management Diploma. The purpose is to provide students the opportunity to apply the knowledge and skills acquired in year two to a position in the tourism sector.

The supervising program instructors will assist students in securing a suitable and approved placement. The instructors will evaluate the student's progress in conjunction with the field placement supervisor/manager.

Arrangements and expenses for transportation, lodging, and meals are the sole responsibility of the student.
Prerequisite(s): TR2100, AC1100, TR2105, PS2340, TR2110, TR2115, TR2235, HN1230, TR2205, TR2210, TR2215, TR2220

FW1180 - Field Placement Preparation
Students will prepare for their field placement experience and will gain the necessary information to help them benefit from the field placement experience.
Prerequisite(s): Successful completion of all Semester 1 and 5 courses

FW1210 - Journalism Internship
Students will pursue learning objectives related to their individual career goals while receiving four weeks of on-the-job training within a professional news organization. They will have the opportunity to apply and build upon the training they received in previous semesters and in conjunction with a field supervisor (who is an employee in the placement agency), the instructor supervises and evaluates the student's progress.
Prerequisite(s): JL2210, JL1010, JL1420

FW1235 - Field Placement Preparation
This course helps students prepare for field placement. In the course students will identify and pursue possible field placement opportunities, prepare learning contracts, and receive direction on completion of field placement documentation. Faculty will work with community stakeholders and students to help secure a field placement option and determine the most appropriate means for completing the field placement requirements. In addition, students will review ethical and legal guidelines to prepare them for placements with human service agencies.

FW1330 - Field Placement I •
Field Placement I is a six-week placement with a human services agency. In collaboration with the instructor, students will obtain their own placements and are encouraged to seek one that meets their interests and goals. Each student will be assigned a supervisor who will monitor and evaluate their progress. Students are responsible for completing and submitting field placement documentation for evaluation and grading.

(Please note: under extenuating circumstances wherein an external field placement is not secured, an equivalent industry-related project approved and supervised by the instructor is acceptable.)
Prerequisite(s): Successful completion of all courses in semesters 1 and 2; clear certificate of conduct; vulnerable sector check; updated immunization record

FW1445 - Field Placement I
This course consists of a five-week placement with a human services agency in a voluntary capacity. Students are responsible for obtaining their own placements while working in collaboration with their field placement instructor. Students are encouraged to seek field placements which allow them to meet personal interests and goals. Each student will be assigned a field placement supervisor who will monitor and evaluate the student's progress. Students are responsible for completing and submitting field placement documentation for evaluation and grading.
Prerequisite(s): CM1100, HR1120, LD1200, CM2100, LD1120, FW1235, LD1300

FW1451 - Field Placement II
This course consists of a five-week placement with a human services agency in a voluntary capacity. Students are responsible for obtaining their own placements in collaboration with their field placement instructor. Students are encouraged to seek field placements which allow them to meet personal interests and goals. Each student will be assigned a field placement supervisor who will monitor and evaluate the student's progress. Students are responsible for completing and submitting field placement documentation for evaluation and grading. (Please note: under extenuating circumstances wherein an external field placement is not secured, an equivalent industry-related project approved and supervised by the instructor is acceptable.)
Prerequisite(s): FW1445, LD2511

FW1605 - Field Placement I •
During field placement, students begin to link theory to practice. Students will participate in seminars to learn basic knowledge and skills necessary for a successful placement experience, and spend a block of time at a field placement site. In this first supervised placement, the focus will be on students becoming familiar with the role of the early

childhood educator and the program itself. Students will practice interacting and responding in positive ways to children, and engage in developmentally appropriate play with individual and small groups of children. Please note that time will be spent in the College's demonstration child care centre as part of the series of block placements. Opportunities to work with a variety of age groups across the series of field placement courses will be provided where possible.
Prerequisite(s): Valid First Aid Certificate
Co-requisite(s): EE1180, EE1340, EE1290, EE1420, FH1340

FW1610 - Field Placement II •
During this second supervised field placement students will continue to link theory to practice, participating fully and assisting with all aspects of the program. It is expected that confidence and competence is increasing in interacting with and guiding children's behaviour, and working with staff, families and community members. Students will begin to add developmentally appropriate materials to the learning environment to support children's play and will plan and implement a variety of developmentally appropriate activities for individual and groups of children. The importance of an inclusive, child-centred, active learning approach will be reinforced. Please note that time will be spent in the College's demonstration child care centre as part of the series of block placements. Opportunities to work with a variety of age groups across the series of field placement courses will be provided where possible.
Prerequisite(s): EE1180, EE1340, EE1420, FH1340, EE1290, FW1605
Co-requisite(s): EE1181, EE1341, FH1360, EE1421, EE1360

FW1710 - Field Placement I
Field Placement I provides students with the opportunity to apply knowledge and training in a real-world setting. The field placement also provides the student with a strong basic preparation for a wide range of professional practice. Using continuous assessment, students will be placed in a variety of approved settings such as long-term care facilities, hospitals, municipal recreation departments, and community agencies for a four-week (140 hours) period following course training. Throughout the semester, students will review field placement requirements and documentation, types of placements, and professional conduct. The student's progress will be evaluated in conjunction with a field supervisor (normally an employee in the placement agency).
Prerequisite(s): First Aid/CPR Certificate, Clear Certificate of Conduct, Vulnerable Sector Check, Updated Immunization Record, Host site documentation as required
Co-requisite(s): RS1100, RS1280, RS1451

FW1711 - Field Placement II
Field Placement II is an integral part of the curriculum allowing students to build on the knowledge and experiences gained from practical assignments and FW1710. It provides students the opportunity to apply knowledge and training gained from the Fall and Winter semesters in a work environment. Students will be prepared for placements based on accepted industry standards. Preparation in interview skills, resume writing, professional skills, and best practices will also be covered in the course.
Prerequisite(s): FW1710, RS1280, RS1100, RS1451, Documents required: Valid First Aid/CPR Certificate, Clear Certificate of Conduct, Vulnerable Sector Check, Updated Immunization Record, Additional host site documentation as required
Co-requisite(s): RS1255

FW2320 - Field Placement II •
This course consists of a six-week placement with a human services agency. In collaboration with the instructor, students will obtain their own placements and are encouraged to seek one that meets their interests and goals. Each student will be assigned a supervisor who will monitor and evaluate their progress. Students are responsible for completing and submitting field placement documentation for evaluation and grading.

(Please note: under extenuating circumstances wherein an external field placement is not secured, an equivalent industry-related project approved and supervised by the instructor is acceptable.)
Prerequisite(s): Successful completion of all courses in semesters 1 to 5; clear certificate of conduct; vulnerable sector check; updated immunization record

FW2605 - Field Placement III •
During this third supervised field placement the focus is on students working in teams along with staff to implement

the program. Students will plan cumulative play experiences and utilize webbing as a tool for planning of the curriculum. Students are expected to demonstrate initiative with regards to independently facilitating spontaneous and pre-planned play experiences for individual children, small groups, and large groups. Students are expected to demonstrate an inclusive approach to curriculum and interactions with families. Please note that time will be spent in the College's demonstration child care centre as part of the series of block placements. Opportunities to work with a variety of age groups across the series of field placement courses will be provided where possible.
Prerequisite(s): EE1181, EE1341, EE1421, FH1360, EE1360, EE1440, EE1480, EE2500, FW2610

FW2610 - Field Placement IV •
During this fourth supervised field placement, students are expected to demonstrate increased competence in planning and implementing the routines and schedule, preparing and implementing a cumulative curriculum to meet the needs of all the children, and interacting with parents and community service providers. With guidance, students will implement specific supports for children with challenging behaviours. Students will promote the philosophy of inclusion in all aspects of their interactions with children, families, and the community. Please note that time will be spent in the College's demonstration child care centre as part of the series of block placements. Opportunities to work with a variety of age groups across the series of field placement courses will be provided where possible.
Prerequisite(s): EE2180, EE2255, FW2605

FW2710 - Field Placement III
This course provides students with a four-week placement at an approved community-based agency/organization such as long-term care facilities, hospitals, youth serving agencies, government, provincial sport and recreation departments, and municipal recreation departments. During the placement, students will demonstrate their leadership skills while gaining invaluable experience in administrative practices and procedures in various areas including financial management, staff and public relations, program development, organization and government structures and functions, and facility operations. Prior to the placement, students will review previous placement experience documentation, type of placements available, and placement documentation issues and concerns.
Prerequisite(s): FW1711, RS1451, Documents required: Valid First Aid/CPR Certificate, Clear Certificate of Conduct, Vulnerable Sector Check, Host site documentation as required, current resume
Co-requisite(s): RS1320

FW2711 - Field Placement IV
Field Placement IV provides second-year students with experience in administrative practices and procedures with an approved community-based agency/organization. Through classroom and individual assessments, students will practice leadership skills and work independently in areas such as financial management, staff and public relations, program development, organizational administration and facility management. Students will be either physically or virtually assigned to a partnering agency, and design, plan, implement, and present a final product to the agency. Examples of community agencies that the student may be assigned to include long-term care facilities, hospitals, youth-serving agencies, government, provincial sport and recreation departments, and municipal recreation departments.
Prerequisite(s): FW2710, RS1320, Documents required: Valid First Aid/CPR Certificate, Clear Certificate of Conduct, Vulnerable Sector Check, Host site documentation as required, current resume
Co-requisite(s): MN1410

FW2800 - Field Placement
Students will work in the graphics industry under the direct supervision of an employer, with their progress being monitored and evaluated by faculty in the Graphics programs. The supervised field placement is an integral part of the total curriculum in the Graphic Design and Graphic Communications programs, and provides students with direct experience in the industry that can lead to a wide range of professional practice. (Please note: under extenuating circumstances wherein an external field placement is not secured, an equivalent industry-related project approved and supervised by the instructor is acceptable.)
Prerequisite(s): Successful completion of all program courses in Semesters 1 to 5, FW1180

FW2801 - Field Placement Reflection
Students will reflect upon and evaluate their field placement experience. Based upon this reflection and evaluation, students will have an opportunity to revisit skill-sets and areas for development.
Prerequisite(s): FW2800 or FW1451

FW2810 - Field Placement
Students will work in the graphics industry under the direct supervision of an employer, with their progress being monitored and evaluated by faculty in the Graphics programs. The supervised field placement is an integral part of the total curriculum in the Graphic Design and Graphic Communications programs, and provides students with direct experience in the industry that can lead to a wide range of professional practice. (Please note: under extenuating circumstances wherein an external field placement is not secured, an equivalent industry-related project approved and supervised by the instructor is acceptable.)
Prerequisite(s): Successful completion of all program courses in Semesters 1 to 5, FW1180

FW2811 - Field Placement Reflection
Students will reflect upon and evaluate their field placement experience. Based upon this reflection and evaluation, students will have an opportunity to revisit skill-sets and areas for development.
Prerequisite(s): FW2810

FW3200 - WIL Practicum •
This course provides an opportunity for students to gain experiential, hand-on learning in an approved community setting that focuses on providing inclusive programming and supports to children in the early years e.g., a regulated child care centre, a regulated family home, a pre-k or kindergarten classroom, or a parent and child drop-in program. Through a detailed work plan, reflections, journal entries, and application of program objectives, students will work in partnership with an on-site mentor who is working directly with a specific child. At the end of the practicum, students will submit a final report of work completed. Students will be on site for a minimum of two days per week, for a total of 13 weeks.
Prerequisite(s): EE3100, EE3105, EE3110, EE3115, EE3120
Co-requisite(s): EE3205, EE3200, EE3210, EE3215 *These courses may have been completed as prerequisites

GA1120 - Typography I
Students will be introduced to the history of the graphics industry and will study the historical evolution of typography from its beginning to its application in today's industry.

GA1121 - Typography II
Students will address contemporary issues in typography as they apply to print, web, and mobile devices. Students will develop design solutions for common typographic issues such as readability, legibility, navigation and coherence.
Prerequisite(s): GA1120

GA1130 - Digital Design Fundamentals
Students are introduced to digital design tools including vector and bitmap image manipulation, as well as digital layout fundamentals. Students will also learn to work independently on basic creative tasks using digital tools.

GA1140 - Vector Graphics
Students will gain an introduction to the basics of Vector Graphics used on dual platforms within graphic communications.

GA1170 - Graphics Problem Solving
Students will gain an understanding of practical and relevant mathematics specific to disciplines within the graphics industry and learn to directly apply relevant mathematics concepts. Students will learn about topics which emphasize problem-solving skills that apply practically to printing and design.

GA1180 - Graphic Design History
Students will gain a clear understanding of the history of the graphics industry. Students will study the historical evolution of typography from its beginning to its application in today's industry.
Co-requisite(s): GA1121

GA1220 - Color Management
Students will learn to effectively manage and use color in a digital graphic arts environment. Students will learn effective color management principles on both Apple MacIntosh and PC platforms, and cover color systems and

translations between color gamuts in detail. Students will also gain a clear understanding of the elements and principles of color theory, and how color can be used to create more effective images for the graphics industry.
Prerequisite(s): GA1170

GA1230 - Finishing & Bindery I
Students will gain an understanding of the background and methods used for finishing and bindery and how they apply to graphic communications.

GA1231 - Finishing & Bindery II
Students will gain an understanding of the advanced methods used for finishing and bindery as it applies to graphic communications.
Prerequisite(s): GA1170, GA1230

GA1320 - Digital Printing I
Students will receive hands-on skill development in printing to digital devices. Students are required to become proficient in the skill areas involved in providing short run, full-color documents and on-demand printing.

GA1321 - Digital Printing II
Students will gain an understanding of the principles of digital practices. The focus will be on advanced machine operation and quality control.
Prerequisite(s): GA1320, GA1421

GA1350 - Motion I
Students will be introduced to the principles and elements of motion design through studio practices at beginning and advanced levels. Students will be exposed to the first phase, "type in motion", which emphasizes the relationship between typography principles and animation fundamentals. Students will then gain knowledge during the second phase when an advanced applied approach to the language and principles of motion is explored. Students will also develop skills in digital creativity throughout this course.

GA1351 - Motion II

Utilizing current industry standards and techniques, students will expand upon the principles and elements of motion design studied in Motion I. Students will continue with studio lessons and practices at an advanced level and implement a practical demonstrable skill set in motion graphics.

Prerequisite(s): GA1350

GA1420 - Digital Page Layout I
Students will learn the basic technique of assembling visual elements.

GA1421 - Digital Page Layout II
Students will learn electronic page assembly using the techniques of page layout software on the computer. Students will learn about the flexibility of the page layout software as it applies to production for graphic communications.
Prerequisite(s): GA1420
Co-requisite(s): GA2570

GA1430 - Page Composition I
Students will gain an understanding of basic page composition as it applies to the graphics industry. Students will explore topics which emphasize developing digital layout skills using industry-standard software tools, while exploring different types of graphic design projects for traditional and digital printing processes.

GA1431 - Page Composition II
Students will gain an understanding of intermediate page composition as it applies to the graphics industry by working on long document design and production. Students are exposed to topics which emphasize developing digital layout skills while using industry-standard software tools, and exploring different types of graphic design projects for traditional and digital printing processes.

Prerequisite(s): GA1430

GA1470 - Web Processes
Students will be introduced to the basic skills in web processes. Students will be required to collect and process data from web-based applications, and this collected data will be processed and managed through software applications.

GA1520 - Image Manipulation I
Students will gain foundational skills required to use equipment and software to record, store, and manipulate digital images. Students will also gain an understanding of the hardware and skills required for the graphics industry.
Prerequisite(s): GA1170

GA1521 - Image Manipulation II
Students will gain advanced skills required to use equipment and software to record, store, and manipulate digital images. Students will also gain an advanced understanding of the hardware and skills required for the graphics industry.
Prerequisite(s): GA1170, GA1520

GA1625 - Print Technology I
Print technology allows for the reproduction of text and images on paper and other materials. This course introduces different methods that enables the printing of digital files. Students will prepare and print files using a digital printer, vinyl cutter, and through alternate methods of printing.

GA1626 - Print Technology II
Building on the skills and knowledge from Print Technology I, this course advances into innovative and trendy methods of print and application. Topics that will be covered are dye sublimation printing, laser engraving and cutting, and 3D sign application.
Prerequisite(s): GA1740, GA1750

GA1640 - Illustration I
Students will be introduced to the basics of illustration as it is used in the graphics industry, and will develop traditional and digital illustration skills. Observation and experimentation with current traditional and digital graphic communications drawing tools, and an emphasis on both print- and screen- based graphic design projects are the focus of this course.

GA1641 - Illustration II
Students will further develop their illustration skills using vector-based drawing software current in the graphics industry. An emphasis will be placed on complex projects that incorporate vector and bitmap illustration, as well as typographic and layout skills.
Prerequisite(s): GA1640, GA1120

GA1740 - Textiles Graphics & Imaging I
Students will gain an understanding of the techniques and methods of transferring digital images to a variety of textile products. The emphasis will be on creation, output, and production of graphic images.
Prerequisite(s): GA1140, GA1420

GA1741 - Textiles Graphics & Imaging II
Students will gain advanced computer and production skills in the program area. Students will focus on the development of professional skills acquired through a selection of self-directed projects.
Prerequisite(s): GA1740

GA1750 - Display Graphics & Assembly I
Students will be introduced to the techniques and methods of applying digital images to a variety of materials used in the sign and display advertising industry. Emphasis will be on creation, output and assembly of graphic images.
Prerequisite(s): GA1140, GA1421

GA1751 - Display Graphics & Assembly II
Students will gain advanced skills in display graphics and assembly. Student focus will be on equipment maintenance, team building, and productivity.
Prerequisite(s): GA1750

GA1880 - Business Practices
Students will develop an understanding of common business practices in the graphics industry. Students will be introduced to the business requirements of freelance graphic design work, including pricing, estimating, specification-writing, subcontracting, contract and copyright law, time management, taxation and self-promotion.

GA1890 - Business Practices
Students will develop their understanding of common business practices in graphic communications. Students will focus specifically on the business requirements of graphic communication work, including pricing, estimating, specification-writing, subcontracting, contract and copyright law, time management, taxation and promotion.

GA2320 - Digital Printing III
Students will gain the skills required to ensure the equipment is functioning to equipment manufacturers' specifications. Students will focus on efficient machine operation and maintenance.
Prerequisite(s): GA1321

GA2350 - Motion III
Students will be introduced to the principles and elements of motion design through studio practices at beginning and advanced levels. Students will be exposed to the first phase, "type in motion", which emphasizes the relationship between typography principles and animation fundamentals. Students will then gain knowledge during the second phase when an advanced applied approach to the language and principles of motion is explored. Students will also develop skills in digital creativity throughout this course.
Prerequisite(s): GA1351

GA2380 - Production for Designers
Students will receive a basic overview of production methods and equipment used in the graphics industry. After completion of this course, students will have an understanding of the equipment with supervised operation.
Prerequisite(s): GA1170, GA1431, GA1641

GA2420 - Digital Page Layout III
Students will learn the techniques of page layout using advanced electronic page assembly software on the computer. They will work with advanced features of the software plus the explore different types of software for page layout. Students will also develop electronic documents that will be published to mobile devices.
Prerequisite(s): GA1421, GA2570

GA2430 - Page Composition III
Students will gain an understanding of advanced layout as it applies to the graphics industry by working on electronic document design and production. Students will explore topics which emphasize enhancing digital layout skills while using industry-standard software tools, and while exploring different types of graphic design projects for screen-based documents.
Prerequisite(s): GA1431

GA2570 - Production Workflow
Students will gain the skills required to develop workflow methods while maintaining quality control. Students will develop estimate sheets, quotation sheets, job dockets, and a tracking system while using computer software and workflow devices developed by the student.

GA2640 - Illustration III
Students will further develop their illustration skills using vector-based and bitmap-based drawing software current in the graphics industry. Students will be working on advanced projects that incorporate vector-based and bitmap-based illustration, typographic and layout skills for both print and screen-based (static and motion-based) graphic design projects.

Prerequisite(s): GA1641

GA2720 - Design Management Identity
Students will gain advanced understanding of and experience with managing and developing complex identity systems for the private, governmental and non-profit sectors.
Prerequisite(s): MR1340, VA1231

GA2750 - Advanced Graphics Imaging
Students are required to research new technologies in graphics imaging and will choose to either develop their research or merge the data with current imaging methods. After a combination of lectures, students will conduct and document a self-study exercise which includes ongoing consultations with the instructor. Based on their research, each student will complete three projects and will present their findings to faculty and the remainder of the class.
Prerequisite(s): GA1740, GA1750, GA2420, GA1321, GA1520

GD1120 - Storytelling in Games I •
The game industry is comprised of many artistic and technical disciplines. As games evolve, storytelling is becoming a leading factor in the development of an immersive and engaging gaming experience. Like movies and books, games support much of the common literary and cinematic forms of narrative. Games provide the opportunity to take these storytelling tools deeper through interactivity and involving the player as an active member of the storytelling experience. Students will learn the influence classic storytelling has in games and examine the modern day narrative processes and experiences that entertain gamers today.

GD1130 - Game Design Theory •
Games and the concept of play are an important part of human culture from the prehistoric age through modern times. They serve purposes such as teaching basic survival skills, provide engaging entertainment, and promote education, health, and fitness. Effective game design determines the purposes that each game will serve, and how audiences will respond through the act of play. This course will explore how games influence culture, past and present, discuss the principles of basic game design, and examine the psychological, and sociological aspects of games.

GD1140 - Serious Games Theory •
Inspiring young minds to learn, exploring the depths of the ocean and outer space, saving lives, increasing personal wellness: these are examples of areas where games go beyond pure entertainment and expand into education and training for people of all ages and roles in society. Students will explore the history, key designers, industry, and career opportunities of serious games. Various types and categories of serious games will be analyzed and discussed. Games for education, vocational training, simulation, health, and wellness, as well as art games, will be explored in more depth.

GD1150 - Game & Level Design I
Game and Level Design I introduces students to the basic practices of creating games through procedural design practices. From the stages of conceptualizing a game idea to delivering a fully functional game, students will explore the structured elements of making games, create game design documentation, prototype game concepts, and playtest a game's functionality. Game and level design practices will be applied to developing original 2D digital games with custom art and audio assets.
Prerequisite(s): GD1130
Co-requisite(s): GD1160, GD1170

GD1160 - Art for Games I
This course covers traditional and digital concept art for games. Students will also be introduced to skills and techniques for creating 2D game art and pixel art. Participation in critical analysis and discussion provides feedback for improving work.
Prerequisite(s): VA1120, VA1110
Co-requisite(s): GD1150

GD1170 - Sound Design for Games

Sound is an important element that helps bring a game to life, communicate with the player, and deepen the immersive experience. Building an effective soundscape for a game is a creative process that involves several areas of focus such as sound effects, ambience, character dialogue, and music. Each one of these elements blend together to create a game atmosphere which might provide interactive feedback to the player, or pull them into an emotional, audible world. Students will be introduced to, and practice, the process of creating and editing sounds for implementation into game projects.
Co-requisite(s): GD1150

GD1180 - Game Industry Professionalism
Professional behaviour is important to having a successful career in the game industry, including interpersonal and online interactions. Students will learn about the uniquely casual yet intense workplace environment of game studios. This course covers topics such as teamwork, diversity, conflict resolution, and attitudes for success in the game industry.

GD1600 - Business of Game Development
The game industry has grown to be a major economic force in the global market. It is an exciting time for start-up game companies and large studios alike. Accessibility to game engines and tools, and an enormous player base on a variety of platforms has lowered barriers to entry into the game industry. This course will explore elements of business for game developers with examples pertaining to the game industry. Items such as trends, game pitches, intellectual property, and marketing will be covered.
Prerequisite(s): GD1150

GD2110 - Game & Level Design II
Casual and serious games are popular genres in game design. Easy-to-play but difficult-to-master games are what defines a casual game while serious games can offer a player more than casual entertainment, providing educational and informational experiences. Students will examine and discuss various types of casual and serious games and apply game design practices to develop a serious game based on task-based team development.
Prerequisite(s): GD1150, GD1140

GD2121 - Art for Games II •
This course introduces the design and creation of 3D art and animation for games. The basics of 3D modelling and texturing for game art will be introduced. Participation in critical analysis and discussion provides feedback for improving work.
Prerequisite(s): GD1160

GD2130 - Storytelling in Games II
Creative writing skills are an essential element of storytelling in games. Through developed story arcs, deep characters, and meaningful writing, games can provide unique narrative experiences that go beyond traditional writing by incorporating the element of choice. Choice driven stories allow participants to feel a sense of control and freedom over how their experience will unfold. In this course, students will utilize writing fundamentals to engage in practices of creative writing, detailed character development, and create an original story-based game featuring branching narrative.
Prerequisite(s): GD1120

GD2140 - Game & Level Design III
Good level design can draw a player into an immersive game experience. 3D level design reflect how people assess the space around them in the real world. By creating levels that deliver a sense of believability, based on perspective, games can be created that provide deeper engagement for the player. Multiplayer levels offer a sense of collaboration, competition, and a community element to game play. In this course, students will be introduced to early 3D game and level design practices, and become familiar with using a 3D level editor to build basic, multiplayer game levels.
Prerequisite(s): GD2110
Co-requisite(s): GD2150, GD2160

GD2150 - Art for Games III
As a continuation of Art for Games, this course will focus on research and design practices for a specific theme. Students will build skills in 3D modelling and texturing for game art asset creation for 3D game levels. Participation in

critical analysis and discussion provides feedback for improving work.
Prerequisite(s): GD2121
Co-requisite(s): GD2140

GD2160 - QA & Playtesting for Games
This course explores quality assurance and testing for the game industry from a professional viewpoint. Test planning, documentation and bug reporting are taught and practiced as a playtesting feedback mechanism for Game and Level Design III. Careers in quality assurance and testing are also covered.
Co-requisite(s): GD2140

GD3100 - Game & Level Design IV
Interactions within a level allow a player to engage with the game through active participation. Interaction design can introduce diversity in navigational exploration and involve deeper elements of challenge. By combining basic game mechanics in a level with original asset implementation, students can create unique, interactive game experiences. Elements such as physics and particles can add to the theme and atmosphere of the level. In this course, students will continue the practices of 3D level editing to begin creating a single player game experience.
Prerequisite(s): GD2140
Co-requisite(s): GD3110, GD3130

GD3110 - Art for Games IV
As a continuation of the Art for Games series, this course covers advanced art asset creation for implementation into 3D game levels including environments, props, particles, and effects. Students will also design and create game props with basic animation. Participation in critical analysis and discussion provides feedback for improving work.
Prerequisite(s): GD2150
Co-requisite(s): GD3100, GD3120

GD3120 - 3D Game Character Design
This course covers 3D game character design including concept, modelling, texturing, rigging, posing, introduction to animation, and presentation. Tools and techniques are utilized with a focus on application for game art. Participation in advanced critical analysis and discussion provides feedback for improvement of work.
Prerequisite(s): VA1140
Co-requisite(s): GD3110

GD3130 - Visual Narrative for Games
A picture is worth a thousand words and game stories can be intensified through the use of visual narratives. With the basic nature of human gestures and expressions, storytelling can come to life with dramatic influence. Students will examine the historical relevance of cinematography as it relates to game design. Incorporating visual elements into games and media begins with the preproduction process of storyboards and animatic design. Students will apply these preproduction processes and utilize video editing software to create animated storyboards as well as use in-game camera systems to create basic scripted events in a game level.
Prerequisite(s): GD2130
Co-requisite(s): GD3100

GD3140 - Game & Level Design V
A game experience can be improved when the action and environment facilitate good storytelling. The game world along with interface elements provide a canvas for delivering a game story. Revision and refinement are important processes when seeing a project through to completion. This course will focus on the completion of student single player levels from the previous Game and Level Design course. Through playtesting, revision, and refinement, students will complete and deliver a short single player game experience.
Prerequisite(s): GD3100
Co-requisite(s): GD3170, GD3150

GD3150 - Interactive Storytelling
Games as storytelling devices is a popular and growing trend in game development, and drawing attention to the narrative possibilities of interactive entertainment. Storytelling is an important element of game design that can deliver a narrative context to the events and actions of game play. Environments and interfaces also have the power to

influence a story experience and can be used to guide a player throughout the events of the game. In this course, students will develop in-game artifacts and utilize various literary, auditory, and visual forms of interactive narrative, providing deeper storytelling experiences to compliment game play and level design.
Prerequisite(s): GD3130
Co-requisite(s): GD3140

GD3160 - Portfolio for the Game Industry
Students will research current roles and opportunities within the game industry to conduct an organized, targeted job search. Refined and fully developed work samples specific to roles within the game industry will be selected and critically assessed for inclusion in a body of work. Using skills and knowledge learned in Visual Narrative for Games, students will create supporting media for job application and create an online portfolio to present samples and media in an industry standard convention.
Prerequisite(s): GD3130
Co-requisite(s): GD3170, GD3140

GD3170 - Art for Games V
This course is a continuation of developing game art assets for 3D game levels, including interface and artifact design, level décor, and polishing elements to bring a high-quality project to completion. Students will focus heavily on art production for the project combined with Game and Level Design V. Participation in advanced critical analysis and discussion provides feedback for improving work.
Prerequisite(s): GD3110
Co-requisite(s): GD3140

GD3180 - Game Design Capstone Project
The capstone project enables the learner completing a Video Game Art & Design diploma, in the final semester, to demonstrate the application of skills and knowledge developed throughout the program. This course incorporates comprehensive project development simulating industry practices.
Prerequisite(s): GD3140, GD3170, GD1180

GD3190 - VR & AR in Games & Simulation
Virtual and augmented reality technologies continue to emerge as exciting platforms for entertainment products as well as efficient and necessary resources for simulation training in various industries. Modern game engines are often used to develop virtual and augmented reality products, which apply game design theory and practices. In this course, students will examine the uses of these modern technologies and apply previous Video Game Art & Design studies and practices to create a virtual reality prototype.
Prerequisite(s): GD3100, GD3110

GE1110 - Geology I
In this course, students will be introduced to mineralogy; igneous, sedimentary, and metamorphic rocks; weathering and erosion; and the earth's internal structure. Field and lab exercises will provide students with opportunities to gather samples and practice identifying rocks and minerals.

GE1210 - Geology II
In this course, students will be introduced to geologic time, structural geology, topographic and geologic maps, earth structure, and the area geology for Newfoundland and Labrador. The lab component of this course includes lab and field exercises related to the identification of igneous, sedimentary, metamorphic rocks, and embedded mineralization.
Prerequisite(s): GE1110

GE1240 - Geology for GSET
This is an introductory course in physical geology and exploration geophysics designed for students in the Geomatics/Surveying Engineering Technology (Co-op) program. The course will begin with an introduction to physical geology and continue with an overview of tectonics and structure and will include weathering and erosion. The second component will be an overview of geophysical exploration tools. Laboratory work will relate directly to in class lectures.

GE1300 - Forest Soils
This course is designed to expose students to the basic concepts of soil science, soil sampling and analysis, and soil classification. These concepts are then utilized to allow the student to investigate forest soils in detail and to investigate the role of forest soils in forest site classification and productivity and the impact that forest practices have on soil properties and its implication to forest management.
Prerequisite(s): EY2210
Co-requisite(s): EY2211

GE1310 - Soil Fundamentals
This course is designed to expose students to the basic concepts of soil science, soil sampling and analysis, and soil classification.

GE1420 - Physical Environments
This is an introductory course designed to provide students with basic knowledge in both terrestrial and aquatic environments.

GE1502 - Petroleum Geology I
This course is a continuation of Physical Geology. It covers geologic processes occurring in and on the earth, structural geology and geological resources. Laboratory work includes the study of topographic maps and profiles, earthquakes and tectonics, construction of sub-surface geology maps and sections and field trips to places of geologic interest on the Avalon Peninsula.
Prerequisite(s): GE1520

GE1520 - Physical Geology
This is an introductory course in physical geology designed for students in the Petroleum program. It covers origin, distribution and deformation of igneous, metamorphic, and sedimentary rocks. Laboratory work includes the study of minerals and rocks with emphasis on identification and classification of sedimentary rocks.

GE2100 - Geological Fieldwork
In this course, the student will acquire skills necessary for field and underground mapping: use of Brunton and Silva compasses, pacing, plotting, sketching, layout and use of a field grid, use of maps and/or photos for control, and use of GPS for navigation and location. Students will draw finished maps and interpret sections manually, prepare simple geological reports, interact with NL GeoScience Online Database, and explore the use of drones for aerial photogrammetry.
Prerequisite(s): GE1210

GE2210 - Exploration Geophysics
In this course, students will be introduced to the application the most common types of geophysical surveys and equipment, including magnetic, gravity, and electromagnetic. Each technique will be covered using a combination of lecture, lab, and fieldwork.
Prerequisite(s): GE1210, SU1230

GE2310 - Intro to Structural Geology
In this course, students will recognize, classify, interpret, and analyze folds, faults, and fractures. In this descriptive study of the structural deformation of rocks, the applied use of structural geology is emphasized. Lab work involves the solution of three-dimensional problems related to mineral exploration and mine development.
Prerequisite(s): GE1210

GE2410 - Mineral Resource Evaluation
In this course, students will be introduced to the role of the Mining Engineering Technician in the process of mineral resource evaluation. Students will design drilling programs - laying out drill holes - using standard guidelines. Hands-on lithologic and geotechnical core logging, interpretation, and presentation of data will also be covered. Students will utilize field data to classify and estimate mineral resources following standard industry practices.
Prerequisite(s): GE1210, EG1235

GE2510 - Petroleum Geology II
This course covers the generation of oil/gas and the movement of oil/gas from source to reservoir. Further, the course will look at the exploration procedure and the methods of exploration for oil and gas both geological and geophysical. The main geophysical exploration tool "seismic exploration" will be looked at in detail.
Prerequisite(s): GE1502
Co-requisite(s): CH2330

GE2520 - Digital Map Making
In this course, students will convert geological field maps to digital maps using scanning and digitizing technology, software, and techniques, complete and integrate geological interpretation into digital maps and sections and prepare digital components of a simple geological field report. Multiple methods of creating digital maps will be introduced, including manual scanning and editing, use of AutoCAD, and use of GIS software.
Prerequisite(s): GE1210

GM1140 - Standard Work Shop Practices
This course is designed for students entering the Aviation Programs. This course enables the student to obtain the knowledge and skills required to select and use hand and power tools, precision measuring instruments, shop equipment and the knowledge to be able to identify different types of aircraft hardware.

GM1160 - Maintenance and Plumbing
This course is to inform the student of the responsibilities and safety requirements when working in an aircraft environment. This course will also enable the student to select materials and instructions so they can successfully complete a maintenance task as well as enable the student to identify and manufacture the different types of pressure and vacuum lines and hoses used on the various aircraft systems.

GM1165 - Maintenance and Service
This course covers the responsibilities and safety requirements when working in an aircraft environment. This is to enable students to position aircraft, select materials and instructions that will provide for the safe completion of a maintenance task. Students will perform servicing checks on both fixed and rotary wing aircraft. This course is to inform the student of the responsibilities and safety requirements when working in an aircraft environment.

GM1210 - Corrosion Control
This course will provide the student with the knowledge to identify various types of corrosion, the causes of corrosion and the susceptible locations of corrosion on aircraft structures. This course is designed to provide the knowledge to inspect aircraft structures for corrosion, assessment of damage, removal of corrosion, treatment of corroded areas and protection methods used to prevent or retard further deterioration of aircraft structural components.

GM1320 - Aircraft Weight and Balance
This course is designed to provide a student with an in depth knowledge of Aircraft Weight and Balance. Students will be required to differentiate between fixed wing and rotary wing weight and balance, as well as longitudinal and lateral center of gravity. Students will interpret manufacturers' specifications and procedures for weighing aircraft and compute a weight and balance report.

GM1420 - Non-Destructive Testing
This course is designed to provide the student with an in depth knowledge of Non-Destructive Testing (NDT) techniques. Materials and equipment will also be discussed.

GM1525 - Sheet Metal Fabrication
This course is designed to provide the student with the knowledge of aircraft structural fabrication and replacement. The student will utilize the knowledge and skills learned in previous aircraft structural repair courses. They will use aircraft technical drawings, follow guidelines and specifications to fabricate and replace aircraft structural component. The student will produce the certification as required by the Canadian Aviation Regulations for the completed projects.
Prerequisite(s): AF1240

GM1550 - Maintenance Regulations

This course will provide the student with the regulatory guidelines to be followed while performing maintenance on aircraft or aeronautical products as a requirement of the Canadian Aviation Regulations (CARs). Human performance in aviation maintenance will also be covered.

GM1600 - Structural Damage Repair and Assembly
This advanced course in aircraft sheet metal repair will further develop the student's knowledge and skill to assess damaged structures, procure a repair scheme, and embody a certified repair that meets airworthiness standards.
Prerequisite(s): AF1240

GS1110 - Cartographic Concepts

This course will engage students in the exploration of the cartographic communication process. By introducing concepts and processes that are central to cartography, the course will enable the student to build a broad cartographic foundation for concurrent and subsequent studies. Through a series of lectures, exercises, deliverables, and presentations the students will compute and maintain geographic accuracy while encoding real world phenomena using specific cartographic communication concepts.

GS1210 - GIS Database Principles
This course presents principles of database processing in a GIS environment; lab exercises and project work provide opportunities for students to develop skills in implementing and managing databases. Students will use Database Software and Structured Query Language (SQL) to build databases and manipulate data in preparation for future work in data processing and GIS analysis.

GS1320 - Principles of GIS
This course will enable students to explore the principles and fundamental concepts and types of Geographic Information Systems (GIS) and apply them in simple projects. Students will be introduced to the five main technical components of a GIS: input, storage, pre-processing, analysis and output using both the raster and vector spatial data models. A series of laboratory and mini-project exercises provide students with hands-on experience using current software applications.

GS1410 - Problem Solving and Programming
Geomatics software systems include programming capabilities to enable technical users to build specialized applications to process data and automate repetitive tasks. Using these facilities, a few well-placed lines of code can save days of tedium or can accomplish tasks that would otherwise not be feasible. In this course students will prepare to utilize these capabilities by: (1) developing problem solving and algorithm design skills, (2) implementing solutions in a high-level programming language. This course also serves as the foundation to the other programming and technical courses covered later in the GIS Applications Specialist program.

GS1510 - Remote Sensing and Image Analysis
This course introduces detection, delineation, interpretation, and measurement of physical/biological/cultural features on remotely sensed imagery. Students will acquire an understanding of critical remote sensing techniques and their application in a variety of sectors.

GS1610 - Surveying and Mapping
This course emphasizes geomatics principles as they apply to spatial databases. Building on the skill sets associated with measuring for maps and land type surveys, students will develop expertise in the use of equipment such as: total stations, GPS receivers, and data loggers to locate features and attach the attribute information. Through project work in the lab and field, students will gain practical experience in equipment use, maintenance and troubleshooting. Once collected, features will be placed in a GIS / Land Information System and appended to existing digital maps and plans. The resulting maps and GIS databases will be used to solve spatial queries related to land parcels.

GS2100 - Open Source GIS and Data Management Tools

This course will provide an introduction to open source tools for spatial and non-spatial data management. Particular emphasis will be on data summary and presentation of results. Students will use open source GIS software to reproduce commercial off the shelf software techniques to solve GIS problems and manage GIS data. Python and the Pandas Module will be used for data summary and manipulation. Pandas is a core module in the Data Scientist's tool box and has numerous applications for GIS.

GS2110 - Customization of GIS Applications
As GIS software packages become more sophisticated, there is a greater need for GIS specialists who not only perform GIS analyses, but also are highly skilled in automating GIS applications, and workflows. Automation may be done within the application itself, or by developing stand-alone programs that integrate GIS capabilities. This course introduces students to the basics of designing programs to facilitate the repletion of tasks and to perform unattended GIS workflows. Students will also learn how to develop customized GIS applications to meet specific user needs and how to link these applications to other programs.
Prerequisite(s): GS1410

GS2210 - Database Design and Development
This course builds on GIS Database Principles to introduce advanced relational database topics that are increasingly important for GIS and mapping professionals. Through application of the basic principles of relational database design, students will learn how to design a model of the users' view of their data and express it as an entity-relationship model. Core concepts of database development will also be explored, including normalizing tables, establishing appropriate relationships between data, establishing metadata, determining domains, and capturing business rules. The course includes topics in data processing with SQL and procedural extensions in industry-standard client server environments. The course also provides a detailed exploration of the Geodatabase.
Prerequisite(s): GS1210

GS2310 - Project Planning and Management
The skills developed in this course will help students select, design, build, and implement a complex GIS application in response to an industry defined problem, using a business project management model. The course will assist students in negotiating the complexities of project management unique to this sector, as well as issues such as client relations, time management and scheduling, costing and budgeting, data acquisition, negotiating intellectual property rights and copyrights and managing teamwork and interactions. Project design principles and cartographic standards, together with guest lectures, will provide a foundation for the iterative process of planning, establishing schedules, and writing a GIS project proposal. Project Planning and Management will act as an introduction to the major GIS project in the final semester, and develops a skill set critical to its success.
Prerequisite(s): GS1110, GS1210, GS1320, GS1410, GS1510, GS2512, GS2100

GS2410 - Spatial Analysis and Applications
This course will provide the opportunity to conduct advanced GIS analysis applications. The course is designed to deliver competencies related to spatial analysis techniques available within a GIS environment, and within the context of a variety of application areas. In addition, this course will apply methods for determining appropriate use of GIS within organizations. Conceptual material presented in lectures will be placed in an applied context through lab exercises and mini projects designed to strengthen practical understanding and awareness of GIS methods and methodologies.
Prerequisite(s): GS1320

GS2512 - Spatial Statistics
Following a review of basic statistics, this course introduces the student to the fundamentals of geostatistical methods relevant to geographic data and spatial analysis. The course begins with a brief review of descriptive and inferential statistics and their application to geographic data as a precursor to conducting applied statistical analysis focusing on spatial distribution of data, trend analysis, geographically weighted regression, machine learning techniques, CART analysis, and data mining.

GS2710 - Web GIS Development
This course introduces GIS students to the broad possibilities of the single greatest impetus for change in the GIS industry - the Internet. Web GIS Development provides an overview, and develops a conceptual understanding of,

existing Web-based applications for GIS and the innovations that will affect the shape of the industry's future. Students will create web GIS sites using the built-in capabilities of ArcGIS Server, and create applications using the ArcGIS Online Platform. Planning and development stages for a GIS website will also be covered, with practical work in accessing, displaying, querying, and analyzing GIS data over the Internet.
Prerequisite(s): GS1320

GS2911 - Advanced Remote Sensing
Airborne/space borne imagery will be analyzed using current imaging and GIS software(s). Increasing utility of the data from space-borne sensors will also be conducted, and in parallel, students will perform advanced fully automated (as well as semi-automated) data extraction.
Prerequisite(s): GS1510

GS3110 - Advanced Topics in Geomatics
Advanced Topics in Geomatics is designed to ensure that students are exposed to emerging issues and trends in the field as well as the most current technologies. Course topics will be selected through the input of advisory committee members, departmental faculty and students as well as through assessment of the professional literature and publications. Activities will include guest lectures, demonstrations of new technologies, applications and software, workshops, student presentations, field trips and, where possible, attendance at an external conference or workshop. The course is an important transition for students as they move from program graduates to entry level practitioners, helping them to begin professional networking, develop a career path and explore avenues for future professional development and areas of specializations.
Prerequisite(s): GS1320

GS3210 - Major GIS Project
This course provides the student with an opportunity to finalize the design, development and implementation of a GIS project initiated in the Project Planning and Management course. This team-based project will address a variety of GIS issues and use mapping techniques to promote the research, development, testing, and analyzing of real-world information in a real-world environment. Students will be challenged to assign responsibilities, create and maintain satisfactory working relationships with the client, accept feedback, meet project deadlines, manage the production of deliverables to industry standard, and formally present their findings. The team consists of students, instructors, and industry sponsors.
Prerequisite(s): GS2110, GS2210, GS2410, GS2310, GS2710, GS2911, GS3410

GS3410 - Spatial Database Applications
Through labs, mini-projects, and a collaborative class major project, students will gain competencies related to the functionalities and applications of ESRI ArcGIS geodatabases. This course will provide students with an extensive knowledge-base and skillset necessary to conduct high-level analysis in research and industry projects.
Prerequisite(s): GS1320

HC1300 - Hydrogen Safety
The physical and chemical properties of hydrogen create hazards that can potentially cause injury or death. Hydrogen workplaces require safety practices to protect workers. The Hydrogen Safety Practices course focuses on the identification of hazards relating to hydrogen. Safety precautions such as safety zones and personal protective equipment are examined. Emergency response procedures for hydrogen related incidents and evacuations are also covered.

HC1310 - Introduction to Process Operations
This course provides the students with knowledge of the common duties assigned to process operators across many types of industrial plants. The types of equipment and their related maintenance requirements and troubleshooting procedures are also introduced.

HC1320 - Hoisting, Rigging, and Lifting
This course will enable students to discover safe protocols and requirements for hoisting, lifting, and rigging equipment; its applications, limitations and procedures. Students will determine hoisting and lifting calculations, and apply safe standard procedures utilized to perform hoisting and lifting.

HC2110 - Ammonia Safety
The physical and chemical properties of ammonia create hazards that can potentially cause injury or death. Ammonia workplaces require safety practices to protect workers. The Ammonia Safety Practices course focuses on the identification of hazards relating to ammonia. Safety precautions such as safety zones and personal protective equipment are examined. Emergency response procedures for ammonia related incidents and evacuations are also covered.

HC2115 - Process Diagrams
In this course, students will gain practical experience in reading, interpreting, and drawing process block diagrams, process flow diagrams, and process and instrumentation diagrams (P&ID).

Prerequisite(s): HC1310

HC2120 - Final Control Elements
This course will explore the language and applications of final control elements, their accessories, components, and operation. Student will apply basic troubleshooting final control elements, accessories, and components in a simulated and/or industrial plant-based environment.

HC2125 - Storage of Liquids and Gases
This course introduces students to the storage of liquids and gases in the oil and gas industry, specific to vessels and storage tanks. Students will gain the necessary knowledge base and apply hands-on skills to perform the purging, bleeding, and venting of vessels.

HC2130 - Green Hydrogen Industry
The drive towards a sustainable green economy is becoming a reality due in part to the emergence of the green hydrogen industry. In this course the occupations and production facilities involved in producing green hydrogen are examined.

HC2135 - Pollution and Control
This course examines the measurement and management of different types and sources of pollution. It emphasizes three major types of pollution: air, water, and land. Methods to prevent and control pollution and the complexities associated with waste management and environmental effects are also learned in this course.

HC2140 - HMI and Process Control Systems
This course will provide students with an overview of how process control systems and Human Machine Interfaces (HMI), SCADA, PLCs, function and integral to ensuring a management mechanism in processing.

HC2145 - Process Instrumentation
This course is designed to introduce students to the basic instruments used for process variable measurement in the process industry. Topics covered in this course include pressure, level, flow rate and temperature measuring instruments.

HC2150 - Asset Maint. & Reliability
Development and application of preventive and predictive maintenance programs for industrial equipment and facilities is emphasized. Condition monitoring of equipment, predictive techniques including vibration analysis and fluid sampling are explained with practical applications and related exercises. A preventive and predictive maintenance program is developed as a project, using industry-recognized methods.

HC2200 - Hydrogen Production
This course provides an introduction to hydrogen and the fundamentals of hydrogen production. The student will learn about the uses and application of hydrogen in process plants including the operation of hydrogen units.

HC2215 - Ammonia Production
This course provides an introduction to ammonia and the fundamentals of ammonia production. The student will

learn about the uses and application of ammonia in process plants including the operation of ammonia units.

HC2220 - Basic Process Control
This course will enable students to discover basic process control and its purpose. The course will determine how basic controllers, their components and operations are configured, calibrated, maintained, tuned, commissioned, and troubleshot.

HC2225 - Advanced Control Systems
This course will provide the student with an overview of programmable logic controller (PLC) systems, distributed control systems (DCSs), human machine interfaces (HMI) software and hardware. The student will delve into how each control interacts with process systems and to develop applied skills.

HC2230 - Advanced Process Control
In this course students will review advanced process control and its purpose and the procedures used to, configure, tune, maintain, and troubleshoot process control systems. Students will perform procedures used to commission and optimize process control systems.

HC2235 - Work Planning
Work planning follows a similar process as project management. As such, the student is introduced to the practical aspects of project management and a workflow that ensures management oversight and 'closes the loop' so future jobs of a similar nature can be optimized.

HC2240 - Troubleshooting Techniques
Students will learn to establish and apply a general troubleshooting methodology to chemical process equipment. Definitions of good/normal performance will be discussed for each process/equipment type covered. Criteria to use when evaluating possible problem solutions will be examined. Students will practice troubleshooting real-world chemical process equipment malfunctions.

HC2245 - Hydrogen Fuel Cells
This course provides an introduction to hydrogen fuel cells. The structure and underlying electrochemical principles are examined. Students will learn procedures pertaining to production, operation, and maintenance of hydrogen fuel cells.

HG1110 - Applied Science for Allied Health
In this course, principles of chemistry, biochemistry, and physics are studied as they apply to the practice and study of several allied health sciences, including but not limited to respiratory therapy, medical laboratory technology, ultrasonography, and medical radiography. Major topics include bonding, matter, solutions, equilibrium, and electrochemistry. The fundamental concepts covered in this course will form the basis for further studies in allied health sciences.

HG1300 - Professional Practice
This course provides an awareness of key professional aspects of health care settings as expected in a rapidly evolving clinical environment. Prior to beginning a clinical rotation, students must be cognizant of the personal, operational, and behavioral issues affecting the clinical practicum and the broader health care environment which involves both patients and other health care professionals. This course will allow students an opportunity to develop basic skills related to health care professionalism, interprofessional collaboration, and teamwork in the health care setting prior to beginning their first clinical rotation.

HG1500 - Working in Healthcare
Students will examine the concepts of working in healthcare with a contemporary lens. Historical aspects of the Canadian Health Care System and recent changes to the system are explored. The significance of these changes to Canadians and to the roles of employees in the field will be considered. Areas to be addressed include: health and the individual, group behaviour, management and employee decision making, conflict and negotiation, motivation, and organizational culture. Application of these concepts to related work settings provide an employee's perspective to working in a rapidly changing field.

HG1681 - Ethics in Health Care •
This is an introductory course in health care ethics, legal issues, and workplace concerns. The student will be aware of, understand, appreciate and evaluate commonly encountered ethical, legal and professional problems in the workplace. Through course content, lectures, selected readings and student discussion, ethical and legal theories will be examined, together with what constitutes professional behaviour, values and practical wisdom. These concepts will be applied to current issues related to healthcare professionals.

HG2051 - Professional Practice & Ethics
This course provides an awareness of current trends and the healthcare industry as expected in a rapidly evolving clinical environment. The student will learn the legal considerations, professionalism, patient care, teamwork and interprofessional skills pertaining to the clinical practicum. Emphasis will be placed upon preparing the student for their practicum experience. The student will learn the aspects of the personal, operational, and behavioral issues that affect communication with patients and professionals. This course will allow the students to learn interprofessional communication skills to enhance the clinical experience.

HM2521 - Events Management
This course is designed to give students an introduction to developing, planning and executing events. The course examines practical information on all aspects of creating, organizing and managing events, such as selecting the event; choosing the venue; preparing and managing budgets and promotions; scheduling and staffing; coordinating programs and entertainment, food and beverage, décor, technology, media and security; risk management and evaluating after the event. The economic impact of events will also be discussed.

HN1100 - Industrial Relations •
This course provides an introduction to the theory and practical application of industrial relations in Canada. Through the course, students will gain an understanding of various industrial relations models, the structure of the Canadian Labor movement, the process of union organization and recognition, the collective bargaining process, administration of collective agreements, and various methods for dispute resolution and industrial dispute tactics. In addition to theoretical learning, students will engage in case studies and research on current topics in industrial relations to reinforce their understanding.

HN1200 - Human Resource Management •
This is an introductory course in the theory and practice of human resource management which affects every aspect of the workplace. The course focuses on the fundamentals of human resource management in the Canadian milieu.

HN1230 - Human Resource Management I •
This is an introductory course in the fundamental principles and practices of strategic human resource management today. The student will explore the law and human resource management, human resource planning, job analysis and job design, recruitment, selection, socialization and employee onboarding, training, development, and career planning. Theoretical learning will be reinforced with case studies and current article reviews.

HN1240 - Human Resource Management II •
This is an introductory course in the fundamental principles and practices of strategic human resource management. The student will explore performance management, direct compensation, indirect compensation (employee benefits and services), communication and employee relations, workplace safety and occupational health, industrial relations framework, workforce diversity and international human resource management, and human resource metrics.

Theoretical learning will be reinforced with case studies and current article reviews.
Prerequisite(s): HN1230

HN1400 - Occupational Health and Safety •
This is an introductory course in the fundamental principles and practices of occupational health and safety (OH&S). Students will examine the legislative framework regulating OH&S. Students will learn about hazard recognition, assessment, and control techniques, as well as the physical, biological, chemical, and psychological hazards in workplaces. The topics of workplace compensation, the costs of accidents, injuries and workplace illnesses, accident investigation, and disability management will be examined. Current OH&S issues will be explored. Students will have the opportunity to apply various OH&S practices and techniques with all students obtaining WHMIS certification.

HN2100 - Collective Agreement Administration •
This course will examine in depth the issues involved in the interpretation, application, and administration of a collective agreement. The student will explore the legal requirements and issues in interpreting and administering collective agreements, the collective bargaining rights of the employer and union, collective agreements clauses and terms, the negotiating of a collective agreement, and the administration of a collective agreement. The impact of a collective agreement on human resource management will be examined throughout the course. Students will have the opportunity to examine and interpret collective agreements and apply their knowledge through the use of case studies and application assignments.
Prerequisite(s): HN1100

HN2110 - Dispute Resolution •
This course examines dispute resolution in the workplace, both union and non-union environments. Students will develop a deeper understanding of the nature of conflict and how it may be effectively managed. A foundational understanding of how grievances, as well as other disputes emerge, and how they are effectively handled is examined.

A continuum of approaches to managing and resolving formal grievances and other disputes are explored - ranging from adversial resolution processes to more cooperative alternative dispute resolution approaches. These approaches are examined as part of an organization's larger conflict management system to resolve disputes and promote effective worker voice. As these dispute resolution practices are examined, emphasis is placed upon the development of practical skills in conflict resolution. Aside from conflicts that arise from daily work, conflict that may emerge during the negotiation of collective agreements are explored along with associated dispute resolution options.

Forms of employer and worker cooperation are also examined in the course, including the activities related to labour-management committees, worker participation programs, and labour -management partnerships.
Prerequisite(s): HN1100, LW1225, HN2100

HN2130 - Recruitment and Selection •
This course will examine the current process, practices, and issues involved in the human resource function of recruitment and selection. Students will examine theories and best practices in talent acquisition, specifically, how recruitment and selection links to organizational strategic goals. Students will learn all aspects of the recruitment process, including job analysis, attraction and recruitment of candidates, the employee selection process, decision-making methodologies, recruitment and selection metrics, and current and emerging trends in recruitment and selection. Students will have the opportunity to apply various staffing techniques and practices using case studies and application assignments.
Prerequisite(s): HN1240

HN2140 - Attendance and Disability Management •
This course will examine in some depth the current processes, issues and practices involved in attendance and disability management. The student will explore the various laws and regulations affecting the practice of attendance and disability management; attendance management systems/procedures; disability management programs; best practices in disability management; legal and ethical issues in disability management; disability management in a unionized environment; and attendance management and disability management policy/plan development. Students will have the opportunity to research various attendance management and disability management practices and procedures.

Prerequisite(s): HN1240, HN1400

HN2150 - Training and Development •
This course will examine the role and the importance of training and development in our workplaces. It will explore current processes, issues, and practices involved in the training and development activities in organizations. The student will examine training needs analysis, training design and development, training methods, training delivery, training evaluation, management development, and emerging trends in the field. Students will have the opportunity to apply various training and development techniques and practices using case studies and application assignments.
Prerequisite(s): HN1240

HN2195 - Inclusion, Diversity, and Equity •
In today's global and interconnected world, it is essential to embrace diversity and foster human connections. This course provides an in-depth exploration of inclusion and diversity, with a focus on cultivating a sense of belonging and well-being for all individuals. The course emphasizes the importance of creating an inclusive culture that values diversity and promotes human connections to support total health and wellness, including mental health.

Students will delve into the critical importance of total health and wellness, including mental health, in fostering inclusion and diversity. They will learn about the role of employers in creating a supportive and healthy workplace and explore ways to promote mental health and well-being. Students will be able to create an inclusive culture and learn practical strategies for promoting human connections and well-being in their personal and professional lives.

HN2200 - Strategic Compensation and Benefits •
This course will explain in some depth the key issues, processes and techniques involved in planning, designing, and administering a compensation and benefits strategy. The student will explore internal alignment; external competitiveness; performance management; administration/budgeting; role of government and pay discrimination; and employee benefits. Students will have the opportunity to apply various compensation practices and techniques with case studies and application assignments.
Prerequisite(s): HN1240

HN2215 - Human Resource Planning •
This course will examine in some depth the fundamental issues, principles, and practices of strategic human resource planning. The student will explore human resource strategies and plans; environment influences/issues; staffing strategies; forecasting techniques; and managing and measuring the human resource function. Theoretical learning will be reinforced with application assignments.
Prerequisite(s): HN1240

HN3110 - Current Topics in Human Resource Management •
This student-led seminar-based course will examine issues, topics, and trends in human resource management that are of recent and current concern to human resource professionals today. Students will research, develop, and present a seminar/paper on selected issues/topics/trends from among the following areas explored in this course: the field/practice of human resource management; industrial relations; recruitment and selection; occupational health and safety; employment and labour law; collective agreement administration; attendance and disability management; compensation and benefits; human resource planning; and dispute resolution. In addition, students will have the opportunity to research and critique a current journal article or create a blog based on current topics in Human Resource Management.
Prerequisite(s): HN1100, HN1400, HN2100, HN2130, HN2140, HN2200

HR1120 - Human Relations
This course is designed to create an awareness of the importance of effective interpersonal skills in personal and professional environments, and to provide an opportunity for students to learn and practice these skills. The student will examine the basic elements of interpersonal communication and practice effective communication skills in personal and professional relationships. The course emphasizes interpersonal skill development through the process of experiential learning; students will practice these skills by writing reflective essays, identifying their skill development progression and participating in role-plays, skits and presentations.

HR1215 - Professional Development •

This course provides students with training in career planning, job search and interview techniques, workplace professionalism, and field placement preparation. Students will acquire skills needed to excel in their chosen career paths within the tourism sector. By the end of the course, students will be equipped with the knowledge and confidence to navigate the job market effectively and thrive in professional settings.

HR1300 - Communications & Human Relations •
Students will develop communication skills associated with effective human relations. Knowledge and skills will be developed in effective listening, and oral and written communications.

HR2121 - Public Relations
This course concentrates on the skills necessary to develop public relations for music business purposes. A combination of theories/concepts and practical illustrations are used to explain the application of public relations.

HR2200 - Human Relations
This course is a study of the basic principles of human relations, and the behaviour of the people in organizations as they strive to achieve both personal and organizational goals.

HR2210 - Human Relations
This course is designed to create an awareness of the importance of effective interpersonal skills in personal and professional environments, and to provide an opportunity for students to learn and practice these skills. The student will examine the basic elements of interpersonal communication and practice effective communication skills in personal and professional relationships. The course emphasizes interpersonal skill development through the process of experiential learning; students will practice these skills by writing reflective essays, identifying their skill development progression and participating in role-plays, skits and presentations.

HR2230 - Human Relations
This course is designed to provide the learner with an introduction to the complexities of human interaction with respect to the work place. The course material will contribute to a better understanding of subject matter studied in other courses.

This basic course in human relations emphasises the role of the individual within an organization. Topics include, but are not limited to: self analysis, including attitudes, self-concept, communication style, motivations and organizational values; improving human relations, constructive self-disclosure, emotional control, positive reinforcement and first impressions; leadership and supervision, considering conflict resolution and management, prejudice, discrimination, and sexism. Learners will be required to attend and participate in weekly workshops, and submit a structured, reflective journal.

HY1106 - Art History
This course covers western art history to the twenty-first century. Students are introduced to the basic art-historical concepts with topics including major art movements and artists, the cultural and social meanings and relevance of art, and exploring period costume and jewelry while also discussing crucial terminology such as quality and beauty.

HY1120 - Prehistory to Renaissance •
This is a survey course of the history of Western art from prehistory to the early Renaissance period. It will examine the importance of historical context in the development of visual culture and its relationship to the interpretation of art. Students will be introduced to art historical concepts and develop an understanding of works of art as aesthetic objects and cultural artifacts.

HY1130 - Renaissance to 20th Century •
This is a survey course of the history of Western art from the late Renaissance to the 20th century. It examines art historical concepts, the significance of the social, religious and political context for the development of visual culture and the interpretation of ideas in art. Students will develop skills in critical thinking, visual communication and an understanding of how art history informs contemporary art practices.

HY1201 - Craft History
This course is designed to introduce students to both traditional and contemporary craft. Topics covered include concept, functions and origins of craft; techniques, technologies, and culture of craft; major craft movements; and historic craft works. Students will be given an opportunity to appreciate craft by participating in field trips.
Prerequisite(s): HY1106

IA1010 - Indigenous History of NL •
Indigenous History of Newfoundland and Labrador will provide an Indigenous perspective of the historical and cultural diversity of Canada's Indigenous peoples with special emphasis on Indigenous peoples of Newfoundland and Labrador, from pre-contact to Confederation to contemporary challenges.

IA1200 - Indigenous Arts & Culture •
This course has been developed for students to explore Indigenous arts and culture by using a variety of materials. The course will emphasize Indigenous cultural expression and artistic creation through various mediums. Students will examine oral tradition, storytelling, memoirs, literature, dance, and other art forms.

IM1370 - Information Analysis & Communication
This course focuses on the techniques required to effectively gather information for the purpose of developing communication tools to support an information management (IM) program. Topics include the effective use and management of email and messaging technologies, researching IM requirements, survey development design, delivery and analysis, interview techniques and document design. Students apply their research to the development of an IM-specific policy, procedure which will form the basis of a workshop based on adult learning principles.

IM2100 - IM Business Principles & Practices
Digital workplaces rely on accurate, complete and timely information flow to meet operational, legal and regulatory requirements. This course focuses on information handling as integral to effective and compliant business processes. Concepts include the need for good records creation and the Duty to Document, Business Process Analysis (BPA) fundamentals, Unstructured versus Structured Records, Managing Database Records, Business Systems and ERP Systems. Students will review requirements for standard administrative lines of business including Human Resources, Financial, Facilities as well as functional/operational processes. Students will apply BPA techniques to analyze and document business requirements and make recommendations for improved case file management.

IM2110 - Information Privacy and Security
This course provides students with an understanding of the need for privacy and security in the IT environment. The course includes the following aspects of privacy and security: history of privacy and security, core concepts, the IT environment, policy and program requirements, considerations through the information life cycle, systems and applications, common risks, techniques, online issues, incident response management and education and awareness.
Prerequisite(s): CR1050

IM2115 - IM Strategic Documentation
Planning and assessing Information Management (IM) program components, processes and requirements are essential to an organization's ability to demonstrate due diligence in meeting compliance requirements, identifying and mitigating risks and to communicating goals and performance. This course requires students to combine their knowledge of IM requirements and practices with tools and techniques to gather, analyze and present findings or recommendations. Topics include IM Program Planning and Reporting, IM Capacity/Maturity Assessment, Privacy Audit, Investigations, Request for Proposal (RFP) and Training.
Prerequisite(s): IM1370, OP1401

IM3010 - Orientation to the IM Work Exposure
The work exposure is an integral part of the Information Management program's curriculum. Work exposure opportunities are arranged by the Work Exposure Coordinator for the program but ultimately must be secured by students in competition with all applicants for the position. This course focuses on content that will assist students in

finding a meaningful placement and prepare students for a career in enterprise web development by fine-tuning the skills cultivated throughout the program.

JL1010 - Journalism Ethics
Students will apply journalistic ethical standards characterized by truthfulness, compassion, transparency, accountability, and independence. They will examine cases in which the duty to tell the truth might conflict with the duty to minimize harm. In so doing, they will apply principles of ethical reasoning to resolve such dilemmas. Students will discuss ethical issues in journalism. They will examine the philosophical foundations of journalism ethics, the pressures exerted upon journalists to act unethically, and the qualities of character and intellect needed to withstand such pressures.

JL1110 - Introduction to Journalism
This course introduces the theory and practices of professional journalism. Students will obtain a foundation in reporting and news writing skills, including the fundamentals of research, interviews and news article writing. They will discuss accuracy and deadlines, conceive story ideas, and research and report the news. The function of journalism and the journalist in society will be examined in depth.

JL1120 - Reporting Essentials
Students will cover a variety of general assignment stories as entry-level reporters. They will develop the rational, analytical, editorial, and reflective skills required of all journalists. Students will also write short profile features while incorporating elements of narrative.
Prerequisite(s): JL1110

JL1130 - Audio Journalism
This course emphasizes the rudimentary skills in delivering effective radio news storytelling, including professional formatting, writing conventions and presentation. Students will use professional broadcast tools for radio including digital audio recorders, a Digital Audio Workstation (DAW) with non-destructive audio editing software, and a radio sound board for live broadcast. The course will provide the theoretical and technical foundation students require to effectively craft, record, and execute radio news stories.

JL1140 - Current Affairs
Through class discussions and presentations, students will develop the ability to relate current affairs to their own lives and to the communities they serve. Students will devise strategies for following major issues and events at local, provincial, national, and international levels. They will research the background of major current issues and events, as well as provide context and draw connections between them.

JL1160 - Video Journalism
In this course, students will demonstrate how to produce news and current affairs videos. They will apply principles and practices of news video production common to both TV and online consumption including visual storytelling principles, script writing, presentation, composition, lighting, audio, and editing.

JL1170 - Broadcast Journalism
In this course, students will further develop the principles and practices of broadcast journalism, including writing for television and radio; producing video and radio news clips; producing radio news programs, producing TV news programs, and speaking on radio and television. Students will apply the technical and editorial knowledge acquired in both Audio and Video Journalism to create longer broadcast pieces that achieve greater depth with higher production values.
Prerequisite(s): JL1130, JL1160
Co-requisite(s): JL2120, JL1841

JL1210 - Freelance Journalism
Students will attain skills essential to the freelance journalist including how to pitch and market freelance stories for different platforms, manage their freelance careers as businesses, negotiate payments, and uphold their legal rights. They will also examine opportunities to market their work directly to the public. Each student will produce and sell at

least one print, broadcast or multimedia piece to a professional news organization.
Prerequisite(s): EP2010

JL1220 - Professional Wellness
This course provides students with the knowledge and skills to help promote their health and wellness while working. Through the completion of workshops and quizzes they will be provided with tools to help identify and minimize physical and mental health risks in journalism workplaces.

JL1250 - Covering Indigenous Communities
Student journalists will gain a better understanding of Indigenous history, culture and current issues. They will equip themselves to cover Indigenous communities with a balance of open-mindedness, insight, empathy, respect and fairness. Student journalists will examine the history of Indigenous peoples within Canada, particularly within Newfoundland and Labrador. Topics will include treaties and Indigenous rights; Indigenous law; Indigenous-Crown relations; the history and legacy of residential schools; intergenerational trauma; and the United Nations Declaration on the Rights of Indigenous Peoples. Student journalists will examine diverse cultural values and practices within Indigenous families, communities, and groups. Finally, they will apply sound principles in reporting about Indigenous peoples, communities and issues.

JL1340 - Digital Reach and Engagement
Students will use social media to report the news, reach audiences, engage people, and attract them to content. They will experiment with social media platforms and apply methods to reach and engage audiences. Students will apply principles of search engine optimization (SEO) to achieve high search-engine rankings to expose content to a wider audience. They will use various analytics tools to measure and improve the performance of their online content.

JL1345 - Mobile Journalism
Students will use mobile devices as audio and video journalism tools. With audio and video applications, students will record, edit, and upload content using mobile devices. They will gain experience by practicing mobile journalism in the field.

JL1355 - Podcasting
Students will create podcasts by applying audio and video journalism principles. They will analyze and emulate professional journalism podcasts and apply methods to grow an audience. The principles of conducting long-form interviews along with strategies for running a financially successful podcast will be examined.
Prerequisite(s): JL1130

JL1420 - Journalism Law
This course analyzes legal issues common in journalism. Students will examine the foundations of Canadian law and how the Canadian legal system functions. They will investigate the reporter's role in safeguarding both freedom of expression and the integrity of the legal system. Students will discuss legal concepts including defamation and contempt of court and will apply ethical standards of journalism when covering criminal and civil cases.
Prerequisite(s): JL1010

JL1840 - Newsroom I
Newsroom I is a practical course in which students apply journalistic principles acquired in previous courses. Students will utilize platforms such as print, broadcast and the Internet. The course seeks to emulate a professional newsroom setting, complete with story meetings, assignments, and strict deadlines. The students will maintain a website, and produce a weekly radio show and various video projects. Emphasis is placed on developing sound journalistic skills such as effective time management and producing quality work.

JL1841 - Newsroom II
Newsroom II is a practical course in which students apply journalistic principles acquired in previous courses. Students will utilize platforms such as print, broadcast and the Internet. The course seeks to emulate a professional newsroom setting, complete with story meetings, assignments, and strict deadlines. The students will maintain a

website, produce a weekly radio show and various video projects. Emphasis is placed on developing sound journalistic skills such as effective time management and producing quality work. Students are expected to apply the principles developed in other courses.
Prerequisite(s): JL1840
Co-requisite(s): JL2120, JL1170

JL2120 - Beat Reporting
Students will learn how to cover major beats such as politics, business, sports, entertainment, and lifestyles. The course also covers advanced principles of feature writing.
Prerequisite(s): JL1120

JL2210 - Advanced Newsroom
In this course, students will apply investigative journalism techniques and skills. In collaboration with others, they will produce a news website and a regular broadcast/webcast while meeting strict deadlines. In addition to daily and weekly deadline stories, the students will produce one major story incorporating accumulated knowledge and experience.
Prerequisite(s): JL1010

JL2215 - Internship Preparation
This course will prepare students for internships by explaining the structure of newsrooms and how they work. Students will also discuss professionalism with management, staff, and the public; conflict resolution; and their responsibilities as an employee. Students will arrange internships for the spring semester.

JL2220 - Public Relations
In this course, students will be introduced to journalism as it relates to public relations. Students will write news releases, set-up and participate in news conferences, analyze the duties and responsibilities of a public relations specialist, and evaluate the strategies used in public relations to both access information and respond to media.

JL2225 - Data Journalism
In this course, students will find, scrape, clean, analyze, and clearly present data that is important to the public interest. They will use spreadsheet, data scraping and data cleaning applications as reporting tools. Students will create interactive graphics using data visualization software. They will produce a multimedia story about an important public issue, relying upon both data and the people behind the numbers to tell that story.
Prerequisite(s): JL1120, JL2120

LD1120 - Leadership Theory
This course is the first of three leadership courses, and introduces the concepts of group dynamics, team and goal development, and group structure. Exploring effective methods for communicating within groups and identifying strategies for problem solving and collaborating are also included. Students develop and practice these skills through various experiential learning opportunities.

LD1121 - Leadership Practice
This course is the second of three leadership courses designed to help students work effectively with various community groups. Community organizational structure is studied. Students are introduced to fundraising concepts and strategic planning and will develop and implement a fundraising activity to apply their knowledge. These opportunities provide students with initial connections and contacts in the community which are vital for demonstrating competencies in planning and organizing a community project. Decision making, meeting management, facilitation, recruitment, motivation, fund-raising, board development, supervision, mediation and planning are the major topics. Case studies, simulations, role play and formal exams are part of the instruction and evaluation process.
Prerequisite(s): LD1120

LD1200 - Intro to Human Services

This course introduces the student to the human service field and profession. The principles that underlie the delivery of human services will be examined and the knowledge, skills and values relevant to human service work will be identified and analyzed. Through practical and applied opportunities, students will explore and experience the environment in which human services are delivered. Personal suitability for human services will be determined through a systematic approach to examining human service practice while providing current examples of human service work. Students will identify critical components and approaches to helping and empowering others through a human service model of delivery and will also examine the importance of self-care and self-awareness. Finally, students will identify methods and processes of supporting individuals and communities through advocacy and organizing.

LD1210 - Media & Public Relations
This is an applied media and public relations course designed for students intending to work in the human service field. Students will explore how best to develop strategies and campaigns that fit the needs of individual non-profit agencies and will learn how the concept of public relations and the types of media have changed in the 21st century. Applying new concepts and strategies will teach students to prepare a public relations strategy for an organization and demonstrate use of various forms of media, including social media, as a way to address the needs of individual organizations. Upon completion of the course, students will be able to address the media through interviews, give presentations, develop a public relations strategy, and use social media to market an organization as well as fulfill requirements such as recruitment and fundraising.

LD1220 - Effective Leadership •
This course is designed to develop effective leadership capabilities within organizations. Topics include effective leadership, equity, diversity, and inclusion, effective communication in organizations, meeting management and facilitation, supervision, and conflict management.

LD1300 - Professional Certifications I
This course provides students with the knowledge and skills to identify and assess crisis development in human service agencies and to implement appropriate strategies for prevention and intervention. Students will acquire the appropriate knowledge and skills through the completion of a series of workshops and certifications.

LD2100 - Community Development
This course introduces students to the major concepts, principles and challenges of the community development field. It allows students to take a critical look at conventional approaches to development, as well as theoretical influences on current community development practice. Students are further encouraged to examine best practices in international development and discover the common framework where these two intersect. Through the examination of both community and international development, students will learn about the diverse roles and occupations within the field.

LD2110 - Change Leadership
This course is the third and final leadership course designed to provide students with the opportunity to work extensively with an identified community partner. Students practice and develop their leadership skills by responding to a community needs assessment. Students learn what it takes to become change agents by developing and implementing a sustainable project from beginning to end. In true partnership with a community agency or organization, students will develop a strategic plan, implement that plan, and evaluate the learning process.
Prerequisite(s): LD1121

LD2220 - Interviewing Skills
This course is designed to develop the basic skills and knowledge necessary to conduct effective interviews in helping relationships. Using a micro skills training model, students will examine a framework within which interviewing takes place. Students will identify practical interviewing and basic counseling strategies, and apply interviewing skills in a variety of situations, through the extensive use of role-playing, case studies and report-writing.

Prerequisite(s): HR1120

LD2250 - Diverse Populations
Diverse Populations will position students to explore the social/cultural context of helping relationships as guided by the population groups. Students will gain a greater understanding of working with diverse populations by examining topics around immigration, settlement, and integration into society. Students will learn to view these groups in a more holistic way by reading, studying and discussing a selection of essays, articles, and stories written by or in cooperation with members of these populations. Students will grasp the impact stereotypes have on individuals and groups within Indigenous, Immigrant and Refugee, and the lesbian, gay, bi-sexual, transgender, queer and two-spirit (LGBTQ2S) community. Students will learn to think, reflect, and develop appropriate practice strategies for working with individuals, groups, and the community.
Prerequisite(s): SC1110, SC1130

LD2300 - Intro to Social Research
This course is an introduction to social research. Students will learn to approach research as a process which takes place in three phases and each phase has specific steps to follow. On completion of this course students will be able to do the kinds of research required for jobs in marketing, social policy, social work, politics, communication, or community work.

LD2400 - Voluntary Non-Profit Sector
This course introduces students to the non-profit volunteer community sector and various strategies for building and financing community development ventures. Students will identify techniques for creating innovative solutions to meeting community challenges. With a focus on the management of human and other resources in the volunteer and non-profit (VNP) sector, students will be introduced to management instruments, financial concepts, proposal writing, revenue generation, and fundraising. An experiential learning approach will help to establish skills through projects and assignments.

LD2500 - Project Management
This course focuses on project management. Students will work through the process required for taking a project from the creative phase to project completion. Students will create a project, monitor the budget, identify staffing and work through other requirements for the successful completion of a project. Microsoft Excel will be used to develop spreadsheets and to create charts and tables to enhance the appearance of the project proposal report. Independently, students will research, develop, and write a project report.

LD2511 - Professional Certifications II
This is the second Professional Certifications course and offers further development opportunity for students to gain the knowledge and skills necessary for identifying and assessing crisis development in human service agencies. Students will learn to implement appropriate strategies for prevention and intervention while acquiring the appropriate knowledge and skills during the completion of a series of workshops and certifications.

Prerequisite(s): LD1300

LW1070 - Ethics, Sustainability & Law
This course introduces learners to the legal and ethical rights, obligations and responsibilities of the engineering technician profession in the work place. Learners will gain an understanding of the intent and application of professional codes of ethics, Torts, Contract Laws, and environmental protection regulations.

LW1100 - Business Law I
This course is an introduction to the Canadian legal system. Topics covered include federal and provincial judicial systems, dispute resolution, civil law, tort law, and contract law. Students will learn how law impacts business environments and will increase their awareness in managing personal legal affairs.

LW1225 - Employment Law •
This course is designed to provide an insight into the laws affecting employment in Canada. It will examine the legal framework through which employment-related laws are created, interpreted, and enforced in Canada. Students will

review both the common law and statutory requirements as they relate to the employment relationship. Key employment topics such as the employment contract, employment standards, human rights, equity, and dismissal will be examined. Common law topics include the rules governing the creation and interpretation of the employment contract, as well as the law of wrongful dismissal. Students will become familiar with the legal issues relating to the employer-employee relationship and how common law and employment legislation impact human resources management. Students will have the opportunity to apply and research various employment case law and legislation.
Prerequisite(s): HN1100, HN1240

LW1230 - Business Law •
This course will examine the fundamental principles of the Canadian legal system. The student will explore the Canadian legal system, torts, contracts, business law, employment law and property law. Students will have the opportunity to apply and research various business law cases.

LW1235 - Business Law II
This course builds on Business Law concepts and methods learned in LW1100 - Business Law I and introduces students to methods of carrying on business, property and information technology, and commercial transactions. Topics covered include partnerships, corporations, intellectual property, and consumer protection.
Prerequisite(s): LW1100

LW1280 - IM Legal & Regulatory Framework •
Effective and consistent Information Management (IM) practices are critical to legal and regulatory compliance. This course introduces the IM legal framework including the need for acceptable evidence, the Duty to Document, the structure of the federal and provincial legal system, legal discovery standards and processes, the language of law and identifying IM requirements within legislation. Provincial and federal legislation impacting IM in government, health and private industry are reviewed including Access to Information and Protection of Privacy, the Management of Information Act, The Personal Health Information Act (PHIA) and The Personal Information Protection and Electronic Documents Act (PIPEDA) Finally, students study industry best practices for legal compliance, process access to information requests and analyze the role of contracts and agreements in managing information.

LW1500 - Law & Ethics
This course comprises various aspects of law and ethics as they apply in an industrial/business setting. The intent is to develop an understanding of fundamental concepts and a frame of reference guiding the application of these principles.

LW1540 - Law, Ethics & Sustainability
This course comprises various aspects of law and ethics as they apply in an industrial/business setting. The intent is to develop an understanding of fundamental concepts and a frame of reference guiding the application of these principles. Within the course, sustainability concepts are introduced as a subset of what constitutes an ethical practice.

LW1600 - Construction Law
This is an introductory course dealing with the application of tort and contract law as applied to the construction environment. Topics covered include but are not limited to a study of various federal and provincial acts that affect the construction phase of project development; the law of contract, insurance and bonding, the law of torts, construction claims, construction contract documents and ethics.
Prerequisite(s): CM1401

LW1610 - Management & Construction Law
This is a course dealing with management principles, professional relationships, and various laws applicable to the design and construction industry. It is designed to enable the student to become familiar with several generic management systems and the specific laws and codes of ethics which govern this industry.
Prerequisite(s): DR3111
Co-requisite(s): CG3230

LW2210 - Natural Resources Policy & Law
This course is designed to address the principles and processes related to the establishment and implementation of policies and laws for the management and protection of natural resources. Topics critical to the comprehension of Canadian law, including the Charter of Rights and Freedoms, the Criminal Code, resource policies, regulations and relevant acts will be addressed.

LW2211 - Law Enforcement
This course requires the use of legal documentation and enforcement equipment. It involves the role of a peace officer and the proper investigation, recording and reporting of natural resource infractions. It includes information patrolling, covert operations, use of decoys, powers of arrest, search and seizure, and interviewing techniques, as well as preparation for court proceedings and sentencing.
Prerequisite(s): LW2210

LX1010 - Apparatus & Accessories •
The student will develop a comprehensive knowledge of the production of x-radiation that will be useful for medical purposes, including the use of the x-ray tube, its components, and characteristics that will allow the proper control of the x-ray beam. The student will have a basic knowledge of the electrical circuits that are essential for the production of the type of x-radiation that will result in high quality radiographic imaging. The effective use of grids and collimators to reduce patient dose and improve image quality will be covered while gaining knowledge of methods employed to facilitate heat dissipation during the production of x-radiation, as well as practical skills employed to conserve tube life. Finally, the student will be able to identify signs of tube failure.

LX1020 - Radiographic Anatomy & Pathology •
Students will study human anatomy as it relates to performing diagnostic radiographic examinations. Identification of anatomical structures on the radiograph as well as differentiation between the normal and abnormal radiographic images will be studied. Students will use their knowledge of tissue densities (either normal or pathological) to accurately locate structures.

LX1050 - Radiographic Technique •
Students are introduced to the fundamental practices involved in the performance of radiographic positioning and procedures and the analysis of the resultant image. Instructional areas include: terminology, IR identification, patient/technologist relationship, examination procedures and protocol, image analysis and critique, radiation protection and technologist responsibility. Emphasis will be placed on routine and trauma imaging.
Prerequisite(s): LX1020

LX1060 - Patient Care & Safety •
Students will gain the necessary knowledge to provide patient care in a variety of situations which they might encounter in the hospital environment. This course emphasizes basic concepts in general patient care, body mechanics, basic nursing skills, as well as caring for patients with special needs.

LX1070 - Simulated Practical Radiography •
Students will complete seven weeks of simulated general radiography preparing them for their upcoming clinical experience. The course utilizes simulated patients, including manikins, x-ray phantoms, and fellow students and focuses on skill development in radiographic positioning, image recognition (normal and abnormal) and equipment operation, assisting the student to correlate theory learnt in previous courses to patient situations. Students will be required to demonstrate their ability to prioritize, organize and implement procedures in general radiography including, routine, pathology and trauma skills necessary to image skeletal (including skull), and respiratory, digestive and urinary anatomy. Professional practice will be stressed to provide patient care while emphasizing safety. Students will be expected to adhere to and provide radiation protection, optimize image quality and utilize a quality assurance program with special attention to performing quality control procedures and mitigating potential risks.
Prerequisite(s): LX1050, LX2000

LX1080 - Clinical Radiography •
Students will apply knowledge of anatomy, radiographic technique, pathology, radiation protection and patient care and safety in a clinical setting. Emphasis will be placed on intensive demonstration and application of clinical skills in professional practice. Throughout the entire clinical component of the X-Ray Skills for Medical Laboratory

Technologists program, the student will maintain documentation which demonstrates both the quality and quantity of clinical experience acquired, thus ensuring on-going maintenance of competencies acquired.
Prerequisite(s): LX1110, LX1010, LX1020, LX1100, LX1050, LX2000, LX1060, LX1070

LX1100 - Digital Imaging & Quality Management •
Students will gain a comprehensive knowledge of the process involved in the formation of a diagnostic x-ray image generated through the use of radiant energy. Students will learn digital methods of image capture and will become familiar with the many factors that affect the quality of the radiographic image. This course will also provide students with knowledge of quality assurance processes associated with image quality management. The student will be able to describe and explain specific quality control procedures necessary to maintain a high standard of image quality in a digital imaging environment.

LX1110 - X-Ray Physics & Radiation Protection •
This is a radiation physics course designed for x-ray skills students to give them an understanding of: (1) x-ray physics: the nature of x-rays, the production of x-rays, the interaction of x-rays with matter; (2) radiation dosimetry: radiation exposure, absorbed dose, dose equivalent, effective dose equivalent, detection of radiation and dosimeters. Combined with their knowledge of radiobiology, students will learn how to utilize radiation to provide maximum diagnostic information with minimal biological damage to the patient. Students will become familiar with national and provincial standards. They will learn how to maintain these standards by the correct use of equipment, accessories and other relevant factors. Students will also learn how to provide maximum protection from ionizing radiation for the patient, general public, co-workers and themselves.

LX2000 - Clinical I •
This clinical course is designed to reinforce in a practical manner, the theoretical knowledge the student acquired during the didactic segment of their training program. Under the direction and supervision of a clinical preceptor, students participate in a variety of basic routine radiographic procedures in accordance with their level of training. Students are also afforded the opportunity to enhance their knowledge of radiographic equipment used in today's modern diagnostic imaging departments. Finally, students are able to apply their understanding of the concepts used in providing quality patient care and radiation protection by observing radiographic procedures in a "real life" setting.
Prerequisite(s): LX1110, LX1010

MA1021 - Basic Laboratory Calculations
This course will provide students with the skills to perform math calculations to ensure accurate patient results. It includes a review of basic mathematical principles; calculations associated with dilutions, solutions, molarity and normality; calculations specific to areas of the clinical laboratory; and basic statistical calculations associated with quality assurance and quality control.

MA1030 - Mathematics I
This course in basic mathematics presents knowledge of general mathematical concepts to prepare learners for success in the trades. The course also provides knowledge of mathematics related to on-the-job skills and practices. It utilizes shop problems to help learners relate mathematics to job situations. Upon successful completion of this course, learners will be able to apply mathematical concepts to trade practices and view mathematics as a critical component of workplace success. Topics include whole numbers, problem solving, fractions, decimals, ratio, proportion, percent, and measurement. Since the emphasis is on learning basic mathematical concepts, it is recommended that Mathematics I be completed without the use of a calculator.

MA1031 - Mathematics II
This course presents knowledge of general mathematical concepts to prepare learners for success in the trades. It uses shop problems to help learners relate mathematics to job situations. Upon successful completion of this course, learners will be able to apply mathematical concepts to trade practices and view mathematics as a critical component of workplace success. Topics include geometry, pre-algebra, and basic algebra. Since the emphasis is on learning basic mathematical concepts, it is recommended that Mathematics II be completed without the use of a calculator (with the exception of 6.0 Numerical Trigonometry).
Prerequisite(s): MA1030

MA1040 - Math Fundamentals I •
This course is designed to prepare students for further academic mathematics courses, and commences with a review of fundamental mathematics skills, and subsequently examines algebra, including variables, linear equations, functions and graphing, right angle trigonometry, exponents and polynomials. A calculator may be used but students must show all workings.

MA1041 - Math Fundamentals II •

This is a course in pre-calculus mathematics that covers topics including factoring, rational expressions and equations, radicals, systems of linear equations, quadratic functions, trigonometry, and logarithmic and exponential equations. It is designed to build on students' fundamental mathematical knowledge and skills, thereby providing a solid foundation for success in subsequent mathematics and related college courses.

Prerequisite(s): MA1040

MA1055 - Pharmacological Math •
Students will study basic mathematics as it applies to weight measurements, equations, statistics, and graph interpretation. In addition, pharmacokinetics, drug dose calculations, drug administration including intravenous rates will be studied in this course.

MA1070 - Structural Repair Shop Mathematics
This is an introductory course providing practical exercises in mathematics. The course begins with a review of basic mathematics and leads to a solid foundation of practical and realistic application for Aircraft Structural Repair.

MA1072 - Aircraft Maintenance Mathematics
This is a course designed to support the mathematical needs related to the field of Aircraft Maintenance Engineering. This course is to be used in conjunction with MA1070 to fulfill the math requirements for AME.
Prerequisite(s): MA1070

MA1081 - Math Fundamentals for NDT
This course is designed to prepare Non–Destructive Testing (NDT) students to use basic math concepts directly related to the core disciplines in Non–Destructive Testing. The major topics contain content that reflects more specific required topics for NDT applications. The focus of this course is to introduce a technical math to students to enable them to apply the concepts in each of the disciplines of NDT.

MA1085 - Culinary Math
This course introduces students to the basic numeracy skills required to work in the culinary industry. It begins with a review of basic numeracy and measurement skills. Students will learn and use common kitchen measurements. They will also learn to convert measurements within and between the U.S. Customary and Metric systems.

The course entails specific terminology and skills used in the culinary field. It gives students the opportunity to apply numeracy and measurement skills to problems modelled on real life culinary applications and problems. Students will learn to calculate food quantities, food costs and menu prices.

MA1095 - Baking & Pastry Arts Math
This course will build on the fundamentals of math and explore the specific application of mathematics in baking and pastry arts.
Prerequisite(s): AM1101

MA1100 - Mathematics
MA1100 is a course in pre-calculus mathematics that covers several topics in both algebra and trigonometry. Topics include: ratios and proportions, algebraic expressions, fractional algebraic expressions, exponents and radicals,

logarithms, trigonometric functions, oblique triangles, and linear equations and determinants. This course focuses on strengthening students' fundamental mathematical knowledge and skills, thereby providing a solid foundation for success in subsequent mathematics and related courses.

MA1101 - Advanced Mathematics

This course further prepares students for the study of calculus and introduces the concepts of differentiation necessary to enable a better understanding of a variety of technology courses.

Prerequisite(s): Successful completion of either Mathematics MA1700, MA1100, HS Advanced Mathematics 3200, or a minimum grade of 70% in HS Academic Mathematics 3201

MA1104 - Algebra and Trigonometry
This pre-calculus course is designed to strengthen the student's skills in basic algebra, review and develop a deeper understanding of the concept of a function and make students aware of the importance of trigonometry. MA1104 provides students with the essential prerequisite elements to complete an introductory calculus course. Transferable to MUN's Math 1090. This is a non-calculator course
Prerequisite(s): At least 50% in Mathematics 3200 or Mathematics 3201 and at least 55% on the Mathematics Placement Test or a pass (50%) in MA1041

MA1115 - Mathematics I
This course emphasizes a study of number theory, basic arithmetic, and problem-solving skills. Students will analyze whole numbers, fractions, decimals, and percentage in addition to using Systeme Internationale (SI) measurements.

MA1120 - Finite Mathematics I
Transferable to MUN Mathematics 1050. This course is designed to satisfy part of the first-year mathematics requirement for prospective teachers in primary and elementary education programs. This course is also suitable for students headed into a non-science area of study. A non-graphing calculator is permitted.

Prerequisite(s): At least 50% in Mathematics 3201 or Mathematics 3200 and at least 50% on the Mathematics Placement Test or a pass (50%) in MA1041

MA1121 - Finite Mathematics II
Transferable to MUN Mathematics 1051. This course is designed to satisfy part of the first-year mathematics requirement for prospective teachers in primary and elementary education programs. This course is also suitable for students headed into a non-science area of study. A non-graphing calculator is permitted.
Prerequisite(s): At least 50% in Mathematics 3201 or Mathematics 3200 and at least 50% on the Mathematics Placement Test or a pass (50%) in MA1041

MA1130 - Calculus I
Transferable to MUN Mathematics 1000. This is an introduction to differential calculus including logarithmic, exponential, and trigonometric functions with applications. This is a non-calculator course..
Prerequisite(s): At least 50% in Mathematics 3200 and at least 75% in the Mathematics Placement Test or a pass (50%) in MA1104

MA1131 - Calculus II
This course is an introduction to integral calculus with applications. Transferable to MUN Mathematics 1001. This is a non-calculator course.
Prerequisite(s): A pass (50%) in MA1130 or an acceptable score on the Calculus Placement Test

MA1135 - Practical Mathematics
This course is designed to equip students with practical mathematical concepts essential for success in technical industries. The course aims to empower students to apply these concepts across diverse disciplines within the skilled

trades sector. Students will emerge with a comprehensive understanding of mathematics' pivotal role in navigating the dynamic landscape of technical industries.

MA1140 - Applied Mathematics
This course introduces students to with an understanding of the concepts of elementary differential and integral calculus, to prepare them for content in preparation for success within their technology courses. Throughout the course, students will have the opportunity to develop their analytical reasoning and problem-solving skills.
Prerequisite(s): MA1100

MA1215 - Mathematics II
Students will evaluate algebraic concepts, algebraic equations, positive and negative exponents, scientific notation, polynomials, and graphing linear equations upon a coordinate system. This course provides a brief introduction to right triangle trigonometry (Pythagoras Theorem and the three primary trigonometric ratios).

MA1220 - Mathematics

This course prepares students for the study of calculus and provides them with the foundational concepts of differentiation necessary for a better understanding of a variety of technology courses.

MA1250 - Mathematics for WT
This course is specifically designed for students in the Wind Turbine Technician program. The course addresses essential topics including a review of arithmetic skills, ratios and proportions, operations involving algebraic expressions, exponents and radicals, trigonometric functions, and linear equations. Emphasis is placed on applying these mathematical concepts to real-world problems and scenarios encountered in the field of wind energy. Students will strengthen their mathematical knowledge and skills to prepare for technical challenges as wind turbine technicians.

MA1521 - Applied Mathematics for CSN
This course provides a practical mathematical background for Computer Systems and Networking. The course covers topics in number systems, set theory and statistics in the context of supporting computer systems. The examples used in this course have a direct application to network and operating system analysis.

MA1530 - Statistics
This course is designed to introduce the student to the basic principles of statistics with the use of Microsoft Excel.

MA1670 - Statistics •
This course introduces students to the basic principles of probability and statistics, and the decisions that can be made using statistics. In this course the student will explore descriptive statistics, elementary probability, discrete and continuous probability distributions, sampling distributions, hypothesis testing, chi-square distribution, analysis of variance, linear regression and correlation, and multiple linear regression. The student will have the opportunity to apply and interpret the results of a variety of statistical techniques from both descriptive and inferential statistics; to apply the fundamental concepts in statistics including sampling, experimentation, variability, distribution, association, causation, estimation, confidence, hypothesis testing, and significance; to critically review and analyze statistical arguments found in the popular press and in scholarly journals; and to appreciate the relevance and importance of statistics.

MA1700 - Mathematics
This is a course in pre-calculus mathematics designed to help strengthen students' mathematical skills and thereby increase their chances for success in other technical courses.

MA1900 - Problem Solving for Information Technology •
The course is intended to illustrate how to develop logic for computer programs. To aid in the development of the student's use of problem solving techniques necessary for Information Technology, a practical mathematical

background is provided in this course as it applies to business data processing. A review of basic algebra and computer-related mathematical topics is covered.

MA1905 - Problem Solving for IT
The course guides students in building logical thinking and problem-solving skills essential for computer programming in the context of Information Technology. This course offers a practical foundation in mathematics relevant to business data processing, encompassing basic algebra, calculus, and various computer-related mathematical concepts. By the end of this course, students will have acquired the critical skills and knowledge necessary to excel in Information Technology and its numerous real-world challenges.

MA2100 - Mathematics - Calculus
In this course students will extend their study of topics in differential calculus and will also be introduced to integral calculus. Topics covered will assist students to better understand concepts encountered in other courses.

Prerequisite(s): MA1101 or MA1220

MA2130 - Applied Mathematics
This is primarily an applied calculus course designed to meet the specific requirements of the following technology programs: Mechanical Engineering Technology (HVAC, Power and Manufacturing), Industrial Engineering Technology.
Prerequisite(s): MA2100

MA2150 - Linear Algebra I
Transferable to MUN Mathematics 2050. Linear algebra is the branch of mathematics dealing with solutions of linear equations, and related ideas of vector space and linear transformations. This is a practical, non-calculus course where students learn how to solve systems of linear equations, perform matrix algebra, find eigenvalues, diagonalize matrices, and perform vector geometry.
Prerequisite(s): MA1130 or ten credit hours in first-year mathematics courses (two first year math courses)

MA2180 - Applied Geomatics Mathematics
This course consists of an introduction to probability and statistics with emphasis on descriptive statistics, probability theory and two-variable data sets. It also investigates error propagation and error analysis as it pertains to the surveying industry.
Prerequisite(s): MA2100

MA3130 - Advanced Geomatics Mathematics
This course consists of elements of spherical trigonometry and an introduction to conditional adjustment as it pertains to the surveying industry.
Prerequisite(s): MA2180

MA3700 - Production and Operations Management
This course is designed to provide students with an understanding of production management and operations management. With a focus on the building blocks of production and operations management, the course explores the design, planning, control and improvement of the activities or processes that transform a firm's inputs into final products. The course also explores the importance of interaction and coordination of business areas to meet organizational goals. Various mathematical and computerized models are introduced and their application to the decision-making process is emphasized.
Prerequisite(s): FN1140, MA1670, MC1242

MC1040 - Computer Applications
In today's digital world, the ability to navigate in an environment that is increasingly dependent on electronic technology is critical. The Computer Applications course will allow students to gain practical knowledge of the most common features of operating systems and software applications. Through a hands-on approach, the student will utilize software to obtain know-how in the use of word processing, presentations, spreadsheets, the internet, e-mail, and security.

MC1130 - Computer Studies
This course is an introduction to microcomputers, their operations, hardware, and popular software applications including the laboratory information system (Meditech). The student will develop the basic skills to use an operating system, a word processor, and a spreadsheet.

MC1190 - Computer Essentials
In today's digital world, the ability to navigate in an environment that is increasingly dependent on electronic technology is critical. The Computer Essentials course will allow students to gain practical knowledge of the most common features of operating systems and software applications. Through a hands-on approach, the student will utilize software to obtain know-how in the use of word processing, presentations, spreadsheets, the internet, e-mail, and security.

MC1240 - Computer Applications I •
This course will introduce the students to the use of e-mail and the Internet; manipulating files in the Windows operating environment; basic word processing techniques; and basic presentation creation techniques. Students will apply concepts practically.

MC1242 - Spreadsheet Essentials •
The course is designed to expose the student to spreadsheet software Students will build and format worksheets, using spreadsheet features, formulas and functions, and gain charting and graphing skills. Students will also develop skills in sorting and querying a dataset.
Prerequisite(s): MC1260

MC1260 - Integrated Software Applications •
This course will introduce the students to the use of e-mail, manipulating files in the Windows operating environment, word processing applications, presentation software, and collaboration software. Students will apply concepts through practical application.

MC1850 - Spreadsheet Applications
This course is designed to give the student a working knowledge of a Windows operating system and the use of electronic spreadsheets. This course teaches the student how to work with different types of spreadsheet documents using a variety of core and intermediate features to create and edit professional-looking spreadsheets for a variety of purposes and situations.

ME1400 - Mechatronics I - PLC
This course introduces the student to the general concepts and programming techniques for digital, networked, and peer to peer communications associated with programmable logic controllers (PLCs) with a focus on mechatronics applications.

ME2400 - Mechatronics II - Automation
This course is an introduction to automated process control systems, designed to provide the student with the fundamental techniques used to control various process variables to achieve desired outcomes. Students are shown how the learned concepts are applied to control mechanical systems.

Prerequisite(s): ME1400

ME3400 - Mechatronics III - Robotics
This is an advanced course for students having some background in technology. Graduating students will possess a good understanding of robotics and machine vision systems as well as the necessary technical expertise to be able to meet the current needs of the industry.

MH1300 - Building Operations I
This course will introduce the basic building operation. It will provide the student with an understanding of the operation of commercial buildings and light industrial heating plant equipment.

MH2100 - Building Operations II
This course will expand upon basic building operations. It will provide the student with an understanding of environmental comfort and the operation of commercial buildings and light industrial pumps, compressors, and energy maintenance systems related to heating plant equipment.
Prerequisite(s): MH1300

MH2830 - Mechanical Building Systems I - HVAC
This course will introduce the fundamentals of HVAC. It will provide students with an understanding of the methods of recognition and evaluation of various aspects related to HVAC.

MH3350 - Mechanical Building Systems II
This course introduces the student to the application of various codes and standards. It provides the student knowledge of industrial ventilation and applications of piping heating and cooling systems for specific operations. It also provides the student with the knowledge and understanding of various components associated with the various systems.
Prerequisite(s): MH2830

MH4610 - Mechanical Building Systems III
This course will introduce the student with the concepts of acoustic in HVAC; fire protection and smoke management; testing, adjusting, and balancing of HVAC systems; industrial ventilation; equipment and ancillary schedules; cost estimates; mechanical specifications; and detailed plant system design.
Prerequisite(s): MH3350

MI1050 - Adult Learning & Cognition •
This course focuses on adult learning theories and the application of cognitive science principles in a community college environment. In this course, participants will examine different adult learning theories.

Upon completion of this course, the learner will earn a digital badge in *Adult Learning Principles*.

MI1060 - Organizational Values & Ethics •
This course focuses on the values and ethics expected of post-secondary instructors. In this course, participants will explore their role within an organization's values, examine their own personal values, explore the different ethical standards expected of post-secondary instructors, and develop their own personal professional code of ethics.

Upon completion of this course, the learner will earn a digital badge in *Organizational Ethics*.

MI1070 - Course Delivery Planning •
This course focuses on the long-term planning of content and assessment within a course. In this course, participants will use course objectives to create approximate timelines for content and major assessment, develop strategies for assessing major objectives, and create a syllabus that outlines relevant policies and dates.

Upon completion of this course and MI1080 Lesson Planning, the learner will earn a digital badge in *Instructional Planning*.

MI1080 - Lesson Planning •
This course focuses on short-term course planning and the development of learner-centred lesson plans. In this

course, participants will explore ways to align lessons with course and program objectives, develop lesson objectives using Bloom's taxonomy, and create lesson plans that incorporate active learning strategies. The learning outcomes within Lesson Planning are most applicable to instructors with active classes.

Upon completion of this course and MI1070 Course Delivery Planning, the learner will earn a digital badge in *Instructional Planning*.

MI1090 - Universal Design for Learning •
This course focuses on enhancing student engagement through the principles of the Universal Design for Learning (UDL). In this course, participants will interpret the principles of UDL, examine the link between UDL and engagement, representation and expression in adapting learning resources or assessment to support inclusivity.

Upon completion of this course, the learner will earn a digital badge in *Universal Design for Learning*.

MI1110 - Learning Management Systems •
This course focuses on preparing instructors to teach and assess within D2L. In this course, participants will create and organize content, use the Virtual Classroom and discussion forums to communicate with others, create assessment, and grade student assessment in Brightspace. Learners who have already completed the 8-week "Teaching with Brightspace" training course are eligible for PLAR.

Upon completion of this course and MI1120 Teaching Technologies, the learner will earn a digital badge in *Educational Technologies*.

MI1120 - Teaching Technologies •
This course focuses on types of technology that could be used to enhance the learning experience in conjunction with Learning Management Systems (LMS). In this course, participants will create formative assessment using new software, create videos or screen recordings using new software, explore resources available on third-party educational websites, and explore the potential role of simulations in vocational education.

Upon completion of this course and MI1110 Learning Management Systems, the learner will earn a digital badge in *Educational Technologies*.
Prerequisite(s): MI1110

MI1130 - Digital Literacy •
This course focuses on the development of media and information literacy in the context of the classroom. In this course, participants will examine ways in which media can be manipulated to promote a viewpoint, design an activity that promotes student media literacy in their discipline, and analyze data representations for accuracy and manipulation.

Upon completion of this course, the learner will earn a digital badge in *Digital Literacy*.

MI1140 - Accessible Instruction •
This course focuses on how to accommodate students with disabilities in the classroom. In this course, participants will explore ways to accommodate students with disabilities, adapt materials to meet accessibility needs, and explore the role of the instructor in providing accommodations.

Upon completion of this course, the learner will earn a digital badge in *Accessible Instruction.*

MI1150 - Mental Health & Wellbeing •
This course focuses on mental health and its effects on learning. In this course, participants will recognize signs of

common mental health problems, explore methods to support students who are struggling with mental health problems, and discuss ways for instructors to maintain their mental wellbeing.

Upon completion of this course, the learner will earn a digital badge in *Mental Health in the Classroom*.

MI1160 - Gender Inclusion in the Classroom •
This course focuses on understanding how a student's gender can impact the learning experience. Participants will examine their own unconscious biases, identify dimensions of diversity in the classroom, examine exclusionary practices in gendered workplaces, and incorporate inclusive and affirming language in the classroom.

Upon completion of this course, the learner will earn a digital badge in *Gender Diversity in the Classroom*.

MI1170 - Culturally Inclusive Teaching •
This course focuses on how cultures can impact the learning experience. In this course, participants will examine their own biases, explore the impact of racism on education in Canada and explore culturally inclusive strategies to support students from all backgrounds.

Upon completion of this course, the learner will earn a digital badge in *Cultural Diversity in the Classroom*.

MI1180 - Reconciliation through Education •
This course focuses on the colonization of Canada and ways reconciliation can be achieved in post-secondary classrooms. In this course, participants will examine the history of colonization and its presence in educational materials, discuss ways that post-secondary instructors can contribute to reconciliation, and incorporate Indigenous ways of knowing and learning into lesson plans

Upon completion of this course, the learner will earn the *Reconciliation Through Education* badge.

MI1190 - Self-Regulated Learning Strategies •
This course focuses on how instructors can help develop self-regulated learning in their classrooms. In this course, participants will reflect on their own self-regulation strategies, develop a learning activity that fosters self-regulation, and determine appropriate supports for struggling students.

Upon completion of this course and MI1200 Student-Centred & Active Learning, the learner will earn a digital badge in *Active Learning*.

MI1200 - Student-Centred & Active Learning •
This course focuses on the design of student-centered and active learning strategies. In this course, participants will explore strategies to promote student-centered learning, compare different active learning strategies, develop an active learning activity, and critically reflect on their practice.

Upon completion of this course and MI1190 Self-Regulated Learning, the learner will earn a digital badge in *Active Learning*.

MI1210 - Collaborative Learning Strategies •
This course focuses on the benefits and challenges of using collaborative learning in the classroom. In this course, participants will explore different types of collaborative learning activities, examine common problems associated with collaborative learning and potential solutions, and explore the roles of peer feedback, peer assessment, and self-assessment in the collaborative learning process.

Upon completion of this course, the learner will earn a digital badge in *Collaborative Learning*.

MI1220 - Classroom Management Strategies •
This course focuses on classroom management and the importance of setting expectations early. In this course, participants will design syllabi that clearly outline expectations, explore strategies that facilitate the co-creation of classroom rules with students, and reflect on their current use of classroom management techniques.

Upon completion of this course and either MI1230 Lab/Shop Environment Management or MI1240 Online Environment Management, the learner will earn a digital badge in *Adult Classroom Management*.

MI1230 - Lab/Shop Environment Management •
This course focuses on the preparation, facilitation, and assessment of laboratory and shop sessions. In this course, participants will examine strategies for preparing for a successful laboratory session, explore best practices in laboratory facilitation, and explore ways to create different types of assessment that are commonly used in the laboratory environment.

Upon completion of this course and MI1220 Classroom Management Strategies, the learner will earn a digital badge in *Adult Classroom Management*.

MI1240 - Online Environment Management •
This course focuses on best practices for engaging students in synchronous and asynchronous online learning. In this course, participants will reflect on the challenges of teaching and learning online, use a variety of techniques to engage students in synchronous lessons, and develop asynchronous learning modules to engage students and build community.

Upon completion of this course and MI1220 Classroom Management Strategies, the learner will earn a digital badge in *Adult Classroom Management*.
Prerequisite(s): MI1110

MI1250 - Trauma-Informed Teaching •
This course focuses on how to best support students through a trauma-informed lens. In this course, participants will define trauma and learn about how it affects individuals, explore de-escalation techniques, explore strategies for supporting students who have experienced trauma, and examine strategies for preventing secondary trauma.

Upon completion of this course, the learner will earn a digital badge in *Trauma-Informed Teaching*.

MI1260 - Valid Assessments •
This course gives a broad overview of the design and facilitation of assessment, including its alignment and validity. In this course, participants will explore different types of assessment, align assessment with program outcomes and certification exams, develop valid assessments, and examine the role of the assessment facilitator.

Upon completion of this course, MI1270 Designing Assessment, and MI1280 Formative Assessment & Feedback, the learner will earn a digital badge in *Assessment of Learning*

MI1270 - Designing Assessment •
This course focuses on best practices for designing assessment and evaluation. In this course, participants will discuss best practices when designing assessment questions, design accessible questions, and create evaluation schemes according to best practices.

Upon completion of this course, MI1260 Valid Assessment, and MI1280 Formative Assessment & Feedback, participants will earn a digital badge in *Assessment of Learning*.
Prerequisite(s): MI1260

MI1280 - Formative Assessment & Feedback •
This course focuses on the use of both formative assessment and feedback to enhance teaching and learning. In this course, participants will develop formative assessment, ask and respond to questions using best practices, apply best practices when assigning feedback, and critically examine forms of evaluative feedback.

Upon completion of this course, MI1260 Valid Assessment, and MI1270 Designing Assessment, the learner will earn a digital badge in *Assessment of Learning*.

MI1290 - Promoting Academic Integrity •
This course focuses on techniques for developing teaching, learning, and assessment resources to support students in both maintaining academic integrity and avoiding engaging in academically dishonest behavior. By the end of the course, learners will be able to identify the importance of upholding academic integrity, identify the types of misconduct, and develop learning resources which promote academic integrity.

Upon completion of this course, the learner will earn a digital badge in *Academic Integrity*.

MI1300 - Coaching Cultures •
This course introduces the principles of using a coach-approach to our interactions and communication in a professional setting. After completing this course, participants will be able to identify the importance of helping build coaching cultures in the classroom or other workspaces, identify personal and organizational core values, and participate in a coaching conversation using effective listening and feedback techniques. Through hands-on learning and personal reflection, participants will enhance their existing skills and gain a greater awareness of the impact each individual has on a workplace environment.

Upon completion of this course, and MI1310 Learning Communities and MI1320 Professional Learning, the learner will earn a digital badge in *Coaching for Learning*.

MI1310 - Learning Communities •
After completing this course, participants will be able to conduct effective and equitable coaching conversations within a Professional Learning Community using active listening, positive language, open-ended questions, and strengths-based feedback in a group. Through experiential learning and personal reflection, participants will enhance their existing skills and mindset for sustained, focused, effortful learning and reciprocal professional accountability.

Upon completion of this course, MI1300 Coaching Cultures, and MI1320 Professional Learning, the learner will earn a digital badge in *Coaching for Learning*.
Prerequisite(s): MI1300

MI1320 - Professional Learning •
After completing this course, participants will develop a professional identity statement and learning plan. Through personal reflection and authentic application, participants will learn about emotional self-management and navigating conflict, examine the impact they have in the classroom and/or workplace, and understand the significance of language in our professional relationships. This course culminates in professional learning plan, which includes a personal-professional vision, and accountability measures that are meaningful to the participant.

Upon completion of this course, MI1300 Coaching Communities, and MI1310 Learning Communities, the learner will earn a digital badge in *Coaching for Learning*.
Prerequisite(s): MI1300, MI1310

MI3100 - Introduction to Cybersecurity
Modern cyber-attacks are designed by skilled, financially motivated, and supported attackers. Targeted attacks hold business networks for ransom and disrupt critical industrial control systems that support our modern way of life. This course is an introduction to cybersecurity through a discovery of today's cyber-attacks and defenses in a digital warfare world. Students will explore information & cybersecurity threats, vulnerabilities, and incident response steps

at a basic to intermediate level. Real world attack scenarios from the industry are dissected with a focus on tactical defenses any organization can deploy for protection against persistent digital threats. Students will apply their basic understanding of programming concepts and networking to protect and defend an organization from internal and external threats.

MI3200 - Cybersecurity - Technical Defense
Modern cyber-attacks are designed by skilled, financially motivated, and supported attackers who target and hold business networks for ransom and disrupt critical industrial control systems which are designed to support our modern way of life. This course is a technical cybersecurity class which dissects modern attacks for the purpose of applying practical technical defenses in today's digital war-fare world. Students will walkthrough technical attacks mapped to the cyber security kill chain to determine gaps in common business security controls. Practical takeaways include alignment with the MITRE ATT&CK© framework customized to the students' sector. Students will apply Security Information and Event Management" (SIEM) rules that can be utilized immediately to defend against active threats. The course is modelled after real-world attack scenarios from advanced persistent threats enabling them to apply lessons learned from in-class technical incident response tabletop exercises.

Students should have a background in:

- Programing
- TCP/IP networking and packet analysis
- Common security controls
- Firewall access control lists
- Malware
- Operating systems

This will enable the student to apply advanced technical cybersecurity concepts
Prerequisite(s): MI3100

MI3300 - Managing Cybersecurity Operations
Modern cyber-attacks are designed by skilled, financially motivated and supported attackers who target and hold business networks for ransom and disrupt critical industrial control systems which are designed to support our modern way of life. Managing modern cyber risks for the business requires a tailored approach. This course covers how to discover active threats, best in class risk mitigation methodologies, technology trends, and tips to effectively manage cybersecurity operations with any budget. Students will navigate through the hype of cyber-attacks while getting to what matters - top strategic and technical actions for teams in any organization achieving a high return on investment. The student will walkthrough an executive-level tabletop exercise focused on incident response to minimize business impact and speed up business recovery. Up-to-the-minute case studies from the industry are explored across several sectors for real-world takeaways for cybersecurity risk managers.
Prerequisite(s): MI3200

ML1000 - General Laboratory Knowledge
Students will apply basic principles of mathematics, chemistry and physics to prepare reagents, to perform simple laboratory procedures, and to properly use and maintain basic laboratory equipment.

ML1010 - Orientation and Medical Laboratory Skills
This course provides an orientation to the role and responsibilities of the Medical Laboratory Assistant in the health care field. Students will define the term professional and examine the desired characteristics of a health care worker. Liabilities of this career will be explored. Students will be introduced to accepted safety procedures for handling specimens, reagents, and equipment (includes WHMIS training). The laboratory sessions will introduce students to selected manual skills that are an integral part of medical technology.

ML1011 - Orientation to MLT
This course provides an orientation to the role and responsibilities of the Medical Laboratory Technologist in the health care field. Students will explore the term professional and examine the desired characteristics of a health care professional. Liabilities of this career will be explored along with an overview of the professional bodies and organizational structure of the profession. Students will be introduced to accepted safety procedures for handling specimens, reagents, and equipment (includes WHMIS training). The laboratory sessions will introduce students to selected manual skills that are an integral part of medical laboratory technology.

ML1025 - Laboratory Calculations
This course will provide students with the mathematical skills required to prepare solutions, to read and record laboratory results, and to monitor quality control and quality assurance testing in the laboratory. Students will utilize these mathematical skills to prepare reagents, solutions, and dilutions.

ML1030 - Practical Clinical Chemistry
Students will collect, assess suitability, store, and prepare samples for chemical analysis, taking into account priority and suitability of the specimen. Students will also perform simple and automated chemical tests under the supervision of a registered medical laboratory technologist.
Prerequisite(s): ML1000, ML1010, ML1025, BL1600

ML1035 - Immunology and Hematology
This course provides the theoretical and applied knowledge associated with routine clinical hematology and immunology required to manipulate clinical hematology specimens. An overview and introduction to routine hematology procedures and the associated immunological concepts will be completed, in preparation for advanced study in hematology and immunohematology.

ML1040 - Practical Hematology
This course provides the theoretical and applied knowledge required to collect, store and prepare samples by routine hematology procedures; prepare and stain peripheral smears; and load automated equipment under the supervision of a registered medical laboratory technologist.
Prerequisite(s): ML1000, ML1010, ML1025, BL1600

ML1050 - Practical Microbiology
Students will learn to prepare, sterilize, store and perform quality control checks on various types of microbiological media. Students will process specimens from a variety of sources including planting, streaking and incubating. Students will perform pre-analytical procedures in the microbiology laboratory.
Prerequisite(s): ML1000, ML1010, ML1025, BL1600

ML1060 - Practical Histotechnology/Cytology
Students will perform routine cytology and histotechnology techniques including paraffin processing, smear preparation of body fluids, and simple stains and cover slipping of slides under the supervision of a medical laboratory technologist.
Prerequisite(s): ML1000, ML1010, ML1025, BL1600

ML1070 - Specimen Collection
Students will collect, store, and prepare blood samples for analysis, and learn collection and handling methods for other types of body fluids and tissue samples.
Prerequisite(s): ML1000 or ML1090, ML1010 or ML1011, ML1025 or MA1021, BL1600

ML1080 - Clinical Practicum
This course allows the student to gain practical experience in a clinical laboratory collection centre including the application of office skills, client communication and specimen collection. It also permits the student to gain practical experience in the clinical laboratory under the supervision of a registered medical laboratory technologist. Pre-analytical procedures performed include basic hematological techniques, macroscopic urinalysis, simple solution preparation, data entry and loading of automated analyzers, preparation and processing of tissue and body fluids, and preparation, inoculation, streaking and culturing of microbiological media.
Prerequisite(s): BL1600, TM1130, HG1500, MC1130, CM2201, ML1000, ML1010, ML1025, ML1030, ML1040,

ML1050, ML1060, ML1070

ML1090 - Medical Lab Knowledge
This course provides an orientation to the standard operating equipment of the medical laboratory technology profession. Students will be introduced to the fundamental equipment and given an opportunity to develop basic applied skills suitable for the clinical laboratory setting which will carry through the remainder of the program. Students will practice accepted safety procedures for handling of laboratory specimens, reagents and equipment. The theory and practical skills gained throughout this course are integral to the performance of laboratory procedures in subsequent MLT courses.

ML1140 - Intro to Quality Management
In this introductory course to quality management, students will examine how quality management in a clinical environment is monitored, maintained and continuously improved. An analysis of different quality systems will allow students to compare the systems and determine their usefulness in the laboratory environment.

ML1160 - Laboratory Pathophysiology

Utilizing a case study spiral learning methodology, this course presents and revisits general concepts of key disease processes covered during the first half of the MLT program and expands upon their impact on health from a clinical laboratory perspective. Through a lens of the five primary laboratory disciplines, the course focuses on major pathophysiologic changes in various disease states, including study of the associated etiology, pathogenesis, and laboratory manifestation As well as functioning to solidify their understanding of physiology and disease, the course is designed to help the student develop deeper knowledge of the relationships between laboratory results and clinical conditions, most importantly, to recognize possible discrepancies and implausible laboratory values.

Prerequisite(s): Successful Completion of all Semester 8 courses

ML1213 - Hematology 1
This is an introductory course in hematology instrumentation. It is intended to provide students with a fundamental knowledge of the principles of automated analysis in a clinical hematology laboratory. Students will study principles of automated cell counting, with an overview of quality control for automated cell analysis. Students are introduced to case studies pertaining to automated hematological analysis. It also includes various manual laboratory procedures, such as preparation and staining of blood smears and erythrocyte sedimentation rates.
Prerequisite(s): ML1035

ML1335 - Histology
Students will study the microscopic structure and function of normal human tissues which serves as an extension of their study of anatomy and physiology. This course will begin with the cell, progress through the basic tissue types, and finally discuss the major body systems. Common disease processes associated with particular tissue types will also be studied. Students will also be introduced to a routine pathology laboratory setting and given an opportunity to explore the working environment as it relates to safety, accessioning, and operations.
Prerequisite(s): BL1600

ML1360 - Histotechnology 1
The course will introduce the student to the workings of a clinical histotechnology laboratory. Topics include: Safe work practice in a histology laboratory along with an introduction to instrumentation, and routine tissue processing. Students will also be introduced to biological staining principles and the hematoxylin and eosin stain.
Prerequisite(s): ML1335

ML1520 - Intro to Transfusion Medicine
The course will provide students with a fundamental knowledge of transfusion from both the donor and patient perspective. Using the knowledge and skills obtained in ML2401 – Intro to Blood Banking, the following will be examined: clinical transfusion practice, compatibility testing, adverse effects of transfusion, transfusion reaction investigation, hemolytic disease of the fetus and newborn as well as autoimmune hemolytic diseases. Associated laboratory testing will be introduced in laboratory sessions.
Prerequisite(s): ML2401, ML2100

ML1660 - Clinical Practicum I
This course allows the student to develop technical competence in pre-analytical procedures while reviewing theoretical material from previous semesters. The two-week hospital rotation will emphasize the pre-analytical phase of the testing process and acquaint the student with the hospital operation and policies.
Prerequisite(s): CH1355, ML1213, BL2425, ML1360, HG2051, ML1070

ML2100 - Hematology 2
This is an intermediate level course in the discipline of Hematology with a specific focus on the erythrocytic series including an overview of the most frequently encountered anemias. It is intended to provide students with a fundamental knowledge of erythrocytes, including: origin, characteristics, functions, routine laboratory procedures, normal and abnormal morphology, and associated pathologies.
Prerequisite(s): ML1213, ML1660, MA1021

ML2120 - Histotechnology 2
This course is intended to instruct students in the theoretical and practical aspects of histotechnology. The course will concentrate on aspects of grossing, instrumentation, and routine tissue processing techniques associated with a clinical pathology laboratory. Along with a theoretical overview of tissue processing methods and surgical pathology, students will gross, process, embed, and perform microtomy on both human and non-human tissue to prepare tissues for staining and microscopy.
Prerequisite(s): ML1360, ML1660

ML2210 - Hematology Sim 1
In a simulated hospital laboratory setting, this course requires students to apply their pre-requisite knowledge of Hematology. Emphasis is on routine Hematology tests and procedures as well as interpretation, documentation and reporting of laboratory results. Additionally, safe work practices and quality control principles are reinforced. It also incorporates significant automated hematological analysis.
Prerequisite(s): ML2225, CS2311

ML2211 - Hematology Sim 2
This is a comprehensive course in Hematology, encompassing the fundamentals and application of information acquired to date in this discipline. Emphasis is on normal and abnormal blood cell morphology, routine coagulation testing as well as interpretation, documentation and reporting of laboratory results. It also introduces the student to a working theory of special hematology stains. Additionally, applications of flow cytometry to hematopathology will be reviewed.
Prerequisite(s): Successful completion of Semester 6

ML2225 - Hematology 3
This is an intermediate level course in the discipline of Hematology with a specific focus on the leukocytic series and hemostasis including an overview of the most frequently encountered myeloproliferative disorders. It is intended to provide students with a fundamental knowledge of leukocytes and coagulation, including: origin, characteristics, functions, routine laboratory procedures, normal and abnormal morphology, and associated pathologies. An introduction to flow cytometry analysis is also presented.
Prerequisite(s): ML2100
Co-requisite(s): CH2514

ML2230 - Histotechnology 3
This course further instructs the student in the theoretical and practical aspects of histotechnology, concentrating on the use of various stains used for pathological diagnosis. Principles of "special" staining including immunohistochemistry will be presented. Students will process, cut, and perform various staining procedures and explore the identification of pigments and artefacts. Microscopic identification of tissue sections will be practiced to aid in the evaluation of staining results.
Prerequisite(s): ML2120, CH2253

ML2310 - Histotechnology Sim 1
The student will be engaged in a laboratory simulation that will require them to apply all the knowledge they have

gained. This course concentrates on the improvement of laboratory skills through practice.

Prerequisite(s): ML2230. CS2311

ML2311 - Histotechnology Sim 2
Students who successfully complete this course will perform processing, embedding, decalcification, section cutting biological staining and coverslipping working independently and as part of the laboratory team. The student will critically evaluate the blocks and slides produced and repeat those which are not of diagnostic quality.
Prerequisite(s): ML2310

ML2320 - Molecular Diagnostics Sim 1
This clinical simulation course explores the emerging field of molecular diagnostics through a molecular biology lens. It will expand upon material covered in previous courses and allow students an opportunity to manipulate DNA and RNA in a simulated laboratory setting. Topics will include an overview of molecular biology, common and emerging molecular biology methods including both manual and automated techniques, and an overview of molecular diagnostics.
Prerequisite(s): BL2441, CH2514, ML2230
Co-requisite(s): BL3410

ML2401 - Intro to Blood Banking
This course will introduce students to the Canadian blood banking system and provide students with the fundamental knowledge of the common human blood products and blood group systems. The implications of the immune system, human genetics, class of antibodies, and antigens will be examined. Common immunohematology testing methodology will be introduced in laboratory sessions.
Prerequisite(s): ML1035, ML1660

ML2510 - Transfusion Medicine Sim 1
The course will introduce students to a simulated clinical experience in a Transfusion Science laboratory. The knowledge and skills obtained in ML2401 and ML1520 are applied to "real-life" situations. Prenatal and pre-transfusion testing is performed along with associated investigations of atypical human blood group antibodies.
Prerequisite(s): ML1520

ML2511 - Transfusion Medicine Sim 2
The course is a continuation of ML2510 Transfusion Medicine Sim 1. More in-depth investigations of prenatal and pre-transfusion testing are performed, along with post natal, post transfusion, and cord blood testing. Following completion of this course, students will possess the knowledge, skills and attitudes to enter the hospital clinical phase of the program.
Prerequisite(s): ML2510

ML2611 - Interdisciplinary Studies
This course concentrates on the integration of the knowledge gained in all courses in the program. Students will challenge five (5) comprehensive examinations over the course of the semester, one (1) examination per week. Students will concentrate on analyzing and solving problems involving all competency categories in each discipline. Students are also expected to rotate through the following laboratories: Public Health Laboratory, Canadian Blood Services, Mass Spectrometry, Immunohistochemistry, Immunology, Flow Cytometry and Clinical Genetics for exposure to advanced diagnostic techniques.
Prerequisite(s): BL4410, CH4510, ML3210, ML3310, ML3510

ML3210 - Hematology Practicum
This course allows the student to develop technical competence while reviewing theoretical material from previous semesters. The three week hospital rotation will emphasize clinical procedures and acquaint the student with the hospital operation and administration.
Prerequisite(s): BL3411, CH3511, ML2211, ML2311, ML2511

ML3310 - Histotechnology Practicum
This course allows the student to develop technical competence while reviewing theoretical material from previous

semesters. The three week hospital rotation will emphasize clinical procedures and acquaint the student with the hospital operation and administration.
Prerequisite(s): CH3511, BL3411, ML2211, ML2311, ML2511

ML3510 - Transfusion Practicum
This course allows the student to develop technical competence while reviewing theoretical material from previous semesters. The three week hospital rotation will emphasize clinical procedures and acquaint the student with the hospital operation and administration.
Prerequisite(s): CH3511, BL3411, ML2211, ML2311, ML2511

MM1115 - 3D Animation I
In this course, students will learn the fundamentals of 3D Animation. They will gain general knowledge of the history and potential applications of the medium, and explore the introductory levels of mechanics.

MM1120 - Pre-Production I
In this course, students will be introduced to processes used to realize and present a story in a visual format. This is in combination with the work done in Storytelling in Animation I. Working alongside second-year students in Pre-Production II, students will take on junior roles in the beginning phase of a capstone project.
Co-requisite(s): MM1130

MM1125 - 3D Modelling
3D Modelling is the process of creating representations of characters and objects in 3D space. In this course, students will learn the fundamentals of 3D modelling for animation. Topics include basic inorganic modelling, intermediate inorganic modelling, and basic organic modelling. Introduction to lighting, rendering, and scene creation will also be covered.

MM1130 - Storytelling in Animation I
Storytelling for Animation I is a creative writing course where students will learn the fundamentals of developing fiction for animation. This course focuses on creating engaging characters, plots and settings that can be pitched as animation projects. This work will coincide with Pre-Production I, where students will visually develop the story. Students will also collaborate with second-year students and participate in the initial stage of a capstone project as junior members.
Co-requisite(s): MM1120

MM1135 - 2D Animation I
This course focuses on a contemporary digital approach to traditional 2D animation. Students will produce sequences of drawings that create the illusion of life and movement. Topics include 2D animation software tools, 2D animation principles, and production techniques. Through hands-on activities and assignments students will produce a series of short animation projects.
Co-requisite(s): VA1131

MM1210 - 3D Animation II
Students will learn intermediate skills in 3D Animation. Building upon the fundamentals of 3D Animation I, they will explore the mechanics and acting that provide characters with their personality and inform their body language.
Prerequisite(s): MM1115

MM1215 - Digital Audio and Video
Digital Audio and Video provides students with the fundamental skills required to capture, edit and disseminate new media. Through practical assignments, students will create professional audio and video appropriate for live action and animation projects.

MM1220 - 2D Animation II
Students will build upon the skills acquired in Animation Drawing I and Drawing Fundamentals. Students will move beyond animating simple objects and physical properties into the realm of character animation. Topics include body mechanics, pantomime and lip sync.

Prerequisite(s): MM1135, VA1131

MM1400 - 2D Digital Graphics
The creation and manipulation of digital graphics are important foundational skills that one must know for many creative positions. In this course, students will become familiar with digital image editing tools, learn how to create and manipulate digital graphics, and will be introduced to basic colour theory and digital painting techniques.

MM1950 - Workplace Professionalism
Students will gain the skills and knowledge necessary to effectively work in a team environment.

MM2110 - 2D Animation III
Students will learn production techniques using 2D animation software tools. Building upon the fundamentals from 2D Animation II, students will produce a series of short animation projects to develop intermediate-level skills.
Prerequisite(s): MM1220, MM1400

MM2115 - 3D Animation III
Students will learn advanced skills in 3D Animation. Building upon the lessons from 3D Animation II, they will further develop the mechanics and acting that provide characters with their unique qualities.
Prerequisite(s): MM1210

MM2120 - Pre-Production II
In this course, students will further develop their ability to tell a story in a visual format. This is in combination with the work done in Storytelling in Animation II, where they develop the story in writing. Working alongside first-year students in Pre-Production I, they will take on senior roles in the beginning phase of a capstone project.
Prerequisite(s): MM1120
Co-requisite(s): MM2125

MM2125 - Storytelling in Animation II
Storytelling for Animation II is a creative writing course where students will develop a narrative for a short animation. Analysis of formats and styles will provide students with the skills required to create a first draft of a script. This work will coincide with Pre-Production II, where students will visually develop the story. Working in collaboration with first-year students, they will take on senior roles in the beginning phase of a capstone project.
Prerequisite(s): MM1130

MM2215 - 3D Character Rigging
Students will build upon the skills learned in 3D Animation courses through the development of character rigs: systems for turning models into puppets. Lessons will begin with bipedal humanoids, expanding students' ability to give characters personality. Students will also gain experience with quadrupedal and non-humanoid characters.
Prerequisite(s): MM1210

MM2220 - Arts Project Management
This course will develop skills in the planning and management of creative projects. Students will use software to apply the principles of planning and management to an arts-based project.

MM2255 - Studio Practice
Students will develop and create a body of work based upon personal and professional goals. Coinciding with the Project Management course, students will enhance their creative and critical thinking skills as well as their ability to plan and execute projects. The body of work they produce will showcase their strengths within the creative industries.
Co-requisite(s): MM2220

MM2340 - Digital Audio Workstations
This course is designed to provide students with the understanding and skill set required to use various Digital Audio Workstations (DAWs) for daily sound production tasks through practical examples and projects.

Prerequisite(s): SN1160

MM2565 - Texture and Paint I
Students will be introduced to the fundamentals of custom texture generation, digital painting and application techniques for 3D animation. This course will prepare students to develop workflows, create professional textures and apply them to 3D assets.
Prerequisite(s): MM1400

MM2570 - Texture and Paint II
Building on the fundamentals in Texture & Paint I, students will learn advanced techniques and workflows. This includes adding textures to production-ready 3D models as well as creating matte paintings for post-production work on the capstone project.
Prerequisite(s): MM2565

MM2765 - Animation Project I
Students will work as junior members of a team to complete an animated capstone project. Using assets and documentation developed in previous semesters, they will assist in the production and post-production phases to realize a fully featured animated short.
Prerequisite(s): MM1120, MM1130, MM2565

MM2810 - 3D Post-Production
Students will learn techniques used to create realistic simulations of environmental conditions, natural phenomenon, and various lighting conditions. They will apply these techniques to create renders suitable for post-production compositing in the capstone project.
Prerequisite(s): MM2115

MM2850 - Digital Compositing
In this course, students will learn the concepts, language and fundamental skill sets required for advanced image processing and assembling visual effects for film and video.
Prerequisite(s): MM1400

MM2900 - Portfolio Development
Students will have opportunity to establish the skills of objective, critical self-assessment required to select, collate, and present a body of work that best represents core strengths with a view to identifying and achieving career objectives.
Prerequisite(s): VA1131, MM2255, MM2220

MM3765 - Animation Project II
Students will work as leads and department heads of a team to complete an animated capstone project. Using assets and documentation developed in previous semesters, they will complete the production and post-production phases of the capstone project in order to realize a fully featured animated short.
Prerequisite(s): MM2765, MM2220, MM2255
Co-requisite(s): VA3555

MN1210 - Organizational Design •
In this course, students will learn theoretical and practical approaches to organizational design. The student will explore the importance of organizational design, they will choose designs to help optimize business performance through practical application assessments and analyze strategies to determine best organizational fit.

MN1410 - Special Events Management
This course will provide students with an understanding of special events as well as the details involved in planning, implementing, and following up of special event activities. Topics covered include event selection, planning, organizing, marketing, budgeting, and overall management. Relevant terminology is defined, and the economic impact of events is discussed. Examples of actual special events will be studied.
Prerequisite(s): RS1280

MN1520 - Supervisory Leadership
This course will prepare the student with skills to work in leadership and supervisory positions in a variety of work place settings. Emphasis is placed on the unique challenges facing the supervisor as the first level of management in most organizations. Concepts and theories will be explored through case studies, projects and in-class exercises designed to simulate the daily challenges facing supervisors and leaders.

MN1800 - Sustainable Forest Management
This course is designed to provide a working knowledge of sustainable forest management principles, procedures, and concepts. Emphasis is placed on resource values, adaptive management, and certification requirements while employing a sound, practical, forest technical approach to sustainable resource management. Students are expected to apply knowledge from all forestry courses throughout the program – especially their GIS skills – to construct a sustainable forest ecosystem management plan for a defined forest area. This plan is a mandatory term project, whereby, students will apply principles of integrated resource management and real-world GIS-based inventory data to prepare a realistic five-year operating plan.
Prerequisite(s): FR1331, LW2210, SU3210

MN2100 - Supply Chain Management •
In this course students will analyze supply chain management from all angles. Through practical application, the student will examine supply chain integration, delve into forecasting, evaluate suppliers, and utilize the tools of total quality management and inventory management. The students will also reflect on how best to assess and measure supply chain performance.

MN2410 - Workplace Culture & Innovation •
In this course, students will explore innovative workplace cultures and analyze strategies to promote cultures of innovation. Using practical application, students will analyze the pillars of innovation, explore how they connect to an innovative workplace culture and discuss how to implement them in an organization. Students will gain knowledge of leader responsibility and skills to implement innovative change.

MN2600 - Strategic Management •
This advanced course will provide students with exposure to the inter-relationship of the functional areas of business. The focus will be on strategy development for business management, enabling students to apply organizational, financial, human resource, and marketing decisions to business applications. The student will explore the role of strategic management, external environment analysis, internal resources analysis, functional areas strategies, competitive strategies, corporate strategies, and strategic management in other organizations.
Prerequisite(s): AC2260, HN1240, MR2100, CM2300, EC1110, MA1670

MN2605 - Strategic Management for Leaders •
In this course, students will focus on the importance of strategic management and appropriate strategic management processes while analyzing internal and external business environments. Students will analyze and implement business and corporate level strategies for business leadership through practical application.

MN3100 - Business Ethics •
This course will examine business ethical principles/concepts as well as the many ethical issues/dilemmas facing organizations today. The course will also explore the various government regulations and laws impacting and restricting business operations as well as stakeholders and corporate social responsibility/governance, ethical issues in the workplace, business ethics and the law, ethical decision making, ethics program and audits, and globalization and emerging trends. Students will have the opportunity to research, analyze, and critique various organizational practices and policies, particularly codes of conduct and codes of ethics.
Prerequisite(s): AC2260, HN1240, MR2100, and PS2340

MN3105 - Applied Ethics •

In this course students will explore the importance of ethics, privacy, and confidentiality. Students will practice ethical decision making, employ ethical leadership skills, analyze, and provide responses to ethical issues and practice implementing ethics and social responsibility.

MN3200 - Performance Management •
This course will examine the importance of an effective performance management system in helping organizations define and achieve long-term and short-term goals vital to its overall success. It will reinforce the concept that performance management is an ongoing process of planning, facilitating, assessing, and improving individual and organizational performance. The student will explore the value of performance management and its context; performance management process and strategic planning; setting performance standards; effective performance appraisal systems; performance management and employee development plans; performance coaching; and team performance. Students will have the opportunity to apply various performance management practices and techniques using case studies and application assignments.
Prerequisite(s): HN1240 and PS2340

MO1100 - Orientation to Professional Cooking
Upon completion of this course, the learner will understand opportunities and career paths in the food service industry. The learner will be able to identify different establishments, describe the skill levels of food production personnel, and identify behavioral characteristics that food service workers should develop and maintain to achieve the highest standards of professionalism.

MO1110 - Canadian Food Safety
This course will provide the learner with the skills and knowledge required to handle food safely. It will provide an in-depth awareness of the importance of food safety, national legislation as well as food safety hazards and the tools needed to control them. The design of the facility, equipment, utensils and cleaning and sanitation will be explored in detail to ensure that food handlers have all the facts they require to receive, store, prepare and serve safe food. A certificate will be issued for this course that will be recognized anywhere in Canada.

MO1113 - Sanitation & Safety
Upon completion of this course the learner will have the knowledge required to prevent food poisoning and food-borne illnesses by identifying and using recommended practices for food handling and storage, cleaning and sanitizing, and personal hygiene. The learner will be able to identify and demonstrate safe workplace habits to prevent injuries from cuts, burns, the operation of tools and equipment, falls, and back injuries.
Prerequisite(s): MO1100

MO1120 - Basic Cooking Methods
This course will introduce the learner to various methods of cooking and their purposes. It will provide the knowledge and skills required to prepare hot food according to recipe specifications. The course will explore the challenges of different cooking methods, moist heat, dry heat, (including deep frying) and combination heat. The course will review the guidelines for microwave and sous-vide cooking. The learner will become aware of the appropriate use of seasonings and flavourings.
Prerequisite(s): MO1130

MO1130 - Receiving & Storage
The learner will be able to describe receiving and inspection procedures for food and non-food products and use appropriate storage methods and temperatures. The learner will be able to identify, interpret and complete forms related to receiving, inspecting and storing incoming inventory. The learner will use recommended procedures to label, date and rotate stock in order to reduce waste.
Prerequisite(s): MO1100

MO1140 - Vegetables, Mushrooms & Fruits
This course will provide the learner with the knowledge and skills required to select, clean and store fresh, dried, canned and frozen vegetables, fruits, and mushrooms. The course will describe how to section fresh vegetables, fruits

and mushrooms into various sizes and shapes with minimum waste, and minimum loss of nutrients, quality, colour and texture in preparation for use in various menu requirements or to freeze for later use.
Prerequisite(s): MO1120

MO1160 - Breakfast Cookery
The course will introduce the learner to breakfast foods, their selection, preparation and storage. It will provide the learner with the knowledge and skills necessary to prepare breakfast foods to maintain maximum nutritional value. Breakfast foods include eggs, meats, toast, cereals, pancakes, crepes, waffles, pastries, fruits, vegetables, tea, coffee, hot chocolate and juice.
Prerequisite(s): MO1120

MO1170 - Potatoes

Upon completion of this course the learner will have the knowledge and skills to identify, select, clean, section, prepare, serve, and store potatoes.

Prerequisite(s): MO1120

MO1180 - Stocks & Soups
Upon completion of this course, the learner will have the knowledge and skills required to identify, prepare, use, and store stocks and soups.
Prerequisite(s): MO1120
Co-requisite(s): MO1185

MO1185 - Sauces & Glazes
Upon completion of this course, the learner will have the knowledge and skills required to identify, prepare, use, and store sauces and glazes.
Prerequisite(s): MO1120
Co-requisite(s): MO1180

MO1190 - Meat Handling & Preparation
Upon completion of this course the learner will be able to identify the primal cuts of beef, lamb, veal, and pork and list the fabricated cuts obtained from each. The learner will be able to describe the composition and structure of meat and explain how they relate to meat selection and cooking methods. The learner will be able to explain and use the Canadian meat inspection and grading system information when selecting and purchasing meats. The learner will be able to explain ageing of meat, tenderizing techniques, and marinating procedures. The learner will be able to select appropriate cooking methods based on the cut as well as determine doneness in cooked meat. This will include variety meats. The learner will be able to store fresh, processed, cured, canned, frozen, and cooked meats to maximize shelf life.
Prerequisite(s): MO1120

MO1200 - Poultry Handling and Preparation
Upon completion of this course the learner will be able to describe the composition and structure of poultry and explain how they relate to selection and cooking methods. The learner will be able to explain and use the Canadian poultry inspection and grading system information when selecting and purchasing poultry. The learner will be able to recognize the classification and market forms of poultry and describe how they relate to selection and quality. The learner will acquire the knowledge and skills necessary to handle, prepare, cook, and store poultry.
Prerequisite(s): MO1120

MO1220 - Fish & Shellfish
Upon completion of this course the learner will have the knowledge and skills required to identify, store, prepare, cook, and serve, North American freshwater and saltwater fish, and shellfish using appropriate methods**.**
Prerequisite(s): MO1120

MO1230 - Food Presentation
Upon completion of this course the learner will understand the importance of attractive food presentation. The leaner

will have the knowledge and skills required to serve hot and cold food that is attractively arranged on a plate or platter, with a balance of colour, shape, and textures, to an individual or on a buffet table. The learner will be able to identify and prepare appropriate garnishes for a wide variety of applications.
Prerequisite(s): MO1120

MO1240 - Salads & Salad Dressings
This course will enable the learner to identify, prepare, and store basic types of salads and salad dressings.
Prerequisite(s): MO1120

MO1250 - Sandwiches
This course will provide the learner with the knowledge and skills required to prepare, cut, decorate, garnish display, and store hot and cold sandwiches using a variety of fillings. The course will review the required facilities, equipment, and supplies.
Prerequisite(s): MO1120

MO1260 - Orientation to Baking
Upon completion of this course the learner will be able to identify, describe and select the major ingredients of baked goods. The learner will be able to describe their functions and characteristics in the mixing and baking processes.
Prerequisite(s): MO1120

MO1270 - Yeast Products
This course will introduce the learner to baking ingredients and techniques, the learner will explore baking convenience products and their use. To provide the knowledge and skills required to select baking ingredients according to required use and specifications, and ensuring quality, freshness and taste of product. To provide the knowledge and skills required to prepare bread, rolls, doughnuts and a variety of other baked dough products. Learners will examine yeast and bread products and their preparation procedures.
Prerequisite(s): MO1260

MO1280 - Pies & Pastries
This course will introduce the learner to procedures and special care associated with dessert pies, fillings and toppings. and their preparation. The course will also focus on the practical exercises of preparing pies, tarts and fillings.
Prerequisite(s): MO1260

MO1290 - Quick Breads
This course will introduce the learner to quick breads such as biscuits and muffins. The learner will gain knowledge and skills required to select baking ingredients according to required use and specifications, and ensuring quality, freshness and taste of product.
Prerequisite(s): MO1260

MO1300 - Cakes & Icings
This course will introduce the learner to procedures and special care associated with preparing cakes, and icings.
Prerequisite(s): MO1260

MO1301 - Hors d'oeuvres
Upon completion of this course, the learner will be able to identify, plan, prepare, store, and serve many types of hors d'oeuvres.
Prerequisite(s): MO1120

MO1302 - Legumes, Grains, Pasta & Dumplings
Upon completion of this course the learner will be able to select, store, prepare, and serve legumes, grains, pasta, and dumplings.
Prerequisite(s): MO1120

MO1304 - Cultural Cooking
Given recipes and instructions, the learner will be able to prepare international, national, and regional cultural dishes

using the skills acquired throughout the Marine Cooking program.
Prerequisite(s): MO1120

MO1306 - Dairy Products
This course provides the learner with an understanding of types of milk , creams, cheeses and butter products used in cooking and baking.
Prerequisite(s): MO1120

MO1310 - Desserts
This course will introduce the learner to baking ingredients and techniques, the learner will explore preparing desserts products and their use. To provide the knowledge and skills required to select baking ingredients according to required use and specifications, and ensuring quality, freshness and taste of product. To provide the knowledge and skills required to prepare cheese cakes, Soufflés, and a variety of baked custard products.
Prerequisite(s): MO1260

MO1320 - Cookies & Squares
This course will introduce the learner to procedures and special care associated with cookies and squares and their preparation. The course will also focus on the practical exercises of preparing cookies and squares and troubleshooting some common problems associated with this type of baking.
Prerequisite(s): MO1260

MO1330 - Marine Safety and Security Certifications
This course will provide students with certifications needed for work in the Marine Industry. Certificate courses will be offered during Semester 2. Students are required to complete these Certifications to meet Marine Personnel Regulations SOR/2007-115 standards. The purpose of this course is to ensure adequate measures are taken to protect students, the environment and assets from potentially harmful consequences of the activities being undertaken within the Marine industry.

MO1340 - Tools & Equipment
Upon completion of this course the learner will be able to select, use, and maintain hand tools, utensils, cookware, and equipment. The learner will have the knowledge and ability to use weights and measures accurately. The learner will be able to read and interpret recipes as well as convert yields to larger or smaller quantities to meet specific menu requirements.
Prerequisite(s): MO1113

MO1350 - Nutrition
Upon completion of this course the learner will understand that nutrients found in food supply fuel, promote cell growth in body tissues, and regulate body processes. The learner will be able to identify and describe these nutrients and the foods in which they are found. The learner will have the knowledge and ability to plan food items rich in nutrients for menus following Canada's Food Guide recommendations.
Prerequisite(s): MO1350

MO1360 - Sea Service
For most learners, this sea trip represents their first experience in a marine environment and therefore presents them with their first opportunity to evaluate their career choice. This work experience occurs during semester 2 in the Marine Cooking program. Learners are expected to learn, develop and demonstrate the high standards of behavior and performance normally expected in the work environment. Learners will experience life at sea and will be required to work with a ship's cook or ship's cook helper and participate in duties assigned to ship personnel. This one month of service will satisfy the student's requirement in Section 173 of Marine Personnel Regulation SOR/2007-115 to apply for Transport Canada's Ship's Cook certification.

Note: A valid passport is required for service on a seagoing vessel.
Prerequisite(s): Successful completion of all previous courses except MO1380 and MO1390

MO1370 - Menu Planning & Costing
Upon completion of this course, the learner will be able to identify and plan menus with variety and balance using the Canada's Food Guide. The learner will have the knowledge and ability to forecast, calculate and control food costs when purchasing and receiving inventory for menus.
Prerequisite(s): MO1110

MO1380 - Marine Cooking Theory Exam
This theory examination will test the student's knowledge of topics presented in the Marine Cooking program. This exam is consistent with *The Examination and Certification of Seafarer TP2293E* Section 48 Ship's Cook Syllabuses of Examinations.
Prerequisite(s): MA1085, CM2161, SD1761, MC1062, TS1520, MO1100, MO1110, MO1120, MO1130, MO1140, MO1160, MO1170, MO1180, MO1190, MO1200, MO1220, MO1230, MO1240, MO1250, MO1260, MO1270, MO1280, MO1290, MO1300, MO1310, MO1320, MO1330, MO1340, MO1350, MO1360, MO1370, MO1301, MO1302, MO1113, MO1304, MO1185

MO1390 - Marine Cooking Practical Exam
This practical examination will test the student's skills and knowledge of topics presented in the Marine Cooking program. This exam is consistent with *The Examination and Certification of Seafarer TP2293E* Section 48 Ship's Cook Syllabuses of Examinations.
Prerequisite(s): MA1085, CM2161, SD1761, MC1062, TS1520, MO1100, MO1110, MO1120, MO1130, MO1140, MO1160, MO1170, MO1180, MO1190, MO1200, MO1220, MO1230, MO1240, MO1250, MO1260, MO1270, MO1280, MO1290, MO1300, MO1310, MO1320, MO1330, MO1340, MO1350, MO1360, MO1370, MO1301, MO1302, MO1113, MO1304, MO1185

MP2140 - Circuit Analysis I
This course covers advanced topics in A.C. and D.C. circuit analysis as well as an introduction to Two-Port Networks. It will provide the necessary background for learners to enter second year Electrical and Electronics programs.
Prerequisite(s): ET1101, MA1101

MP2170 - AC Circuits and Machines
This course is designed for Instrumentation and Controls learners. It is designed to strengthen the learner's ability to analyze single- and three-phase AC circuits as well as the learner's understanding of AC machines. The course also introduces the learner to motor control diagrams.
Prerequisite(s): ET2100, MA1101

MP2210 - Power Harmonics and Controls
The first part of this introductory course covers sources of, and problems with, power systems harmonics. As an analysis tool, Fourier analysis is introduced to aid in solving these problems. The laboratory component of this course further develops student skills related to harmonics and Fourier analysis. The second part of the course uses Laplace Transforms in the design and optimization of industrial control systems, with suitable lab components to support the student's understanding and application of theory.
Prerequisite(s): MA2100

MP2300 - AC Circuits
This course strengthens the student's ability to analyze single-and three-phase AC circuits as well as reinforce the student's understanding of magnetic circuits. Laboratory work is included as an application of the theoretical concepts and is intended to enhance skills in the use of AC measuring instruments.
Prerequisite(s): ET1280, MA1101

MP2350 - Transformers
This course is designed to expand the student's knowledge of transformers and the associated applications, standards and loading guides. Additionally, it will enhance the student's ability to analyze single-and three-phase AC circuits as well as provide an application for advanced mathematical analysis techniques.
Prerequisite(s): MA2100, MP2300

MP2910 - DC Machines
This course is an introductory course in electrical machine theory. It covers the basics of DC machine theory and provides the necessary background for subsequent courses in electrical machines. It will give the student an appreciation of rotating machinery and through labs, an idea of the type and operating characteristics of the various DC machines.
Prerequisite(s): ET1280

MP2920 - AC Machines
This course covers fundamental theory of AC Machines including alternators, AC generators and various types of AC motor types. Troubleshooting of AC machines is also covered at a basic level. The theory learned in this course will be applied in future courses involving power systems and motor controls.
Prerequisite(s): MP2910, MP2300
Co-requisite(s): PE2501

MP3110 - Motor Control Systems
This is an advanced level course designed for Electrical Engineering Technology students. It provides the student with a solid background in designing, installing, and troubleshooting various motor control systems. Upon successful completion, the student should be able to interpret typical control drawings, design automated control solutions for typical industrial applications, install and troubleshoot various control strategies, as well as select and configure protection methods for motor circuits.
Prerequisite(s): MP2920, MP2350

MP3150 - Power Devices and Motor Drives
This course is a study of electronic variable speed motor drives. Power electronic device theory is covered as background for drive electronics. AC and DC drives are studied as well as installation, commissioning and trouble shooting.
Prerequisite(s): AE2260, MP3110

MP3170 - Industrial Motor Controls
This course is a study of power systems including single line power schematics, motor controls, relay logic, PLC control and electronic variable speed motor drives. AC and DC drives, with applications in the instrumentation field.
Prerequisite(s): MP2170, ET2100
Co-requisite(s): CE2810

MP3215 - Power Systems Analysis
This is an introductory course which exposes the student to fundamental design aspects of utility bulk power transmission systems. The student is first introduced to the overall layout and function of each component of typical utility systems. Types and characteristics of overhead line conductors and related hardware are also covered. Sub-transmission and distribution system calculations are introduced, followed by exact and approximate system models used in analysis of medium and long transmission lines. The student is also introduced to basic structural design aspects of high voltage transmission lines. Other major electrical design aspects of high voltage transmission lines are introduced. The course concludes with an overview of the design and construction of high voltage cables for both underground and submarine applications.
Prerequisite(s): MP2920, MP2350

MP3225 - Power Systems Analysis and Operation
This course covers advanced topics related to electric energy systems, from both system analysis and system operation perspectives. Major topics include unit and plant scheduling, fault calculations, stability analysis, power flow calculations, and principles of protection and control. The student is also introduced to high voltage direct current (HVDC) transmission technology.
Prerequisite(s): MP3215

MP3250 - Emergency Standby Systems and Alternative Energy Sources
This course is designed to study emergency standby systems and alternative energy sources. Emergency standby systems will include diesel generator sets, gas turbine driven generators and uninterruptible power supplies. Alternative energy sources covered include gas engines, turbines, waste heat, the sun, the wind, thermoelectric

generators, fuel cells and heat pumps.
Prerequisite(s): MP2300, MP2920

MR1100 - Marketing I •
This is an introductory course in the fundamental principles and practices of marketing. The student will explore strategic planning and marketing management, the internet in marketing, marketing research information, consumer markets and behavior, business markets and behavior, market segmentation and targeting, and international marketing. Students will have the opportunity to apply case studies and research various marketing concepts, techniques, and processes.

MR1340 - Marketing for Graphic Design
Students will gain an understanding of the relationship between marketing and graphic design. Students will be introduced to the process of applying marketing principles when translating clients' needs to specific target audiences.
Prerequisite(s): VA1230

MR1500 - Consumer Behaviour
This course introduces the student to concepts, theories and techniques of consumer behaviour. The student will explore the fundamentals of consumer behavior in order to gain an understanding of the motivation behind purchase decisions. By understanding the consumer's behavior, students are able to make more market focused strategic decisions. Students will have the opportunity to apply the knowledge acquired through the use of case analysis and assignments.
Prerequisite(s): MR2100

MR1600 - Relationship Selling •
This is an introductory course in the fundamental principles and practices of relationship selling through service. The course is designed to teach the student about competencies in prospecting, identifying client needs, and how to effectively handle objections while building client relationships. The student will take part in selling exercises to review and master selling techniques. Students will apply various techniques and practices through case analysis and the use of a sales simulation.
Prerequisite(s): CM1241, CM2200, MR2100

MR2100 - Marketing II •
This is an introductory course in the fundamental principles and practices of marketing. The student will explore product development and lifecycle, price distribution and supply chain management, retailing and wholesaling, promotion, advertising, and personal selling. Students will have the opportunity to apply various marketing techniques and practices using case studies and application assignments.
Prerequisite(s): MR1100

MR2110 - Marketing Methods
This course introduces the concepts and techniques of marketing. Students will learn the principles of modern marketing management and the resources required to successfully promote and market products and services. Students will also take an in-depth look at some of the online tools and emerging technologies available. A major aspect of the course is the development of a marketing plan related to the student's program of studies.

MR2200 - Retailing Management
This course is designed as an introduction to the concepts, theories, and techniques of retailing management. The student will explore the concepts of buyer behavior, strategic retail management, retail design, presentation, and pricing. Students will apply various retail techniques and practices using case studies and application assignments and will develop communication skills through class discussions and group activities.
Prerequisite(s): MR2100

MR2300 - Marketing Research •
This course introduces students to the logic of the marketing research process through examination of the various techniques, principles, skills, and activities required to create and present an effective survey project. Upon completion of the course the student will be familiar with the ways marketing information can be obtained and/or

produced and how it is used to provide insight into markets, customers, products, and business strategies for business decision making purposes. Students will have the opportunity to apply various research techniques and practices using case studies and application assignments culminating in the preparation and presentation of a research report.
Prerequisite(s): MR2100

MR2400 - Advertising & Marketing Comm •
This course will examine the current processes, issues, and practices involved in advertising and promotion with an integrated marketing communications approach. The student will explore communications as it relates to traditional and digital forms of media and will have an opportunity to apply creativity in developing tools in select media for local uses wherever possible. The student will examine how advertising & marketing communications affects the purchase and post purchase behavior of the consumer. Students will have the opportunity to apply current marketing communication techniques and practices using case studies, application assignments and a major project.
Prerequisite(s): MR2100, CM1241

MR2450 - Services Marketing
This course is designed to enable students to apply concepts and strategies of marketing relevant to the service sector. The student will explore aspects of services marketing, including service productivity, service marketing distribution, service pricing concepts, positioning in service marketing, and service personnel management. Students will have the opportunity to apply theoretical knowledge of marketing concepts and strategies via experiential learning opportunities using a case project, application assignments and presentations.
Prerequisite(s): MR2100

MR2620 - Sales Management
This course will provide students with an overview of the critical areas for salesperson success as well as evolving trends in professional selling. Students will deepen their knowledge in the areas of sales management, planning, forecasting, and account relationships, as well as sales force organization, operations, staffing and training. Students will have the opportunity to demonstrate the application of concepts through field work assignments, case analysis, research and presentations.
Prerequisite(s): MR1600

MR3100 - Current Topics in Marketing
This student-led seminar-based course will examine issues, topics, and trends in marketing that are of recent and current concern to marketing professionals today. Students will research, develop, and present a seminar/paper on selected issues/topics/trends from among the following areas explored in this course: the field/practice of consumer behavior; advertising and marketing communications; marketing research; retailing management; relationship selling; social media marketing; customer relationship management; services marketing; data analytics, sales management, and customer experience management.
Prerequisite(s): MR1500, MR2400, MR2300, MR2200, MR1600, CP2070, MR2450, MR3130
Co-requisite(s): MR2620, MR2700

MR3125 - AI in Marketing •
In this course, students will learn about the fundamental concepts and technologies that underlie Artificial Intelligence (AI) and how these technologies are used in marketing. They will explore the various AI tools available for marketing, such as predictive analytics, chatbots, and machine learning and how these tools can be used to drive marketing strategies. Students will learn how AI is transforming consumer behavior and how it can be used to improve customer engagement and satisfaction. How to measure the effectiveness of AI in Marketing by identifying key metrics and tracking progress over time and how to develop a driven marketing campaign including targeting, messaging, and optimization is explored. Students will also learn how to analyze data to improve marketing outcomes and how to use AI-powered analytics data to gain insights and make informed decisions necessary to adapt to an AI-driven marketing environment.

MR3130 - Digital Analytics •
This course exemplifies how marketing analytics are the foundation to digital marketing. Students will learn how analytics is the language used to optimize and connect results across all digital marketing tactics (search, social media, email, display, video, etc.). The technical and soft skills of analytics will be highlighted through theory and practical application to better understand data analysis. Upon completion of the course, the student will be able to explain and

apply the logic of optimization and attribution in business analytics. The student will be able to apply the practical tools and techniques of business analytics and run field experiments in digital environments using A/B testing. The student will also practice web analytics for better business decision-making.
Prerequisite(s): CP2070

MR3210 - Customer Experience Management
Elevating and managing the customer experience is key in today's fast paced market to gain a competitive advantage. This course introduces students to the increasingly complex demands of customer service in today's marketplace. Students will focus on the key concepts of customer experience including an overview of the profession, skills for success and techniques for building and maintaining relationships and retaining customers. Upon completion of the course students will have the tools to build and implement effective customer service strategies through active learning.
Prerequisite(s): MR1500

MT1115 - Introduction to Mining
In this course, students will acquire a basic understanding of the primary functions, processes, and equipment utilized in Canadian surface and underground mining operations. Students will examine several common ore extraction and mine development techniques and will demonstrate a working knowledge of basic mining industry concepts and terminology. Students will solve simple grade control, productivity rate, and three-dimensional problems; identify the various legislation that applies to the mining sector; and investigate sustainability and innovation opportunities in the industry.

MT1210 - Mining Methods
In this course, students will study the application of the basic surface and underground mining methods typically used in Newfoundland and Labrador, as well as basic modifications to those techniques. Students will examine both the development and production dimensions of surface and underground mining (which includes hard rock metalliferous mining methods), for different types of ore deposits, and conduct simple economic analyses.
Prerequisite(s): MT1115

MT2110 - Industrial Hygiene for Mines
In this course, students will examine the industrial hygiene issues associated with mine operations and discover the application requirements for auxiliary mine ventilation systems. Students will monitor and evaluate airflows and learn about the various methods for monitoring for common contaminants. Other mine industrial hygiene issues to be reviewed include physical and chemical agents, noise, light, heat, humidity, and temperature. Students will reference the NL Occupational Health and Safety Act to determine regulatory requirements and review other related reference materials and guidelines.
Prerequisite(s): MT1210, MA1101

MT2130 - Mine Layouts and Planning
In this course, students will apply mining and surveying knowledge to produce working layouts for production and development openings typical of most mines. CAD based and/or GIS based techniques will be applied. Mine engineering procedures and selected industrial problems will be examined, as well. An introduction to elements in the mine planning process will be included and an introduction to various mine modelling software will be made, as available. Relevant sections of the NL Occupational Health and Safety Act, and the Environmental Protection Act will be highlighted as they relate to the mining activities being performed.
Prerequisite(s): GE1210, MT1210, SU1230

MT2155 - Mining Ethics
Environmental stewardship is only one aspect of mining sustainably, where legislative requirements govern how the mining industry operates within the various jurisdictions. However, it is also increasingly more important for corporations to develop partnerships with the people, communities, and organizations within their operating regions to ensure a 'social license' exists to operate and that the socioeconomic benefits have as much impact as possible. This course begins with an introduction to the concepts of sustainable development and environmental stewardship, and similar approaches, used in industry. The typical environmental issues associated with the mining industry are then presented, along with the steps required to manage, monitor, and report on environmental impacts. Federal and Provincial legislative requirements will also be reviewed for all stages of the mining life cycle.

MT2320 - Mine Equipment & Safety
In this course, students will be introduced to the mobile and fixed plant equipment maintenance programs used in different mines. The importance of workplace safety and preventative maintenance will be emphasized. Students will be introduced to various pieces of equipment, a typical maintenance department setup, hazard recognition concepts, and safety standards and procedures related to mobile and stationary equipment in the mine environment. Typical industrial safety systems will be reviewed as well as safe work practices and procedures.
Prerequisite(s): MT1210

MT2430 - Mineral Processing
In this course, students will learn how minerals are processed and concentrated. Students will study the basic unit operations that pertain to comminution, beneficiation, and de-watering as they apply to typical industrial processes. The pertinent chemical and physical interactions involved in the processes as well as industrial control strategies will be covered. Students will discuss the associated health, safety, and environmental issues and may visit plants to enhance their understanding. As part of the course, students will perform illustrative laboratory work.

MT2450 - Mine Blasting Techniques
In this course, students will prepare to cope with the problems encountered when blasting in the modern mining industry. Students will select explosives and construct blast designs with proper layouts for development and production drilling. Problem solving techniques will allow for the solution of blasting performance problems. Troubleshooting and adjustment to blast design will use observational methods as well as blast vibration monitoring technology. The effective use of modern blasting technologies to operate efficiently and effectively in the mining environment will be emphasized.
Prerequisite(s): MT1210, MA1101

MT2700 - Ground Control
In this course, students will be exposed to a common sense, practical approach to underground mine opening stability. Major emphasis will be on rock mass conditions, opening shape, selection and evaluation of support systems, effect of mining methods and instrumentation. Students will primarily focus on the hard rock underground mining environment dealing with both structural- and stress-driven opening stability problems and support solutions. Students will utilize available technical software to undertake a variety of practical activities. Open pit support will be covered if time permits.
Prerequisite(s): MT2130

MU1110 - Music & Culture
This course is designed to trace the history of music and to explore the reciprocal relationship between music and culture. The course traces the development of distinct musical genres and illustrates that these genres serve as mirrors of their respective societies.

MU1130 - Music Theory I
This is an introductory course that explores the basic theory and terminology of music. The intent is to provide students with the skills to read and write music while learning the vocabulary of the industry and the use of music notation software for musical productivity.

MU1140 - Musicianship & Recording
This course is designed to provide the student with the skills required in order to be an effective musician in the recording environment, both in the recording studio and when recording live from the stage. Areas of instruction will include proper preparation for the recording studio, recording terminology, effective studio communication, working with a click track, headphone monitoring, recording a studio performance vs. recording a live performance, the multi-track recording, the mixing process, the musician's role in the overall recording process, and mental focus in the recording studio. Classroom sessions will be augmented through hands-on experience in the recording studio.

MU1150 - Music in Media
This course is designed to introduce students to composing and formatting music for inclusion in 21st Century media

platforms: Film, Video, Video Games, Software, Internet, Animations, and Mobile Web Applications. Lectures and labs will focus on both the musical and technical aspects of the creation of music for these contemporary mediums.

MU1160 - Cultural Career Management
This course is designed to provide students with an understanding of the elements of a long-term career plan for cultural industry workers. Students will learn about developing skills in the following areas: short, medium and long-term career goals establishment, career competencies, artistic competencies and incorporation of business planning, self-promotion strategies, project management, grant application processes, life-long artistic development and professional association's affiliation. Students will have an opportunity to complete this course with a clear vision of their career plans and the tools necessary to implement these plans effectively.

MU1200 - Songs & Songwriting
This course provides an overview of effective songwriting principles. Students will review these principles and will listen critically to a wide range of selections from a variety of genres. Throughout the course, students will regularly write original songs and have them peer evaluated.

MU1210 - Music Theory II
This is an advanced music theory course which explores harmony and scoring. The intent is to provide students with the skills to read and write music at an advanced level while learning to apply theoretical concepts to the analysis of musical compositions and scores. The use of music notation software will be an important tool in this course.
Prerequisite(s): MU1130

MU1415 - Performance I
This course is designed to introduce essential skills required to perform music live in front of an audience. Introductory performance skills will be implemented and the evaluation will focus on the development of these skills. Students will be graded through peer evaluation of classroom performances and instructor evaluation of both college and public performances, as well as a graded final jury. At the core of this course will be introductory performance techniques in the music industry, professionalism and performance career planning.

MU1420 - Performance II
This course is designed to continue with the student's ongoing development as a performer. More intermediate performance skills will be implemented and the evaluation will become more focused on these intermediate skills. Students will be graded through peer evaluation of classroom performances, instructor evaluation of both college and public performances, and portfolio evaluation, which will take place as part of a final jury. At the core of this course will be intermediate performance techniques in the music industry, professionalism, and performance career planning.
Prerequisite(s): MU1415

MU2010 - Music of Atlantic Canada
This course examines the unique musical styles and trends of East Coast Canadian music. An overview of Canada's music history from 1960-present will provide context and point of reference for analyzing the development of Atlantic Canada's music scene and industry. The course will explore East Coast music including pioneer artists, industry representatives, venues, festivals, and organizations whose contributions have helped to shape today's music community and industry infrastructure.

MU2015 - Online Media Strategies
Online Media Strategies trains the student in a variety of techniques and strategies for the development and distribution of music for online media, a skill set that is relevant for all contemporary musicians. Areas of instruction include topics such as media platforms, content users, streaming and cloud technologies, audio and video considerations, and distribution strategies. The course will culminate in the creation and distribution of the student's own content in the form of a capstone project.
Prerequisite(s): SN1170

MU2110 - Instruments
This introductory course explores the families of instruments used in civilizations. Students will use classification systems to categorize instruments and to identify common operating principles.

Prerequisite(s): MU1130

MU2130 - Popular Music History
This course explores the origins of popular music, the evolution of media and mass distribution, and traces the impact of popular music upon society.

MU2135 - Global Music Industry Trends
Through research-based projects, discussions, and presentations, students will examine global markets, emerging release strategies, the effects of artificial intelligence on the music industry, and new models for sustainable economic growth.

MU2420 - Performance III
While the student continues to build a strong portfolio and enhances his or her performance skills, they will prepare larger musical events in various genres at a variety of venues. Students will be graded through peer evaluation of classroom performances, instructor evaluation of both college and public performances, and portfolio evaluation, which will take place as part of a final jury. At the core of this course will be current concert and touring trends in the music industry, professionalism and performance career planning.
Prerequisite(s): MU1420

MU2425 - Performance IV
While the student finalizes a strong portfolio and establishes an online presence, performance skills will be crafted to a semi-professional level. Students will be graded through peer evaluation of live performances, instructor evaluation of both college and public performances and portfolio evaluation, which will take place as part of a final jury. At the core of this course will be professional skill evaluation and clearly defined career planning.
Prerequisite(s): MU2420

MX1300 - Digital Imaging I - CR Systems
This course is designed to give the student a comprehensive knowledge of the process involved in the formation of a diagnostic x-ray image generated through the use of radiant energy. Students will learn and practice computed radiography (CR) image capture and will become familiar with processing and archiving the image. Image capture, technical factor selection and calculation, manipulation, display, archiving and retrieval will be practiced in laboratory sessions ensuring the production of optimum images.
Prerequisite(s): Successful completion of 2nd semester

MX1510 - Clinical Radiography I
This clinical course is designed to provide extensive clinical experience to diagnostic imaging students. Applied knowledge of anatomy and physiology; radiographic technique; pathology, radiation protection; patient care and safety; and quality assurance will be reinforced. Emphasis will be placed on intensive demonstrations and application of clinical skills in professional practice. Students will maintain documentation which demonstrates both the quality and quantity of clinical experience acquired, thus ensuring on-going maintenance of competencies developed.
Prerequisite(s): Successful completion of 5th semester

MX1620 - Clinical Orientation I
The clinical orientation of the student during the fourth and fifth semesters is designed to reinforce the theoretical knowledge acquired during the didactic segment of their training program. For three (3) hours each week, students will participate in a variety of basic routine radiographic procedures within a clinical setting and under the direction of a preceptor or clinical instructor. Students will also be afforded the opportunity to enhance their knowledge of various basic and specialized radiographic equipment used in today's modern diagnostic imaging departments. During their clinical orientation, students are also able to apply their understanding of the concepts used in providing quality patient care and radiation protection in a "real life" setting.
Prerequisite(s): Successful completion of 3rd semester
Co-requisite(s): All courses in the 4th semester

MX1621 - Clinical Orientation II
The clinical orientation of the student during the fourth and fifth semesters is designed to reinforce the theoretical knowledge acquired during the didactic segment of their training program. For three (3) hours each week, students

will participate in a variety of basic routine radiographic procedures within a clinical setting and under the direction of a preceptor or clinical instructor. Students will also be afforded the opportunity to enhance their knowledge of various basic and specialized radiographic equipment used in today's modern diagnostic imaging departments. During their clinical orientation, students are also able to apply their understanding of the concepts used in providing quality patient care and radiation protection in a "real life" setting.
Prerequisite(s): Successful completion of 4th semester
Co-requisite(s): All courses in the 5th semester

MX2102 - Radiographic Anatomy I
In this course, students will gain a complete understanding of radiographic landmarks and anatomy to perform diagnostic imaging procedures. Students will learn how to recognize, identify and label radiographic images and corresponding radiographic anatomy. The content learned in this course includes surface landmarks, skeletal, appendicular, and axial skeleton (excluding the skull). The course will cover anatomical structures, functions, locations and any other anatomical variants relevant to the aforementioned systems.
Prerequisite(s): BL1605, TM1130

MX2105 - Radiographic Anatomy II
This course is a continuation of MX2102, where the student will become knowledgeable of the structure, function, location, and radiographic appearance of structures in the skull, as well as the following anatomical systems: Cardiovascular, Digestive, Urinary, Reproductive, Nervous and Endocrine Systems. Identification of anatomical structures on the radiographic image, as well as the ability to differentiate between normal and abnormal anatomical appearance in all three dimensions, is required. Students will learn how to locate the listed anatomical structures on a diagnostic image.
Prerequisite(s): MX2102

MX2110 - Radiographic Technique I
Students will learn fundamentals practices involved in the performance of radiographic positioning, and routine protocols. An introduction to the importance of adapting protocols in response to patient condition and clinical environments will be covered. Students will develop skills in positioning and evaluating the diagnostic quality of routine and trauma images for the appendicular and axial skeleton.
Prerequisite(s): Successful completion of all semester 3 courses
Co-requisite(s): MX2320, MX2210, MX1620

MX2121 - Radiographic Technique II
Students will build on fundamentals positioning practices and incorporate procedures involved in the major body systems Practice of adapting protocols in response to patient condition and clinical environments will be reenforced. They will develop skills in positioning and evaluating the diagnostic quality of routine and trauma images for the cranium, body systems and specialized procedures as well as imaging techniques specific to geriatric and pediatric populations.
Prerequisite(s): MX2110
Co-requisite(s): MX1621

MX2201 - Image Recording: Quality Management
This course is designed to provide the student with a comprehensive knowledge of quality assurance processes associated with image quality management. Performance of specific quality control procedures necessary to maintain a high standard of image quality will be studied. Quality control tests for radiographic, radioscopic, computed tomography, computed radiography, direct radiography, digital networking and archival system, mammography, bone mineral density and accessory equipment will be studied. The importance of faithful adherence to quality control procedures and processes as part of a diagnostic imaging department's overall risk management strategy will be discussed. Students will learn to perform inspection procedures and reject-image analysis as part of the overall quality assurance program.
Prerequisite(s): MX2420, MX2320
Co-requisite(s): MX2520

MX2210 - Digital Imaging II: DDR Systems
This course is designed to give the student a comprehensive knowledge of the process involved in the formation of a diagnostic x-ray image generated through the use of radiant energy. Students will learn and practice digital methods of image capture and will become familiar with the many factors that affect the quality of the radiographic image. Image manipulation, display, and archiving will be discussed and practiced in laboratory sessions, as well as methods of reducing image artifact, ensuring the production of optimum diagnostic images, and best practice to reduce patient dose.
Prerequisite(s): MX1300

MX2311 - Apparatus and Accessories
Students are introduced to both theory and practical laboratory skills relating to radiation safety standards and the use of basic equipment in the diagnostic imaging suite. The student will gain knowledge of the production of x-radiation and prime factors that will be useful for medical purposes. This course provides both knowledge and practical skills for the use of the x-ray apparatus, its components and accessory equipment, and characteristics that will allow the proper control of the x-ray beam. The student will learn about the effective use of grids, filtration, and beam restriction to reduce patient dose and improve image quality. Additionally, students will learn how to safely and effectively manipulate basic computed radiography imaging equipment and accessories. Knowledge of methods employed to facilitate heat dissipation during the production of x-radiation, as well as practical skills employed to conserve tube life.
Prerequisite(s): Successful completion of 1st semester
Co-requisite(s): PH2205

MX2320 - Introduction to CT and Specialized Imaging
This course introduces the medical radiological technology student to specialized and advanced imaging equipment. Students will gain knowledge of basic principles and theories, data acquisition, image display and reconstruction (if pertinent), image quality factors, post-processing and data management and archiving. The student will also learn about safe operation practices and reduction of dose for the patient, support persons and operators. Emphasis will be placed on Computed Tomography and Fluoroscopic Imaging.
Prerequisite(s): MX2311
Co-requisite(s): MX2110, MX2420

MX2415 - Patient Care I
This course is designed to provide the student radiographer with the necessary knowledge to provide effective patient care in a variety of situations that they may encounter in the hospital environment. This course emphasizes fundamental concepts in general patient care, body mechanics, basic nursing skills, use of common drugs, venipuncture, oxygen administration, suction technique, as well as caring for patients with special needs. Students will also receive instruction in the fundamentals of first aid, basic life support, mental health, and personal wellness.
Prerequisite(s): BL1605, TM1130

MX2420 - Radiographic Anatomy III
This course is a continuation of MX2105 and includes an in-depth study of the sectional anatomy, physiology, and related pathology of different body regions. The primary focus of this course will include CT imaging of the head, neck, spine, chest, abdomen, pelvis, upper extremities, and lower extremities.
Prerequisite(s): MX2102, MX2105
Co-requisite(s): MX2320

MX2430 - Radiographic Image Analysis I
This course is designed to introduce the student to image analysis, evaluation, and critique. The student will use critical thinking and knowledge gained from previous courses to analyze and critique the quality of produced images and to respond and correct errors if applicable. The student will further utilize the previous knowledge acquired from radiographic anatomy, radiographic technique, image recording and acquisition, to develop the skills to evaluate image quality, technical factors, and results to determine if further actions are required.
Prerequisite(s): Successful completion of 3rd semester courses
Co-requisite(s): MX2110

MX2500 - Radiation Protection and Radiobiology

Combined with their knowledge of physics and human biology, students will learn how to utilize radiation to provide maximum diagnostic information with minimal biological damage to the patient. Students will become familiar with international, national and provincial standards. They will learn how to maintain these standards by the correct use of equipment, accessories and other relevant factors. They will learn how to provide maximum protection from ionizing radiation to the patient, general public, co-workers and themselves.
Prerequisite(s): BL1605, PH2205

MX2505 - CT: Imaging Procedures and Protocols
This course is designed to provide the student with knowledge of computed tomography procedures and protocols used in modern imaging facilities. This course requires a student to integrate previously acquired knowledge and skills in physics, patient care, and sectional anatomy. The performance of specific computed tomography procedures and protocols will be explained and described. The signs and symptoms of many diseases and conditions often observed in clinical practice requiring computed tomography imaging will be explained. Students will also become familiar with interventional CT, CT Fluoroscopy and PET/CT Fusion imaging.
Prerequisite(s): MX2320, MX2415, MX2420

MX2510 - Pathology for Imaging Professionals
This comprehensive course provides an overview of the major pathological conditions frequently encountered and diagnosed using medical imaging. The student will learn about common traumatic injuries, pathologies, and abnormalities, using a body systems approach. Specifically, the systems covered will include skeletal, respiratory, digestive, urinary, reproductive, neurological, cardiovascular, hematopoietic, and endocrine system. Building upon a comprehensive knowledge of radiographic anatomy obtained in previous courses, pathologies covered will include those of a congenital, traumatic, inflammatory, neoplastic, and chronic nature. Additionally, the student will become knowledgeable of the mechanism, signs, and radiographic appearance of the different pathological conditions seen on plain X-ray, as well as cross-sectional radiographic signs seen on CT imaging.
Prerequisite(s): MX2102, MX2105, MX2420
Co-requisite(s): MX2505

MX2515 - Patient Care II
This course is designed to provide the student radiographer with the necessary knowledge and skills to provide high-quality patient and family-centered care. Medical Radiological Technology students will learn to anticipate the needs of patients and their families and respond with appropriate patient care strategies in a variety of care environments.
Prerequisite(s): MX2415, MX2320, MX2110
Co-requisite(s): MX2121, MX2505

MX2520 - Radiographic Image Analysis II
This course is a continuation of radiographic image analysis I. It is designed to further enhance the student's ability and skills to image analysis, evaluation, and critique. The student will use critical thinking and knowledge gained from previous courses to analyze and critique the quality of produced images and to respond and correct errors if applicable. The student will further utilize the previous knowledge acquired from radiographic anatomy, radiographic technique, image recording, and acquisition, to develop the skills required to evaluate image quality, technical factors, and results to determine if further actions are required.
Prerequisite(s): MX2430
Co-requisite(s): MX2121

MX3250 - Clinical Radiography II
All clinical courses are designed to provide extensive clinical experience to students. Applied knowledge of anatomy and physiology, radiographic technique, pathology, radiation protection and patient care and safety will be reinforced. Emphasis will be placed on intensive demonstrations and application of clinical skills in professional practice. Throughout the entire clinical component of the Medical Radiography program students will maintain documentation which demonstrates both the quality and quantity of clinical experience acquired, thus ensuring on-going maintenance of competencies acquired.

This course will also provide the student with the opportunity to become familiar with related disciplines in order to review patient data such as images and reports from other studies through research and observation of other imaging and therapeutic modalities.

Prerequisite(s): Successful completion of 5th semester

MX3260 - Clinical Radiography III
All clinical courses are designed to provide extensive clinical experience to students. Applied knowledge of anatomy and physiology, radiographic technique, pathology, radiation protection and patient care and safety will be reinforced. Emphasis will be placed on intensive demonstrations and application of clinical skills in professional practice. Throughout the entire clinical component of the Medical Radiography program, students will maintain documentation which demonstrates both the quality and quantity of clinical experience acquired, thus ensuring on-going maintenance of competencies acquired.

This course will also provide the student with the opportunity to become familiar with related disciplines in order to review patient data such as images and reports from other studies through research and observation of other imaging and therapeutic modalities.
Prerequisite(s): Successful completion of 5th semester

ND1010 - Intro to Non-Destructive Testing
This course is designed to give students an understanding of the concepts and requirements of Non-Destructive Testing (NDT). The course will cover topics such as the capabilities and limitations of visual testing, penetrant testing, magnetic testing, eddy current testing, ultrasonic testing & radiography testing. It will also give students an overview of the uses of the trade, codes/standards and certification requirements of Natural Resources Canada (NRCan) National Non-Destructive Testing Certification Body (NDTCB).

ND1110 - Penetrant Inspection II
Penetrant Testing Level II prepares students to recognize various surface flaws in industrial components using Liquid penetrant inspection methods. This course provides students theoretical and practical training for liquid penetrant inspection in preparation for national Non-Destructive Technician Certification through Natural Resources Canada (NRCan) National Non-Destructive Testing Certification Body (NDTCB).
Prerequisite(s): TS1520
Co-requisite(s): ND1130

ND1130 - Materials and Process
This course provides students information on various industrial materials, metal forming, casting, welding, service conditions, and flaws. It also introduces the physical, electrical, mechanical, and magnetic properties of metals. This course provides students training for Materials and Process in preparation for certification through NRCan NDTCB. This training will include theoretical concepts only.

ND1210 - Magnetic Particle Testing II
This course is designed to train learners to use small magnetic particles to detect flaws in components. For this method to be used the component must be made of ferromagnetic material. Magnetic Particle Testing II provides learners theoretical and practical training for a Magnetic Particle Inspection in preparation for national Non-Destructive Technician Certification through Natural Resources Canada (NRCan) National Non-Destructive Testing Certification Body (NDTCB).
Prerequisite(s): TS1520
Co-requisite(s): ND1130

ND1310 - Industrial Ultrasonics I
Industrial Ultrasonics I trains students to use high frequency sound energy to conduct examinations and make measurements in materials to determine surface or internal flaws in materials. This course provides training for a Level I Industrial Ultrasonics NDT Technician Certification in preparation for national Non-Destructive Technician Certification through Natural Resources Canada (NRCan) National Non-Destructive Testing Certification Body (NDTCB).
Prerequisite(s): ND1130, TS1520, MA1081

ND1311 - Industrial Ultrasonics Level II
Industrial Ultrasonics Level II trains students to use high frequency sound energy to conduct examinations and make

measurements in materials to determine flaw locations. This course provides training for a Level II Industrial Ultrasonics NDT Technician Certification in preparation for national Non-Destructive Technician Certification through Natural Resources Canada (NRCan) National Non-Destructive Testing Certification Body (NDTCB).
Prerequisite(s): ND1310

ND1410 - Industrial Radiography I
Industrial Radiography I trains students to send radioactive energy through a material enabling a negative (photo) to be produced of that material illustrating internal flaws or cracks. This course provides training for Level II Industrial Radiography level II national Non-Destructive Technician Certification through Natural Resources Canada (NRCan) National Non-Destructive Testing Certification Body (NDTCB).
Prerequisite(s): TS1520, MA1081, ND1510, ND1130

ND1411 - Industrial Radiography II
Industrial Radiography II trains students to send radioactive energy through a material enabling a negative (photo) to be produced of that material illustrating internal flaws or cracks. Theory and practical components from Industrial Radiography I are expanded upon to enhance capabilities in this discipline. theoretical and practical training. This course provides training for Level II Industrial Radiography level II national Non-Destructive Technician Certification through Natrual Resources Canada (NRCan) National Non-Destructive Testing Certification Body (NDTCB).
Prerequisite(s): ND1410

ND1510 - Radiation Safety and CEDO
This course introduces students to ionizing radiation safety techniques, regulatory and safety requirements as dictated by the Canadian Nuclear Safety Commission (CNSC) governing body. The procedure for monitoring radiation, biological effects of radiation, non-destructive testing (NDT) procedures for gamma radiography are covered. Students are also provided the opportunity to become nationally certified in Certified Exposure Device Operator (CEDO), a certification that is required for NDT technicians to handle and work with radioactive gamma sources. This will include both theoretical and practical training.
Prerequisite(s): TS1520, MA1081

OF1101 - Operational Management •
This course examines filing systems and procedures used by office workers, manual and electronic methods of information storage and retrieval, types of microforms, and the need for records retention. Proper procedures for handling mail, planning and organizing business travel, good customer-service techniques, and researching information are also explored. This course will integrate service learning with enhanced networking opportunities and quality community involvement.

OF1105 - Personal and Career Growth
This course will acquaint the student with the significant role of the office employee in business, the importance of effective communication and various communications methods, the use of reference resources, and the need to enhance desirable personality traits and attitudes. This course will integrate service learning with enhanced networking opportunities and quality community involvement.

OF1305 - Digital Tools for the Office •
This course introduces the learner to social media skills necessary to carry out specific duties of an administrative professional. Students will use their writing skills to communicate with stakeholders by responding appropriately to inquiries. Students will plan and participate in online meetings and create and collaborate using current technologies to facilitate effective communication.

OF2100 - Career Planning Strategies •
This course is designed to further prepare the student in developing career strategies. The focus is on topics such as self-awareness, personal and professional development, planning business meetings, job search skills and preparation for the workforce to enhance the skills needed to have a successful and professional career. This course will integrate

service learning with enhanced networking opportunities and quality community involvement.
Prerequisite(s): CM2110

OF2101 - Office Simulation •
In this course, students will complete an office simulation that will require them to perform research, make decisions, and apply time management skills**.** Students will apply knowledge they have gained in all previous Office Administration courses.
Prerequisite(s): DM2200, OF2100

OF2300 - MCP Billing •
This course is designed to emphasize the preparation of Medical Care Plan (MCP) claim forms relating to various medical/dental procedures in accordance with the guidelines established by the Newfoundland Medical Care Plan.
Prerequisite(s): TM1100
Co-requisite(s): TM2100

OF2400 - Medical Office Management I •
This course is designed to prepare the student to meet the challenges and responsibilities of working as a medical office administrator (MOA) in a health care setting such as hospital, private clinics, and other health care environments. Upon completion the student will have knowledge of the importance of confidentiality, excellent interpersonal skills to professionally work with patient, visitors, and other health care professions; clinic management; health insurance and funding support; and pharmaceuticals. This course will also provide the student with strong job search skills and interview techniques. The student will participate in a 10-hour service learning component which will provide them with experiential learning in a medical setting.
Prerequisite(s): OF1101, CM2110

OF2401 - Medical Office Management II •
This course further develops the student's ability to effectively and efficiently meet the challenging demands of working as a Medical Office Administrator (MOA) in various medical environments. The student will become certified in the Personal Health Information Act (PHIA), will gain knowledge of patient charts—both paper and electronic medical records, and gain knowledge and experience in meeting planning and minute taking. A time-limited medical office practice simulation program, using the electronic medical record software (MedAccess), is utilized to acquaint the student with typical medical scenarios and to assist in the development of organizational, time management, and decision-making skills.
Prerequisite(s): OF2400

OF2505 - Legal Office Procedures I
This course focuses on the role of the legal assistant and in areas such as criminal matters, civil litigation, incorporation procedures, maintaining client records, and preparing legal documents and legal correspondence. Emphasis is placed on professional development including confidentiality and professional appearance. This course integrates service learning with enhanced networking opportunities and quality community involvement.
Prerequisite(s): OF1101

OF2531 - Legal Office Procedures II
This course focuses on the purchase and sale of real property in Newfoundland and Labrador, legal procedures regarding wills, probate and administration of estates, and family law. Emphasis is placed on professional development pertaining to ethical behaviour and maintaining confidentiality in a legal environment.
Prerequisite(s): OF2505

OF2700 - Career Readiness •
This course is designed to provide students with the opportunity to apply the principles and skills necessary to successfully enter the workplace. The course will reinforce office management concepts, including human relations, and professionalism and positive work ethic, and will assist students as they prepare to make the transition to the workplace.

Prerequisite(s): OF2100 or OF2505 or OF2400

OJ1300 - On the Job Training - Forestry
This three-week unpaid workplace exposure course is designed to ensure that a graduating student has an opportunity of functioning within a real-world employment setting. This work integrated learning opportunity will allow students to gain experience and build contacts among employers in the forest sector or forest-related agencies. Students will undertake typical duties carried out by forest technicians in the workplace.
Prerequisite(s): BL1120, CM1400, EN2120, MA1100, MC1850, SU1150, SU1710, CM1401, EY2210, FR1330, FR1400, MA1670, SU3210, LW2210, FR1230, FR2340, FT1400, SU1330, EY2211, FR1560, FR1331, FR2350, FR2360, FT1401, GE1300, SU1575, FR1561, FR2430, HR2200, LW2211, MN1800, PR2660 + must be eligible to graduate

OJ1301 - On The Job Training
This three-week unpaid workplace exposure program is designed to ensure that a graduating student has an opportunity of functioning with a real-world employment setting. Students are placed with a Fish and Wildlife related agency.
Prerequisite(s): BL1120, CM1400, EN2120, MA1100, MC1850, SU1150, GE1420, CM1401, CS2630, FR1330, BL1400, EY2210, MA1670, SU3210, FT1410, RM1400, RM1500, EY1200, FT1430, LW2210, RM1401, RM1501, RM2200, SU1710, SU1575, EY2510, HR2200, LW2211, PR2660, RM2420, RM2410, RM2500 (must be eligible to graduate)

OJ1550 - Work Exposure - HR •
To provide students with a real-world perspective on the business or industry directly related to their area of training, they will be required to complete a six-week period in industry. During this time, they will learn, develop, and demonstrate high standards of behaviour and performance that are expected in the work environment. By applying the skills and knowledge learned in all previous courses in the HR diploma program, students will gain practical experience and develop employability skills such as working independently, team building, customer service, work ethic, attitude, and accountability, which will contribute to their personal growth.
Prerequisite(s): Successful completion of all courses in Semesters 1 to 5 of the HR Diploma program with a minimum GPA of 2.0

OJ1560 - Work Exposure - Marketing
To gain an appreciation for the real work environment in a business or industry directly related to their area of training, students will be required to complete a six-week period in industry. During this time, they will be expected to learn, develop, and demonstrate the high standards of behaviour and performance that are expected in the work environment. Additionally, students will apply the skills and knowledge gained from previous courses in the Marketing Diploma program and further develop their employability skills, including working independently, teambuilding, customer service, work ethic, attitude, and accountability, leading to personal growth.
Prerequisite(s): Successful completion of all courses in semesters 1 to 5 of the Marketing Diploma program with a minimum GPA of 2.0

OJ1580 - Work Exposure - Accounting •
During a six-week period, students will have the opportunity to gain first-hand experience in a business or industry directly related to their area of training, which will complement the academic content covered in previous courses. By working in the industry, the student will develop an appreciation for the real work environment and will be expected to exhibit high standards of behavior and performance. In addition to applying the skills and knowledge learned in the Accounting Diploma program, students will further develop their employability skills such as working independently, team building, customer service, work ethic, attitude, and accountability, thereby enhancing their personal growth.
Prerequisite(s): Successful completion of all courses in semester 1 to 5 of the Accounting Diploma program

OJ1590 - Work Exposure - Business Administration •
The student will gain an appreciation of the real work environment in a business or industry directly related to the area of training. This six-week period will be required in addition to academic content covered.

Students will complete six weeks in industry where they are expected to learn, develop, and demonstrate the high standards of behaviour and performance expected in the work environment. Throughout the work exposure experience, students will apply the skills and knowledge learned in all previous courses in the Business Administration Diploma program. They will also further develop employability skills such as working independently, team building, customer service, work ethic, attitude, and accountability, further enhancing their personal growth.
Prerequisite(s): AC1260, CM1240, HN1230, FN1140, MC1260, MR1100, AC2260, CM1241, HN1240, LW1230,

MR2100, MC1242, AC2230, CM2200, EP1190, OF1305, LD1220, CP1060, CP1011, PS2340, CP2640, CP2070, CP1070, MN3100, PR2170, SD2200 plus a minimum GPA of 2.0

OJ1860 - Job Placement I
Learners will gain an appreciation of the real work environment through a six week job placement experience directly related to the area of training. This experience will be required in addition to all academic requirements of the Renovation Technician program. Learners will also further develop employability skills such as working independently, team-building, customer service, work ethic, attitude, accountability, and further enhancing their personal growth. This Job Placement will require learners to practice basic skills learned in the first year of study.
Prerequisite(s): Completion of Semester 1 and 2

OJ1861 - Job Placement II
Learners will gain an appreciation of the real work environment through a six (6) week work placement experience directly related to the area of training. This experience will be required in addition to all academic requirements of the Renovation Technician programs. Learners will also further develop employability skills such as working independently, team-building, customer service, work ethic, attitude, and accountability, further enhancing their personal growth. This Job Placement will require learners to practice skills learned in years one and two of the program.
Prerequisite(s): Completion of Semester 3 and 4 and OJ1860

OJ1900 - Work Exposure - Executive Office Management •
The work exposure is a required portion of the program and provides a unique learning experience in a real workplace setting. Work exposure placements must be program relevant, and six weeks in duration.

Students will complete six weeks in industry where they are expected to learn, develop, and demonstrate the high standards of behaviour and performance expected in the work environment. Throughout the work exposure experience, students will apply the skills and knowledge learned in previous courses in the Executive Office Management diploma program. They will further enhance their personal growth by developing employability skills such as team-building, customer service, work ethic, attitude, accountability, and the ability to work independently

Please note: Some objectives will be subject to availability at individual work sites.
Prerequisite(s): Successful completion of all courses in semesters 1-5 of the Executive Office Management program with a minimum Grade Point Average of 2.00

OJ1910 - Work Exposure - Legal Administration
The work exposure is a required portion of the program and provides a unique learning experience in a real workplace setting. Work exposure placements must be program relevant, and six weeks in duration.

Students will complete six weeks in industry where they are expected to learn, develop, and demonstrate the high standards of behaviour and performance expected in the work environment. Throughout the work exposure experience, students will apply the skills and knowledge learned in previous courses in the Legal Administration diploma program. They will further enhance their personal growth by developing employability skills such as team-building, customer service, work ethic, attitude, accountability, and the ability to work independently.

Please note: Some objectives will be subject to availability at individual work sites.
Prerequisite(s): Successful completion of all courses in semesters 1-5 of the Legal Administration Diploma program with a minimum Grade Point Average of 2.00

OJ1920 - Work Exposure - Medical Office Management •
The work exposure is a required portion of the program and provides a unique learning experience in a real workplace setting. Work exposure placements must be program relevant, and six weeks in duration.

Students will complete six weeks in industry where they are expected to learn, develop, and demonstrate the high standards of behaviour and performance expected in the work environment. Throughout the work exposure experience, students will apply the skills and knowledge learned in previous courses in the Medical Office Management diploma program. They will further enhance their personal growth by developing employability skills

such as team-building, customer service, work ethic, attitude, accountability, and the ability to work independently

Please note: Some objectives will be subject to availability at individual work sites.
Prerequisite(s): Successful completion of all courses in semesters 1-5 of the Medical Office Management diploma program with a minimum Grade Point Average of 2.00

OJ1930 - Work Exposure - RIM
The work exposure is a required portion of the program and provides a unique learning experience in a real workplace setting. Work exposure placements must be program relevant, and six weeks in duration.

Students will complete six weeks in industry where they are expected to learn, develop, and demonstrate the high standards of behaviour and performance expected in the work environment. Throughout the work exposure experience, students will apply the skills and knowledge learned in previous courses in the Records Information Management diploma program. They will further enhance their personal growth by developing employability skills such as team-building, customer service, work ethic, attitude, accountability, and the ability to work independently.

Please note: Some objectives will be subject to availability at individual work sites.
Prerequisite(s): Successful completion of all courses in semesters 1-5 of the Records Information Management diploma program with a minimum Grade Point Average of 2.00

OJ2335 - Workplace Integration
Students will gain an appreciation of the real work environment through a work placement in the culinary industry. On placement students will apply culinary and management skills to build confidence and competence. Students will also further develop employability skills such as working independently, team building, customer service, work ethic, attitude, and accountability, further enhancing their personal growth.
Prerequisite(s): Completion of Pre-employment Cook Plan of Training

OJ3040 - IM Work Exposure
The seven-week work exposure is a required portion of the program and will provide a unique learning experience in a real business setting. The College will make every effort to find a suitable placement for students; however, ultimately it is the responsibility of a student to find a placement that satisfies the criteria of the program.

The work exposure will follow the successful completion of all academic courses, must be program relevant, and will be minimum of 7-weeks in duration. During the placement, students will be expected to learn, develop, and demonstrate the high standards of behaviour and performance normally expected in a related work environment. For many students, this work exposure may represent the first opportunity to be engaged in the information management sector, allowing the opportunity to explore and evaluate a variety of information management career paths and help to establish a network of industry contacts. In addition, students will have an opportunity to apply their academic and practical knowledge to further develop their employability and technical skills and enhance their personal growth.
Prerequisite(s): GPA 2.0
Co-requisite(s): CR3540, IM2115, IM3010 *These courses may have been completed as prerequisites

OJ3050 - Work Exposure •
The seven-week work exposure is a required portion of the program and will provide a unique learning experience in a real business setting. The College will make every effort to find a suitable placement for students; however, ultimately it is the responsibility of a student to find a placement that satisfies the criteria of the program.

The work exposure will follow the successful completion of the preceding academic term, must be program relevant, and will be a minimum of 7 weeks in duration. During the placement, students will be expected to learn, develop, and demonstrate the high standards of behavior and performance normally expected in a related work environment. For many students, this work exposure may represent the first opportunity to be engaged in their field, allowing the opportunity to explore and evaluate a variety of career paths and help to establish a network of industry contacts. In addition, students will have an opportunity to apply their academic and practical knowledge to further develop their employability and technical skills and enhance their personal growth.
Prerequisite(s): GPA 2.0, PJ1010, PJ1015, PJ1020, PS2340, PJ1205, PJ1210, PJ1215, LD1220, MN1210, PJ1305, PJ1310, EP1320, MN2100, PJ2000, MN3105, MN2605, MN2410, PJ2005, PJ2010, PJ2015

OJ3100 - ASD Work Exposure
The seven-week work exposure is a required portion of the program and will provide a unique learning experience in a real business setting. The College will make every effort to find a suitable placement for students; however, ultimately it is the responsibility of a student to find a placement that satisfies the criteria of the program.

The work exposure will follow the successful completion of the preceding academic term, must be program relevant, and will be minimum of 7-weeks in duration. During the placement, students will be expected to learn, develop, and demonstrate the high standards of behaviour and performance normally expected in a related work environment. For many students, this work exposure may represent the first opportunity to be engaged in the information technology sector, allowing the opportunity to explore and evaluate a variety of software development career paths and help to establish a network of industry contacts. In addition, students will have an opportunity to apply their academic and practical knowledge to further develop their employability and technical skills and enhance their personal growth.
Prerequisite(s): GPA 2.0, CP1895, CP3566, CP3540, CP4305, CP2030, CP4477

OJ3106 - EWeb Work Exposure •
The seven-week work exposure is a required portion of the program and will provide a unique learning experience in a real business setting. The College will make every effort to find a suitable placement for students; however, ultimately it is the responsibility of a student to find a placement that satisfies the criteria of the program.

The work exposure will follow the successful completion of all academic courses, must be program relevant, and will be minimum of 7-weeks in duration. During the placement, students will be expected to learn, develop, and demonstrate the high standards of behaviour and performance normally expected in a related work environment. For many students, this work exposure may represent the first opportunity to be engaged in the information technology sector, allowing the opportunity to explore and evaluate a variety of software development career paths and help to establish a network of industry contacts. In addition, students will have an opportunity to apply their academic and practical knowledge to further develop their employability and technical skills, and enhance their personal growth.
Prerequisite(s): GPA 2.0
Co-requisite(s): PR3000, CP4475, CP2085, CP2080, CP2075, CP3155, CP3105, CR2805, CP2205, CR1355, CP1505, CP1580, CP2030, CP1895, CP1292, CP1501, CM1401, MA1905 *These courses may have been completed as prerequisites.

OM1635 - Ventilation & Exhaust Systems
This course is designed to give the student the ability to size, install and maintain different types of ventilation and exhaust systems. The student will be aware of code and certification requirements and will be able to complete additional training to become certified as an installer.
Co-requisite(s): OM1471

OM1645 - Electric Furnaces and Boilers
This course will prepare the student to install electric furnaces and boilers and to retrofit and convert existing fuel-fired systems to electric. The course will cover codes, regulations and practices for installation and identify certification requirements to perform electrical modifications or upgrades.
Co-requisite(s): OM1441

OM1665 - Design and Analysis
This course is designed to give the student the knowledge and skills to design heating systems using codes, heat loss and heat gain calculations, regulations and industry standards as well as estimate materials and time. The student will utilize modern technology to develop plans and complete system layout.
Prerequisite(s): OM1441, OM1121

OM1676 - Air Source Heat Pumps
This course will give the student the skills and knowledge required to install air source heat pumps. The student will demonstrate good work practices and the understanding of the training or certification requirements for installing refrigeration lines and charging the system. The course will include the installation requirements, and the operational descriptions of various heat pump layout and designs.
Prerequisite(s): OM1665

OM1685 - Solar Heating
This introductory level course is designed to give the student the skills and knowledge to analyze green heating technologies and to identify various types of solar heating systems. The student will be able to identify the various components that form part of a solar heating system and examine methods of incorporating solar heating as an auxiliary heating method into modern building practices.
Co-requisite(s): OM1632

OM1696 - Solid Wood Heating Systems
The student will develop the skills and knowledge to install, maintain and troubleshoot wood and solid-fuel-fired heating appliances and systems and will be provide information that will enable the learner will be able to work towards WETT Certification.
Prerequisite(s): OM1622

OM1705 - Gas Heating
This is an introductory course covering gas fundamentals and installation practices. It is designed to enable the student to identify the principles of the combustion process as it relates to gas fired equipment and appliances. The course will expose the student to specific code requirements and safety concerns regarding the operation of gas fired systems. These will include fuel delivery, combustion venting and specific gas control systems. This course will serve to introduce the student to gas principles in preparation for any gas required examinations as required by regional or national codes.
Prerequisite(s): OM1665, OM1635

OM1715 - Geothermal Heating
This course is designed to give the student the ability to describe the various components that make up a geothermal installation. The student will be able to evaluate and determine the appropriate type of geothermal installation and will be able to interpret codes and complete basic design requirements. Students will also examine the procedure for pipe fusion and utilize the equipment to perform fusion.
Prerequisite(s): OM1675

OP1390 - Information Management I
This course outlines fundamental Information Management (IM) concepts including: the purpose of IM and its importance, program components and management, IM and privacy codes of ethics, accountability and organization, client service, the information life cycle, appraisal and tools, inventory procedures, records retention and legal considerations, active records in manual systems and IM program planning and performance measurement.

OP1401 - Information Management II •
This course expands on the information management program concepts introduced in OP1390. The topics include information protection, risk assessment and management, vital records, disaster planning, prevention and recovery, inactive records management, archives management and IM education and awareness management.
Prerequisite(s): OP1390

OP1410 - Information Life Cycle
This course focuses on the tools and techniques used to manage the information life cycle. Topics include managing information based on legal and operational value, collection and creation of authentic and reliable records, the development, implementation and maintenance of classification plans and records retention and disposal schedules, information sharing and collaboration including document version control and access management and tracking, inventory management and secure disposal practices.
Prerequisite(s): OP1390

OP1600 - Electronic Records Management •
This course is designed to give students the knowledge necessary to apply standards and best practices to the management of electronic records. The topics covered will give students an understanding of sources of records and appropriate capture mechanisms, concepts of classification, current metadata standards, search and retrieval approaches, retention and disposal schedules and related concepts such as implementation strategies, migration, vital records, digital preservation and discovery and disclosure. Students will be given the opportunity to put these

concepts into practice using the enterprise content management (ECM) software.
Prerequisite(s): OP1390

PA1125 - EMS Basics
In this course, learners will become familiar with the profession of paramedicine by gaining knowledge on areas such as historical perspective, requirements of a modern EMS system, roles and responsibilities, and legislation pertaining to paramedicine. Learners will evaluate an emergency scene, carry out a patient assessment at the basic level and modify a basic assessment in circumstances where triage is required. Learners will also study information pertaining to ground ambulance operation including performing vehicle safety checks, safe and defensive driving techniques, emergency driving, cleaning and disinfecting equipment, and utilizing basic equipment commonly found in emergency vehicles.
Co-requisite(s): BL1180

PA1210 - Health & Fitness I
This course introduces learners to the concepts of physical fitness and the importance of developing and maintaining a healthy lifestyle. This course also explores support systems and stress including the importance of these aspects to an individual's overall level of health and well-being. Learners are encouraged to establish their own goals and plan for their future fitness needs related to the paramedic field. Learners will identify their areas of physical fitness requiring improvement through completion of a General Physical Fitness Appraisal.
Prerequisite(s): Completion of Pre-Physical Activity Assessment

PA1211 - Health & Fitness II
This course extends the concepts of fitness acquired in Health & Fitness I. While fitness remains a leading concept in this course, learners will further explore aspects such as biomechanics, lifting, transferring and securing patients including maximizing crash protection for occupants of the patient compartment. Learners will also study regulations and legislation relative to workplace safety as well as demonstrate their ability to safely perform the bona fide occupational requirements of a paramedic.
Prerequisite(s): PA1210

PA1230 - Airway Management
This course focuses on the knowledge, skills and abilities of paramedics in assessing and managing the airway, oxygenation and ventilation of patients. Learners will study and practice methods of evaluating the respiratory system and its airway structures through assessment techniques and diagnostic tests. Learners will demonstrate the knowledge and ability to independently conduct therapeutic management of the airway, and provide oxygenation and ventilation at the basic life support level. Learners will also develop the ability to assist advanced care providers in managing the airway, including below the vocal cords, utilizing specialized techniques and equipment.
Prerequisite(s): BL1180, PA1125

PA1280 - Cardiology
This course provides learners with a comprehensive understanding of cardiac physiology and electrophysiology. Learners will focus on acquiring, analyzing, and interpreting electrocardiogram (ECG) tracings for a variety of arrhythmias. They will also determine when a 12-lead ECG may be required and demonstrate the technique of obtaining a diagnostic-quality 12-lead ECG. Finally, learners will demonstrate competence in the management of cardiac arrest and arrhythmias in accordance with established standards.
Prerequisite(s): BL1180, PA1125, Current CPR-HCP or BLS Certificate
Co-requisite(s): PA1460

PA1290 - Community Paramedicine
In this course, learners will explore and participate in expanded roles of paramedic practice into an area commonly referred to as Community Paramedicine. The course consists of both didactic and practical components. In the practical component, learners may accompany a health care worker, such as a Mental Health Counselor, Addictions Counselor, Public Health Nurse, Community Paramedic, and others. Learners will evaluate methods and tools utilized to perform related assessments and referrals for clients in the community setting that are not related to the usual emergency response and transport model.
Prerequisite(s): PA1125

PA1370 - Pharmacology I
This course introduces learners to the fundamentals of pharmacology. This course will provide learners with the foundation for further studies on drug administration in Pharmacology II and in specific patient-types related to the paramedic's scope of practice.
Co-requisite(s): BL1180

PA1371 - Pharmacology II
This course builds on the previous Pharmacology I course and provides learners with the theory and skills for intravenous cannulation, fluid resuscitation, and safe administration of medications commonly used in the scope of practice of a Primary Care Paramedic.
Prerequisite(s): BL1180, PA1370, PA1125

PA1415 - Interagency Relations
This course focuses on interagency relations in field operations. In this regard, learners will develop an understanding of the responsibility of the paramedic in interacting with police, fire, air transport teams, rescue specialists, and experts in managing dangerous goods incidents. Learners will study the special considerations to be given when paramedics are involved with patients being transferred to or from air medical transport, including the practical skills of packaging a patient in preparation for transfer to air transport. Learners will participate in a practical workshop to learn about the safety issues related to providing patient care while extrication tools are being used. Finally, learners will study the responsibilities of the paramedic at crime scenes and accident scenes, and their role in collaborating with law enforcement agents.
Prerequisite(s): Semester 1-3 courses
Co-requisite(s): PA2000

PA1440 - Clinical
The purpose of this clinical placement is to provide learners with the opportunity to become acquainted with health care settings, and to allow learners to gain proficiency with specific skills and tasks in a controlled environment under the supervision of a clinician or preceptor.
Prerequisite(s): Semester 1 and 2 courses, Current CPR-HCP or BLS level certificate (maintained throughout course), Certificate of Conduct (as per agency requirement), Personal Health Information Act Training Certificate, Acceptable Health Assessment Form, Up-to-date Immunizations and Vaccinations, Fit Mask Test Certificate

PA1460 - Medical Emergencies I
This is the first of two courses focused on illnesses and medical conditions that the paramedic is expected to be knowledgeable about during their professional practice. Students will become familiar with the pathophysiology, common management strategies and treatments for a variety of medical conditions. Management strategies and specific interventions used in the pre-hospital environment and within clinical settings will be included. In cases where a specific intervention is within the paramedic's scope of practice, learners will proficiently demonstrate the correct management of that patient-type in a simulated setting. The course also includes foundational knowledge of various diagnostic tests that aid in the diagnosis of a variety of medical conditions.
Prerequisite(s): PA1125
Co-requisite(s): PA1230, PA1280, PA1371

PA1470 - Medical Emergencies II
This is the second of two courses with a focus on illnesses and medical conditions that the paramedic is expected to be knowledgeable about during their professional practice. This course further prepares learners with applied knowledge and skills beyond their previous studies related to the pathophysiology, common management strategies, and treatments for a variety of medical conditions not covered previously. The management strategies and specific interventions students will learn will be used in pre-hospital environments and within clinical settings. In cases where a specific intervention is within the paramedic's scope of practice, learners will proficiently demonstrate correct management of that patient-type within a simulated setting. This course also includes foundational knowledge on various diagnostic tests performed to aid in the diagnosis of a variety of medical conditions.
Prerequisite(s): PA1230, PA1280, PA1460

PA1515 - Special Populations
This course addresses special considerations that are required for assessment and treatment of: patients of specific

groups; patients with physical and mental impairments; geriatric and bariatric patients; as well as patients with terminal illness or in palliative care. Learners will also study the pathophysiology, manifestations and pre-hospital precautions for a variety of communicable and infectious diseases.
Prerequisite(s): PA1460, PA1470

PA1520 - Mental Health
Learners will develop an understanding of various mental illnesses including how to relate to patients experiencing a mental health crisis. Learners will also study how to protect their mental health as it relates to their paramedicine working experiences.
Prerequisite(s): PA1125

PA2000 - Traumatology
The course focuses on the skills necessary to recognize mechanisms of injury including assessment and management of trauma patients. Through this course, learners will demonstrate organized time-efficient assessments, prioritize and perform critical interventions, appropriately package and transport trauma patients. A major focus of the course is the identification of conditions that require immediate transport ("load-and-go") in order to save the patient. Lifesaving techniques are taught or reviewed in practical exercises.
Prerequisite(s): All Semester 1-3 courses
Co-requisite(s): PA1415, PA2020

PA2005 - Obstetrics and Pediatrics
In this course, learners will apply knowledge and demonstrate skills related to the branches of medicine concerned with diseases of the female reproductive system, pregnancy, and childbirth. More specifically, the study of the physiologic and pathologic function of the female reproductive tract, and the care of the mother and fetus throughout pregnancy, childbirth, and the immediate postpartum period are addressed. Learners will also incorporate skills developed in previous courses to complete specialized training in evaluation and resuscitation of neonates and pediatric patients.
Prerequisite(s): PA1460, PA1470

PA2020 - Simulation Lab
This course is designed to prepare learners for practicum placements through synthesizing and integrating knowledge and skills learned in previous and concurrent courses. Learners will demonstrate proficiency assessing, inferring a differential diagnosis, and providing care to various patient-types in a simulated setting using high fidelity simulation. Using a teamwork approach, learners will simulate the events of a paramedic or clinical response. At the conclusion of simulated scenarios, learners who performed lead roles will complete proper documentation in a medical record.
Prerequisite(s): All Semester 1-3 courses
Co-requisite(s): PA2000, PA2005, PA1515, PA1415

PA2025 - Practicum
In this course, learners will proficiently demonstrate knowledge and perform specific competencies, abilities and job tasks at the national occupational competency level for Primary Care Paramedicine, in a field preceptorship.
Prerequisite(s): All courses in Semesters 1-4, Note: Learners must successfully pass Simulation Testing within 6 months of beginning the Practicum (PA2025) course, Current CPR-HCP/BLS level certificate (maintained throughout course)

PA3110 - Advanced Care for Medical Emergencies I •
This course is the first of three that focus on illnesses and medical conditions for which the Advanced Care Paramedic is expected to be knowledgeable during their professional practice. The course provides learners with the pathophysiology, common management strategies and treatments for a variety of medical conditions. Some of the management strategies and specific interventions are used in the pre-hospital environment and others in the clinical setting. In cases where a specific intervention is within the Paramedic's scope of practice, learners will proficiently demonstrate correct management of that patient-type in a simulated setting. The course also includes foundational knowledge on various diagnostic tests that may be performed to aid in the diagnosis of various medical conditions.
Prerequisite(s): PA2025 or equivalent
Co-requisite(s): PA3115, CM3020

PA3115 - Foundations for Advanced Care •
In this course, learners will further develop their knowledge of the profession of paramedicine. This will be accomplished by gaining knowledge in areas such as professional practice, communications, health and safety, continuing education and professional development, medico-legal aspects of the profession, and effective decision making. The learner will expand upon their patient assessment techniques, while integrating history taking practices and vital sign skills.
Prerequisite(s): PA2025 or equivalent
Co-requisite(s): PA3110, CM3020

PA3220 - Advanced Care for Medical Emergencies II •
This course is the second of three that focus on illnesses and medical conditions for which the Advanced Care Paramedic is expected to be knowledgeable during their professional practice. The course provides learners with the pathophysiology, common management strategies and treatments for a variety of medical conditions. Some of the management strategies and specific interventions are used in the pre-hospital environment and others in the clinical setting. In cases where a specific intervention is within the Paramedic's scope of practice, learners will proficiently demonstrate correct management of that patient-type in a simulated setting. The course also includes foundational knowledge on various diagnostic tests that may be performed to aid in the diagnosis of various medical conditions.
Prerequisite(s): PA3110, PA3115, CM3020
Co-requisite(s): PA3225, PA3230

PA3225 - Advanced Care for Special Considerations •
This course addresses special considerations that are required for assessment and treatment of: patients of specific groups; patients with physical and mental impairments; geriatric and bariatric patients, as well as patients with terminal illness or in palliative care. Learners will also study the pathophysiology, manifestations, and pre-hospital precautions for a variety of communicable and infectious diseases.
Prerequisite(s): PA3110, PA3115, CM3020
Co-requisite(s): PA3220, PA3230

PA3230 - Advanced Care for Trauma •
This course will give learners the knowledge and skills necessary to provide appropriate care to patients as a result of trauma. In the lab, learners will gain mastery of the specific skills required to assess and manage trauma patients. Such skills will then be integrated into overall patient management in the simulated environment.
Prerequisite(s): PA3110, PA3115, CM3020
Co-requisite(s): PA3220, PA3225

PA3310 - Advanced Care for Medical Emergencies III •
This course is the final course of three that focus on illnesses and medical conditions for which the Advanced Care Paramedic is expected to be knowledgeable during their professional practice. The course provides learners with the pathophysiology, common management strategies and treatments for a variety of medical conditions. Some of the management strategies and specific interventions are used in the pre-hospital environment and others in the clinical setting. In cases where a specific intervention is within the Paramedic's scope of practice, learners will proficiently demonstrate correct management of that patient-type in a simulated setting. The course also includes foundational knowledge on various diagnostic tests that may be performed to aid in the diagnosis of various medical conditions.
Prerequisite(s): PA3220, PA3230, PA3225
Co-requisite(s): PA3320, PA3330

PA3320 - Advanced Care for Obstetrics and Pediatrics •
In this course, learners will apply knowledge and demonstrate skills related to the branches of medicine concerned with pregnancy, childbirth and pediatric emergencies. The student will provide care of the mother and fetus throughout pregnancy, childbirth, and the immediate postpartum period.
Prerequisite(s): PA3220, PA3225, PA3230
Co-requisite(s): PA3310, PA3330

PA3330 - Interagency Relations & Introduction to Critical Care •
This course focuses on interagency relations in field operations. In this regard, learners will develop an understanding

of the responsibility of the paramedic in interacting with police, fire, air transport teams, rescue specialists, and experts in managing dangerous goods incidents. Learners will study the special considerations to be given when paramedics are involved with patients being transferred to or from air medical transport, including the practical skills of critical care. Learners will study the responsibilities of the paramedic at crime scenes and accident scenes, and their role in collaborating with law enforcement agents.
Prerequisite(s): PA3220, PA3230, PA3225
Co-requisite(s): PA3310, PA3320

PA3410 - Final Practicum •
This final practicum is designed to provide learners with the opportunity to synthesize and apply the knowledge, skills, and abilities developed throughout the previous three (3) semesters of the Advanced Paramedicine Program. Under the supervision of a qualified preceptor, learners will integrate - as appropriate - the full scope of paramedicine competencies. Throughout the semester, they will be exposed to a variety of environments and situations typical of the paramedic profession. Learners will attend a variety of shifts including nights and weekends, ensuring that they are exposed to the conditions in which they will be working post-graduation.
Prerequisite(s): PA3310, PA3320, PA3330, Practical Skill Evaluations within the previous six (6) months, BLS Certification

PC1100 - Political Science
In this course, students will analyze the discipline of political science and the structure and purpose of federal, provincial, and municipal government institutions in Canada. They will also evaluate some of the major contemporary political issues in the country.

PC1120 - Foundations for Practice
This course is designed to introduce legal and ethical considerations as well as the delivery of health care. Legislation that pertains to the care and the rights of the client and responsibilities of the health care team members is introduced. Members of the health care team, delegation of care, and the role as the Personal Care Attendant (PCA) are highlighted. There is an emphasis on ethics, the significance of professionalism, and the need to maintain personal and professional well-being.

PC1130 - Workplace Safety
This course is designed to provide knowledge related to government legislation, employer responsibilities, and employee responsibilities for maintaining safety in the workplace. There is an emphasis on the significance of implementing safety measures, recognizing and responding to common workplace safety hazards, and documenting/reporting workplace safety concerns.

PC1141 - Understanding Aging, Dementia & Dying
This course is designed to explore the trends in aging, age related physiological and psychosocial changes, abuse, neglect of the older adult, and provide knowledge for the provision of end of life care. Neurocognitive disorders and illness will be discussed with an emphasis on promoting an optimal level of functioning, promoting client centered care, providing care for families, and promoting self-care for the caregiver. The significance of effective communication, meaningful activities, and the inclusion of family in care is highlighted. Terminal illnesses, death and dying, and the impact of the end of life experience on the client, family and caregiver will be addressed. Concepts of loss and grief, non-pharmacological comfort measures and meeting the needs of the dying client and the family will be discussed. The rights of clients and legal aspects associated with death and dying will be emphasized. Relevant resources that can be used to support client care goals will be identified.

PC1145 - Fundamentals I: Care Basics
This course introduces students to the provision of safe, competent client care in the health care setting. It addresses principles related to personal care, client safety, infection control, body mechanics and safe client/resident handling. Growth and development, along with client care throughout the lifespan, will be highlighted. Opportunities are provided to safely practice fundamental psychomotor skills in a simulated health care environment.

PC1150 - Clinical Practice I
This clinical course provides students with opportunities to integrate theoretical knowledge and apply acquired skills in the clinical practice setting. For this clinical course, long-term care settings will be utilized. Students will be

evaluated based upon clinical observations and interactions, participation in clinical conferences, midterm evaluation, and the Clinical Practice Evaluation Form (CPEF) for Clinical Practice I. Prerequisites must be met prior to going to the clinical setting.
Prerequisite(s): Successful completion of all semester 1 courses

PC1210 - Basic Concepts in Medication Awareness
This course aims to provide students with basic knowledge and skills to prepare for and provide safe competent practice in medication assistance. Emphasis is placed on ensuring clients' rights and maintaining safety measures, dignity and respect when assisting with medications. Medication assistance must be carried out in accordance with legislation and employer policies.
Prerequisite(s): Successful completion of semester one courses

PC1220 - Mental Health Concepts
This course is designed to introduce students to basic concepts regarding mental health and mental illnesses. Common mental illnesses and challenges experienced by clients living with mental health issues will be discussed. Students will explore communication and client-centered care strategies in the provision of care for clients experiencing mental illness. Interventions, therapies, and available community resources will be emphasized.
Prerequisite(s): Successful completion of semester one courses

PC1225 - Fundamentals II: Body Systems Approach to Care
This course introduces students to the human body and the basic anatomy and physiology of the various body systems. Age-related changes, common disorders, and client care associated with the body systems will be discussed. Use of appropriate terminology will be emphasized. Students will have the opportunity to safely practice fundamental psychomotor skills in a simulated health care environment. This course builds upon concepts and labs learned in the Fundamentals I: Care Basics course.
Prerequisite(s): Successful completion of semester one courses

PC1230 - Clinical Practice II
This clinical course provides students with opportunities to integrate theoretical knowledge and utilize acquired skills in the clinical practice setting. For this clinical course, long-term care and acute care settings will be utilized in order to promote care of the client across the life-span. Students will be evaluated based upon clinical observations and interactions, participation in clinical conferences, and the Clinical Practice Evaluation Form (CPEF) for Clinical Practice II. Prerequisites must be met prior to going to the clinical setting.
Prerequisite(s): Successful completion of all semester two courses

PC1235 - Clinical Preceptorship
This clinical course provides students with opportunities to further develop and integrate knowledge and skills acquired in courses. For this clinical experience, long-term care agencies will be utilized. In this course each student is assigned to an experienced Personal Care Attendant (PCA). With the guidance and direction of the preceptor, students will participate in the day-to-day routine of the practice setting and become more familiar with the contributions of the PCA to the health care team. This course is designed to help increase student confidence and competence, and to help students further develop their leadership skills. Students will be evaluated based upon clinical observations and interactions, formal evaluation from the preceptor, student/instructor interactions, clinical preceptorship assignment, agency personnel feedback and the Clinical Practice Evaluation Form (CPEF) for Preceptorship that is completed by the clinical instructor. Prerequisites must be met prior to going to the clinical setting. Students will work the same full shifts as their assigned preceptor (days/evenings/nights, 8h and 12 h shifts, and weekends).
Prerequisite(s): Successful completion of all program courses

PD1105 - Prof. Development I
This course is designed to prepare students for their work term placement. The focus is on acquiring the skills of a successful professional employee. The students will learn how to assess and refine their own skills and to match these skills with employment opportunities. Students will prepare resumes and cover letters to utilize for their up-coming placements. Interview skills and the creation of an interview kit along will mock interviews will further prepare the student for placement competitions. They will develop SMART objectives highlighting their achievement objectives for their upcoming placements.

PD1110 - Portfolio Development
Portfolio Development for filmmaking centers on a special project wherein students will create a demo reel, a website and social media pages in order to showcase their work.
Prerequisite(s): FV2070
Co-requisite(s): FV2080

PD1120 - Portfolio Development I •
This is an introductory course for the development and effective use of portfolios. Students will study portfolio types and requirements for a broad range of applications including post-secondary art and design-based programs, arts awards and employment. The importance of portfolio development and its practical application for a career in art, media and design will be further explored through presentations with professionals within the cultural sector. A portfolio of artwork will be created in order to experience portfolio development as part of a continuous process of self-assessment and learning.
Co-requisite(s): PY1150

PD1125 - Portfolio Development II •
This course will develop skills requiring the objective and critical self-assessment to select, collate, and present a body of work that best represents core strengths with a view to identifying and achieving career objectives in specialized art training programs. Students will learn photo documentation skills for two and three-dimensional artwork and how to create a digital portfolio.
Prerequisite(s): PY1150, PD1120

PD1130 - E-Portfolio •
This course is an introduction to the design and development of static websites. Students will create a portfolio website to showcase artwork produced in the Studio Practice course as well as a selection of completed artwork and works in progress from other courses produced throughout the year.
Co-requisite(s): VA1185

PD1135 - Final Portfolio
In this course, students will create an online portfolio to showcase the artwork they have produced throughout the program. This portfolio will serve as a digital collection, highlighting their growth and development as artists. Additionally, students will organize an exhibition, allowing them to present their art in a curated setting.
Co-requisite(s): VA1185

PD2110 - Project Coordination
In this course students will identify the elements and components necessary to launch an event such as an exhibition and/or fashion show. Students will learn the tools necessary to develop and implement a project plan complete with checkpoints and documentation.
Prerequisite(s): Successful completion of semesters one through four.

PD2140 - Work Term Seminar
This is a pass/fail course that is to be completed by students during the academic semester preceding graduation. It is designed to allow the students to share the technical aspects of their work term, give students individual work term performance review, and to update their career plans and résumés.
Prerequisite(s): PD2310, WC3151

PD2150 - Project Implementation
In this course students will implement a program-related event plan and corresponding timeline. Students will also learn how to critically evaluate the event, make recommendations, and develop corresponding documentation.
Prerequisite(s): Successful completion of all required courses in Semester 5

PD2310 - Prof. Development II
This course reinforces the topics covered in the first professional development course. It provides an opportunity to reflect on their first work term placement and revise or update their Co-op work term objectives. The course discusses the Information Technology industry, ethics and career best practices. Understanding yourself and learning

strategies are discussed to improve student performance. An Experiential Education Model will be introduced as part of the co-operative education process. The student will also receive guidelines on the upcoming work term's Reflective Technical report.
Prerequisite(s): PD1105

PD4400 - Work Term II Seminar
This course is designed to prepare students for the workplace. Students will learn how to assess and refine their own skills and to match these skills with employment opportunities. In addition, students will work to develop measurable achievements and/or objectives that are expected to be accomplished during the work term.

Work term opportunities are arranged by the Work Term Coordinator for the program and secured by students in competition with all applicants for the position. This course focuses on fine-tuning the skills learned throughout their program of studies and aids them in finding a meaningful placement and becoming an asset to that organization.

PE1100 - Basic Electronics
This introductory course in electrical theory covers the basic concepts of electricity, circuit analysis and magnetism. The laboratory work is designed to develop skills in the construction of electrical circuits, use of electrical measuring instruments, and reinforce theoretical concepts.

PE1140 - Basic AC Electronics
This course covers basics of AC theory and application. Learners will analyze AC circuits using impedance, admittance and phase to obtain any required circuit quantities as current, voltage, power, and frequency. This course examines resonance frequency and phase relating to sinusoidal waveform on capacitors, inductors, and resistors. Electrical measuring equipment such as an oscilloscope, frequency generators, frequency counters, VOM, and other electronic measuring devices will be used to enforce theoretical concepts.
Prerequisite(s): None

PE1200 - Basic Aircraft Electrical Systems
The purpose of this course is to give the student an overview of aircraft electrical systems. Batteries, generators, alternators, and ground power sources will be explained. Basic wiring practices as well as an introduction to wiring schematics and ignition systems will be completed. The practical portion of this course will include all aspects of wire routing, securing, tying, splicing and attaching.

PE2100 - Analog Electronics
This course is an introduction to analog application. The student will cover all basic theory in semiconductors, power supplies, amplifiers and filters. In labs the student will identify symptoms in malfunctioning equipment and perform preliminary checks and eliminate obvious problems. This course will direct the student through a balanced approach of theory and practical experience in constructing circuits from diagrams, component identification and the use of electronic test equipment.

PE2105 - Electrical Practices I
This course covers the installation of heating and lighting controls, electrical drawings and commercial and industrial demand load calculations.

PE2135 - Aircraft Electrical Systems
This course is designed to provide an in-depth study of aircraft electrical systems including various aircraft power sources, electrical system design, and operation.
Prerequisite(s): PE1200

PE2140 - Digital Electronics
This course provides an effective way to teach students the basics of digital methods and techniques. The microprocessor architecture covers the operation, memories, and how personal computers work. All lab experiments and troubleshooting techniques will enhance the student concepts of digital electronics in this course.

PE2240 - Hazardous Areas
This course gives the learner an understanding of hazardous area classifications. It includes system design to confine

an explosion inside an enclosure, isolate the ignition source and limit the energy flow into the hazardous area. The learner receives hands on training to install and maintain hazardous area equipment.
Prerequisite(s): MP2170

PE2500 - Electrical Practices II
This course covers the care and use of hand tools, safety, types of electrical protection, installation of motor starters and relays, drawing electrical schematics, troubleshooting motor control circuits, installation of circuits using sections of the CSA electrical code.
Prerequisite(s): ET1280, PE2105

PE2501 - Electrical Practices III
This is an intermediate level course that covers the testing and dismantling of DC and AC motors, as well as an introduction to electrical installations in hazardous locations.
Prerequisite(s): PE2500, MP2910
Co-requisite(s): MP2920

PE2730 - Industrial Instrumentation Practices
This course is designed to provide the Instrumentation and Controls Engineering Technologist with the knowledge and skills necessary to implement safe systems in an industrial environment. Emphasis will be on OHS, instrument wiring and grounding considerations, fasteners and adhesives, conduit, EMT and tube and fitting installations.
Prerequisite(s): CI1313

PE2801 - Industrial Mechanical Systems
The purpose of this course is to introduce the learners to the typical equipment included in industrial mechanical systems. The learners are expected to use this knowledge to assist with improving the efficiency of common industrial processes, in an effort to improve process performance and product quality. Outcomes covered include the operational description and maintenance of: pumps and compressors, power transmission equipment, material handling systems, seals, bearings, and lubrication systems.
Prerequisite(s): PH1101
Co-requisite(s): FM2102

PE3101 - Electrical Facility Design I
This is an advanced course intended to introduce students to the broad field of electrical facility design. Major topics include electrical distribution design, exterior lighting and controls, lamp technology, interior lighting and controls, electrical heating and controls, and electrical distribution design.
Prerequisite(s): PE2501

PE4110 - Electrical Facility Design II
This course is project-oriented and is a continuation of subject materials covered in all prior courses in electrical practices. It involves compilation of a complete electrical facility design inclusive of design calculations, preparation of detailed specifications, and a complete set of electrical drawings. The final product will be sufficiently detailed to enable a hypothetical electrical contractor to prepare a complete tender package so the work can be implemented.
Prerequisite(s): PE3101

PH1010 - Science for NDT

This introductory science course presents information about the nature of the physical world to prepare learners for success in the non-destructive testing field. Fundamental elements of science are covered along with the science tools required to understand and apply the materials covered in future non-destructive testing courses. Topics covered include force, physical chemistry, waves, sound, light, electricity, heat, radiation, fluid mechanics, and magnetism.

Co-requisite(s): MA1081

PH1050 - Introductory Physics I
Introductory Physics I is a Comprehensive Arts and Science (CAS) College Transition course. The course focuses on the fundamentals of Physics. It is the first of two Physics courses offered in CAS College Transition. These courses are

designed to assist students with further study in Physics at the post-secondary level and entry in College programs.

PH1051 - Introductory Physics II
Introductory Physics II is a Comprehensive Arts and Science (CAS) College Transition course. It is the second of two physics courses designed to prepare students for entry into a number of programs at the College level as well as CAS Transfer: College-University. Following Introductory Physics I, this course continues the exploration of some of the fundamental topics common to all Physics courses.
Prerequisite(s): PH1050

PH1055 - Introductory Physics I •
Introductory Physics I introduces students to a broad range of topics that form the foundation of classical mechanics. Students will examine the relationship between forces and motion through an analysis of Newton's Laws of Motion. Topics will range from kinematics to dynamics, momentum and energy, circular motion and waves, as well as a mathematical precursor tailored for physics. In this first course, students will focus on mainly one dimensional linear and circular motion. Students will develop problem-solving skills and apply mathematical concepts to solve real-world physics problems. Through laboratory experiments, they will also gain hands-on experience and develop critical thinking skills.
Co-requisite(s): MA1040

PH1056 - Introductory Physics II •
Introductory Physics II will continue where Introductory Physics I finished, revisiting Kinematics and Dynamics but now including two dimensions. It then provides a comprehensive overview of fields in general, focusing mainly on Electricity and Magnetism. They will apply mathematical principles to solve real-world physics problems and gain practical experience through laboratory experiments.
Prerequisite(s): PH1055

PH1100 - Physics •
This is an introductory physics course designed to extend the students' knowledge and understanding of basic physics principles, concepts and applications related to mechanics. The course also extends abilities in data handling, problem solving and experimentation.

PH1101 - Physics •
This is a second semester course designed to extend the students' knowledge and understanding of basic Physics principles, concepts and applications relating to kinetic theory, heat, vibrations, sound, and light. It also extends abilities in data handling, problem solving, and experimentation.
Prerequisite(s): MA1700, PH1100

PH1110 - Foundational Physics
This is an introductory physics course designed to foster students' competency in basic physics principles, concepts, and applications relating to mechanics, fluids, heat, sound, and electricity. Through practical application, students extend their abilities in data handling, data analysis, experimentation, and problem-solving.

PH1120 - Introductory Physics I
Transferable to MUN Physics 1020. This is an introductory course designed to extend student's knowledge and understanding of the basic concepts, principles and applications of Mechanics. Physics I is a college credit course which may be used as a transfer credit in Physics in a Memorial University degree program. Topics covered include kinematics in one and two dimensions, vectors, dynamics, equilibrium, work and energy, and linear momentum.
Prerequisite(s): High School Level III Academic Mathematics with a minimum mark of 70%, or a pass in Advanced Mathematics; or College MA1104 (or MUN Mathematics 1090). MA1104 (MUN Mathematics 1090) may be taken concurrently
Co-requisite(s): MA1104 (MUN Mathematics 1090) may be taken concurrently

PH1121 - Introductory Physics II
Transferable to MUN Physics 1021. Physics II is an introductory level physics course which may be used as a transfer credit course in physics in a Memorial University academic degree program. Topics covered are Fluids, Vibrations and

Waves, Sound, Electric Charge and Electric Field, Electric Potential and Potential Energy, Electric Current, D. C. Circuits and Instruments, Magnetism and Geometrical Optics.
Prerequisite(s): PH1120 or MUN Physics 1020 and College MA1130 or (MUN Mathematics 1000). MA1130 (MUN Mathematics 1000) may be taken concurrently.
Co-requisite(s): MA1130 (MUN Mathematics 1000) may be taken concurrently

PH1130 - Physics I
Transferable to MUN Physics 1050. This course is a calculus-based introduction to mechanics. The course emphasizes problem solving. One goal is to extend students' knowledge and understanding of the basic concepts, principles and applications of mechanics, which underlies so much of science. An equally important goal, however, is to develop methods of learning and problem solving which will be of value in whatever endeavors they ultimately choose to pursue. Physics I is a college course which may be used as a transfer credit course in Physics in a Memorial University degree program. Topics covered include Measurement, Kinematics in one and two Dimensions, Vectors, Laws of Motion, Application of Newton's Laws, Work and Energy, Momentum, and Static Equilibrium.
Prerequisite(s): Completion of Physics 2204 and Physics 3204 in high school and enrolment in Mathematics 1130 (MUN Mathematics 1000) concurrently.
Co-requisite(s): Mathematics 1130 (MUN Mathematics 1000), which may be taken concurrently.

PH1131 - Physics II
Transferable to MUN Physics 1051. Physics II is a Calculus-based Physics course. This course is integrated with the use of computers in a workshop environment. Computers will be used to collect and analyze data on simple physical systems. Physics 1130 (Physics I) introduces mechanics. This course focuses on oscillation, wave motion, physical optics, electricity, and magnetism. This course further develops the processes of logical reasoning and critical thinking as applied to Physics in particular, and Science, in general. Physics II is a college credit course which may be used as a transfer credit course in Physics in a Memorial University degree program.
Prerequisite(s): PH1130 (MUN Physics 1050) or PH1120 (MUN Physics 1020) with a minimum grade of 65%, and MA1131 (MUN Mathematics 1001). MA1131 (MUN Mathematics 1001) may be taken concurrently.
Co-requisite(s): MA1131 (MUN Mathematics 1001), which may be taken concurrently.

PH1150 - Applied Physics
This course introduces students to basic physics principles and applications related to the mechanical and chemical engineering fields. The course also extends students abilities in problem solving, experimentation.

PH1160 - Physics of Energy Conversion
This course extends the students' knowledge and understanding of basic physics principles, concepts, and applications relating to kinetic theory, heat, vibrations, sound, and light. It also extends abilities in data handling, problem solving, and experimentation.
Prerequisite(s): MA1700, PH1100

PH1205 - Physics
This course introduces students to mechanical physics. Topics include kinematics, statics, energy, and states of matter. Emphasis is placed on developing problem-solving and critical thinking skills related to physics concepts and the field of wind energy.
Prerequisite(s): MA1250

PH1300 - Physics for Aircraft Maintenance
This is an introductory physics course designed to extend the students' knowledge and understanding of basic physics principles as they apply to an aircraft maintenance environment, and applications related to mechanics. The course also extends abilities in data handling, problem solving and experimentation.

PH2205 - Radiation Physics
This is a radiation physics course designed for medical radiography students. It will give them an understanding of: (1) x-ray physics: the nature of x-rays, the production of x-rays, the interaction of x-rays with matter; (2) radiation dosimetry: radiation exposure, absorbed dose, dose equivalent, effective dose equivalent, detection of radiation and dosimeters (3) the electrical components of imaging systems.

Prerequisite(s): PH1110
Co-requisite(s): MX2311

PJ1005 - Intro to Project Management •
This course provides the practical knowledge to prepare for starting and completing a project successfully. It will cover the components and tasks related to complex projects that often involve multiple functional teams and departments. You will explore how the knowledge areas of the Project Management Body of Knowledge (PMBOK® Guide) are applied during each phase of a project's life cycle as well as the processes related to successful project management. An overview of status reporting and the use of MS Project will be covered. This knowledge will help establish priorities and effectively manage your projects. It will be of particular interest to those students who have a long-term goal of attaining the Project Management Professional (PMP)® or the Certified Associate in Project Management (CAPM)® designations certified by the Project Management Institute.

PJ1010 - Project Planning-Scope & Quality •
Project managers need to ensure that the scope of the project is effectively managed from concept through to implementation. This course will focus on all aspects of scope management, including the link to company strategy, concept development, business case, contract management, requirements gathering, work breakdown, scope definition, and scope control. Directly related is the need to ensure that the project implements the scope as intended. Quality management techniques will be studied in detail.

PJ1015 - PM Software and Excel •
Whether you are a large global company or a small business, there are software tools available to help you manage projects. This course explores two options – Microsoft Project and Microsoft Excel. Students will utilize both for project management. Acting as project managers, students will develop schedules, assign resources to tasks, track progress, manage the budget, and analyze workloads.

PJ1020 - Business Operations •
Business is an amalgamation of various systems and processes. Everything from a local bakery to a supermarket, a multinational corporation to a manufacturing plant, fits into its definition. This course aims to demystify the world of business by providing an overview of its most vital concepts, enabling students to apply the acquired knowledge to projects and businesses regardless of the occupation. While this course explores the Macro and Micro business environment and its relationship with an organization's vision, mission, and objectives, it also discusses business fundamentals like the economic environment, business models, systems, structure and culture, marketing, operations, finance, and strategy. Delivery of crucial concepts and models would be reinforced with the help of team-based exercises, industry examples and case studies from present-day organizations operating in the Canadian and global marketplace.

PJ1205 - PM-Leadership & Teams •
Project leaders need to recruit, orient, maintain and motivate individuals and teams as part of their business strategies. This course will compare leadership theories and practices as they apply to the field of project management. Students will also learn how to create and manage teams, along with tactics to facilitate constructive problem-solving and decision-making.

PJ1210 - PM-Stakeholder Management •
The world has evolved by using technology to communicate effectively with stakeholders. Hybrid and remote work have changed the culture of organizations and processes regarding stakeholder management. In this course, students will simulate specific situational applications of effectual communication skills in stakeholder change management. This approach to communication and presentation skills will address written, spoken, and electronic modes, non-verbal communication, and body language, to foster business-appropriate competencies for the professional.

PJ1215 - PM-Schedules & Budgets •
This course focuses on the development of project schedules and budgets as a crucial part of the planning and control process. Students will apply project costing and financial management best practices as it relates to projects. Using the

popular MS Project software, students will create, analyze and critique extensive project schedules containing time and cost information.

PJ1305 - Risk & Issues Management •
Project risk management and issues management play a key role in achieving a project's objectives by identifying, analyzing, and responding to risks or issues that can impact a project's success. In this course, students will learn a structured multi-tiered approach that can be used to identify the different types of risks associated with projects such as technical, time, costs, and quality.

Students will learn to communicate risks effectively and share the responsibility of managing risks with team members, customers, and management. They will develop creative thinking skills and problem-solving skills in the context of dealing with issues while managing a project.

PJ1310 - Adv Project Planning & Control •
This course will address advanced issues in project planning and control as a continuation of the topics taught in the Introduction to Project Management course. It will concentrate on four primary areas: project governance, procurement of goods and services, earned value management, and project management software.
Prerequisite(s): PJ1005

PJ2000 - Agile Project Management •
Agile project management utilizes an iterative approach that includes frequent and continuous releases, with feedback incorporated throughout. This course will prepare students to apply Agile concepts to manage projects. Students will explore Agile values and principles along with how Lean has influenced Agile. Students will learn how to perform key agile functions such as user story creation, estimation, backlog and sprint planning, sprint execution and scrum, as well as the use of information radiators to monitor sprint progress. Practical case scenarios will be utilized for the effective use of Jira software to manage many Agile functions.

This course will be of interest to students who would like to pursue a career as a Scrum Master or become more familiar with Agile. Successful completion of this course meets the current requirements for students to write the EXIN Scrum Foundations certification.

PJ2005 - PM-Applied Project •
This course focuses on the first phase of an extensive Project Management initiative. Working in groups, students will develop a comprehensive business case outlining a business-focused project demonstrating the application of knowledge and skills developed throughout their program of study. Students will work under the supervision of a facility supervisor and will perform the following.

Identify and research the project idea to be used for the applied project.

1. Develop a comprehensive business case
2. Initiate the project according to the approved business case
3. Develop comprehensive project documents for the approved project
4. Create accurate status reports throughout the project
5. Presentation of their project

This project can be one from industry or one assigned by the College. If it is an industry-driven project, prior faculty approval must be provided to ensure it meets the scope, depth, and focus required to meet the course outcomes.

PJ2010 - PM-Certification Preparation •
This course prepares the student to write the (PMI) ® Certified Associate in Project Management (CAPM) ® certification exam. The exam is designed for those with little or no project experience and is a valuable entry-level certification for project practitioners. At the end of the course, the student will demonstrate an understanding of the fundamental knowledge, terminology, and processes of effective project management.

PJ2015 - Orientation to the Work Exposure •

The work exposure is an integral part of the program's curriculum. Work exposure opportunities are arranged by the Work Exposure Coordinator for the program but ultimately must be secured by students in competition with all applicants for the position. This course focuses on content that will assist students in finding a meaningful placement.

PM2130 - Drilling
This is the first of three courses in drilling technology. This course covers fundamental operations associated with drilling a well for petroleum exploration and production in both onshore and offshore environments. Emphasis will be placed on drilling unit types, rotary drilling rigs, the drill string, drilling fluids and casing and cementing.
Prerequisite(s): FM2102, CF2545

PM2140 - Well Planning
This is the second of three courses in drilling technology. Students apply and build on the skills and knowledge developed in PM2130 - Drilling to carry out drilling engineering analysis and optimization and well planning.
Prerequisite(s): PM2130

PM2180 - Well Control
This is an advanced course in drilling technology which uses simulation software to perform well control operations. Learners build knowledge developed in two previous drilling technology courses and apply these skills to hands-on well control simulation exercises.
Prerequisite(s): PM2140

PM2222 - Production
This is the second course in petroleum production, which focusses on the engineering aspects of well production design and operation. This course stresses an interdisciplinary approach to solving production problems by introducing concepts of total quality management.
Prerequisite(s): PM2230, MA1670
Co-requisite(s): PM2520

PM2230 - Completions
This is the first course in petroleum production operations. As an introductory course in Completion Technology operations, this course describes the major processes and equipment involved in initiating and maintaining production from a wellbore. The course stresses an interdisciplinary approach to well completion. Topics include: well completion design for both conventional and horizontal wells; tubular selection (including interactions with packers); subsurface control equipment; completion fluids; and perforating oil and gas wells.
Prerequisite(s): FM2102
Co-requisite(s): PM2130

PM2321 - Reservoir Estimates
This is the first of two courses designed to provide an introduction to the principles and practices of petroleum reservoir engineering. The first course serves as an introduction allowing the learner to master the concepts of basic reservoir engineering theory and application, providing them with knowledge and skills to effectively apply the more complex problem-solving techniques that are developed in the second course.
Prerequisite(s): MA2100

PM2330 - Reservoir Analysis
This second course in reservoir engineering subject area builds upon the basics of reservoir estimating presented in the first offering. The mechanics of fluid flow in a porous media are covered in further detail to enable the learner to analyze flow problems for a variety of reservoir boundary conditions. The course also provides significant detail in the analysis of oil and gas well test data, utilizing the methods of pressure build-up testing and type curve matching.
Prerequisite(s): MA1670, PM2321

PM2402 - Production Logging & Applications
This is a course in the analysis & interpretation of production logging data along with an introduction to the analysis of wellbore cement. The course will overview the operation of production logging tools but will focus mostly on the interpretation of production logging data.
Prerequisite(s): PM2420

PM2420 - Logging and Formation Evaluation
This is a course in interpretation of data obtained from down-hole geophysical tools, i.e. open hole well logs. Concentration will be on the basic open hole logging tools some of which are applicable to cased holes. Physical nature (size, weight, etc.) and theory of operation for the various tools will be dealt with briefly. Interpretation of the data derived from the various tools is the main course goal. New technology/specialty tools that are available will be discussed where time permits.
Prerequisite(s): CH2330, GE2510

PM2520 - Oil Facilities
This course presents the basic concepts and techniques necessary to design, specify, and operate oil field processing equipment to separate the produced gas and water from the oil at or near the well site.
Prerequisite(s): CF2545, FM2102, MA2100, PM2321

PM2530 - Gas Facilities & Flow Assurance
A course which presents the basic concepts and techniques necessary to design, specify and operate upstream gas handling systems and facilities.
Prerequisite(s): PM2520, TD3140, CH2335

PM2600 - Intervention
A third course in petroleum production operations introducing the major processes and equipment involved in maintaining production from a wellbore. The course stresses an interdisciplinary approach to intervention and "workover planning".

Various artificial lift methods are introduced which enable depleting reservoirs to sustain viable production rates.
Prerequisite(s): PM2222

PO1000 - Mineral Processing I
The purpose of this course is to familiarize students with various operational elements in an ore processing facility. Students will study particle size measurement, comminution, classification, and concentration methods. De-watering and tailings disposal are also discussed.
Prerequisite(s): CL1110

PO1170 - Industrial Chemical Processes
This course introduces the student to chemical processes found in a variety of industries. Students will obtain an overview of chemical engineering process units and equipment used in a variety of industries. Students will begin to use and analyze block diagrams, process flow diagrams, and piping and instrumentation diagrams.

PO1180 - Unit Operations and Process Design I
Students will be introduced to basic principles of mass transfer operations and their applications in the chemical process industry. Vapor liquid equilibrium is investigated and applied to chemical processes such as distillation. Reaction mechanism and kinetics, and various industrial reactor types will be also covered. Students will examine the operation of different separation processes using both simulation models and pilot units.
Prerequisite(s): CL1110

PO1190 - Natural Gas Processing
Students are introduced to processes common to the oil and gas industry, with a strong focus on natural gas processes. Students examine several processes required to separate and purify natural gas well effluent into valuable products. Sizing and design calculations are performed for common equipment. Pilot plant scale equipment and/or simulators are used to demonstrate the safe start-up, shut-down, and operation of process equipment.

Prerequisite(s): CL1110, PO1180, CH3450

PO1210 - Oil Refining
Students examine processes common to the oil and gas industry, with a strong focus on oil refining. Students examine several processes required to process crude oil into valuable fuel products. Separation processes, conversion processes, treating processes, and other ancillary processes are investigated.

Prerequisite(s): CL1110, PO1180, CH3450

PO1220 - Unit Operations and Process Design II
This course presents the concepts and techniques necessary to design and operate equilibrium-based multistage and continuous contacting unit operations in chemical engineering. It is designed to familiarize the students with the principles and applications of diffusional separation processes involving gas-liquid, liquid-liquid and solid-liquid systems in equilibrium-stage and continuous-contact operations.
Prerequisite(s): PO1180

PO2000 - Mineral Processing II
The purpose of this course is to familiarize the learner with various operational elements in an ore processing facility. It introduces the learner to flow sheets, ore sampling and analysis, metallurgical accounting, test procedures, and quality control. Processes used in hydrometallurgy are also discussed.
Prerequisite(s): PO1000

PO2010 - Water and Wastewater Treatment Operations
This course focuses on operations and management of water and wastewater treatment facilities. Water and wastewater regulations, standards, and collection and measurement techniques are studied. Learners study typical water and wastewater processing systems as it applies to plant operations and will practice various methods/procedures in a lab setting. Storm water systems and best management practices are also studied.
Prerequisite(s): MA1100, CH2451

PR1110 - AET Work Integrated Project
This work integrated project course is designed to allow students who have successfully completed Semesters 1 through Semester 5 of the Architectural Engineering Technology (AET) program, and who have not obtained a Work Term, to undertake in-depth analysis and/or development of an AET-related project for equivalent course credit.

The work integrated project is aimed at enriching students by connecting different program areas of study and provide an integrative experience. This course provides an opportunity to apply the skills and concepts acquired throughout the program and make connections between study and industry.

Students will work under the supervision of a faculty supervisor. This project can be one from industry or one assigned by the College. If it is an industry-driven project, prior faculty approval must be provided to ensure it meets the scope, depth, and focus required to meet the course outcomes.
Prerequisite(s): Clear Academic Standing and a minimum cumulative GPA of 2.0

PR1410 - Capstone Project I (Seminar)
The capstone project enables the student completing an Advanced Diploma in the Environmental Engineering Technology program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design, or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester of their program.

Students can commence planning for the course prior to the beginning of Semester 2. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): BL1100, CM1460, MA1100, EN1210, CH1120, EN1520, EN1110, MA1140, EN2300, CH1121, EN2321, CM2800, EN3200, MC1850, WC1520 and a minimum cumulative GPA of 2.0

PR1415 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Electrical Engineering Technology (Power & Controls) Co-op 3-Year Diploma Program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester of their program.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): All courses in previous academic semesters and a minimum cumulative GPA of 2.0

PR1420 - Capstone Project II
The capstone project enables the student completing an Advanced Diploma in the Environmental Engineering Technology program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design, or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope.

Students can commence planning for the course prior to the beginning of Semester 2. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR1410 and all courses in previous academic semesters

PR1425 - Capstone Project II
The capstone project enables the student completing a Diploma in the Electrical Engineering Technology (Power & Controls) 3-Year Diploma Program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that learners attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR1415 and all courses in previous academic semesters

PR1430 - Work Integrated Safety Project •
This optional integrated project course is designed to allow students who have completed the Health and Safety Management program to undertake in-depth, analysis and/or development of a viable safety program.

One of the two options available to complete the Health and Safety Management post-diploma is the twelve (12) week work integrated learning project. The project is aimed at enriching students by connecting different program areas of study, providing an integrative experience. The work integrated safety project-based course provides an opportunity to apply the skills and concepts acquired throughout the program and make connections between study and industry. This project combines health and safety concepts that lead to organizational sustainability and provide actionable improvement considerations for organizations and people.

Students will work under the supervision of a faculty supervisor. This project can be one from industry or one assigned by the College. If it is an industry-driven project, prior faculty approval must be provided to ensure it meets the scope, depth, and focus required to meet the course outcomes.
Prerequisite(s): Successful completion of Semester one and two courses with an overall GPA 2.0

PR2170 - Project Management •
This course covers various techniques to ensure a project is successfully completed on time, within budget, and with high quality. The student will explore various aspects of project management, such as scope, time, cost, quality and communications and will use project management software to manage a project.

PR2250 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Civil Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester of their program. Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is mandatory that students attend these meetings. This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): All courses in previous academic semesters and minimum cumulative GPA of 2.0

PR2251 - Capstone Project II
The capstone project enables the student completing a Diploma in the Civil Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is mandatory that students attend these meetings. This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR2250 and all courses in previous academic semesters

PR2660 - Technical Project and Presentation
This technical project enables the student completing a technical diploma in Forest Resources or Fish and Wildlife to demonstrate the application of knowledge and skills developed throughout the program. Students will learn to plan and execute a series of experiments or investigations in a subject area related to the field of study. The student will carry out an in-depth study of a problem, design, or technological application, and fully document and present his/her findings. Emphasis is on long-term planning, organization of information and equipment, record keeping, and

presentation of findings. The communication of results, formally and informally, in writing and orally, is stressed throughout. Students taking this course will work independently on a project under the supervision of a faculty advisor in consultation with a communications instructor.
Prerequisite(s): CM1400, EN2120, CM1401

PR2700 - Project Management •
This course is designed to give the students a general understanding of project management and the various stages of a project. The main topics will be discussed at an informational level. Topics discussed include, but are not limited to: defining a project, project scope, time management, cost management, quality management, human resource management, communications management and risk management including Privacy Impact Assessment (PIA).

PR2740 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Instrumentation and Controls Engineering Technology program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student will work in teams of two to carry out an in-depth study of a problem, provide design recommendations for a technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed and presented a proposal of their capstone project for approval that will be completed in the following academic semester of their program.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be co-delivered to the student by a technical instructor and a communications instructor.
Prerequisite(s): All courses in the previous academic semesters and a minimum cumulative GPA of 2.0
Co-requisite(s): CM2800, PR3150

PR2741 - Capstone Project II
The capstone project enables the student completing a Diploma in the Instrumentation and Controls Engineering Technology program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student will work in teams of two to implement the PR2740 approved design recommendations. Larger teams may be permitted depending upon project scope. At the end of course, the student will have completed the project fabrication, commissioned the modified or new system, and produced appropriate documentation. The student will present a capstone report to faculty and the student body reviewing the project life cycle and providing recommendations for future effort.

Students can commence planning for the two semester course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR2740 and all courses in previous academic semesters

PR2750 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Architectural Engineering Technology program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester of their program. Students can commence planning for the course prior to the beginning

of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is mandatory that students attend these meetings. This course will be co-delivered to the students by a technical instructor and a communications instructor.
Prerequisite(s): All courses in previous academic semesters and a minimum cumulative GPA of 2.0

PR2751 - Capstone Project II
The capstone project enables the student completing a Diploma in the Architectural Engineering Technology program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application and fully document and present their findings. Larger teams may be permitted depending upon project scope. Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is mandatory that students attend these meetings. This course will be delivered to the learners by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR2750 and all courses in previous academic semesters

PR2760 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Computing Systems Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester of their program. Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is mandatory that students attend these meetings. This course will be delivered to the learners by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): All courses in previous academic semesters and minimum cumulative GPA of 2.0.

PR2761 - Capstone Project II
The capstone project enables the student completing a Diploma in the Computing Systems Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is mandatory that students attend these meetings. This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR2760 and all courses in previous academic semesters

PR2770 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Mechanical Engineering Technology program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester of their program.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be co-delivered to the students by a technical instructor and a communications instructor.
Prerequisite(s): All courses in previous academic semesters and a minimum cumulative GPA of 2.0

PR2772 - Capstone Project II
The capstone project enables the student completing a Diploma in the Mechanical Engineering Technology program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR2770 and all courses in previous academic semesters

PR2790 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Electronic Systems Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member.
The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester of their program.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): All courses in previous academic semesters and a minimum cumulative GPA of 2.0

PR2791 - Capstone Project II
The capstone project enables the student completing a Diploma in the Electronic Systems Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member.
The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR2790 and all courses in previous academic semesters

PR2810 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Chemical Process Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the students will have completed a proposal of their capstone project that will be completed in the following academic semester of their program.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that learners attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): All courses in previous academic semesters and a minimum cumulative GPA of 2.0

PR2811 - Capstone Project II
The capstone project enables the student completing a Diploma in the Chemical Process Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR2810

PR2830 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Electronics Engineering Technology Biomedical program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester of their program.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.

Prerequisite(s): All courses in previous academic semesters and a minimum cumulative GPA of 2.0

PR2831 - Capstone Project II
The capstone project enables the student completing a Diploma in the Electronics Engineering Technology Biomedical program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR2830 and all courses in previous academic semesters

PR2880 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Petroleum Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester of their program.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): All courses in previous academic semesters and a minimum cumulative GPA of 2.0

PR2881 - Capstone Project II
The capstone project enables the student completing a Diploma in the Petroleum Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR2880 and all courses in previous academic semesters

PR2890 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Geomatics/Surveying Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The

student can work independently or in teams of two to carry out an in-depth study of a problem, design, or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester(s) of their program.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): All courses in previous academic semesters and a minimum cumulative GPA of 2.0

PR2891 - Capstone Project II
The capstone project enables the student completing a Diploma in the Geomatics/Surveying Engineering Technology program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR2890 and all courses in previous academic semesters

PR2893 - Capstone II (Data Collection)
The capstone project enables the student completing a Diploma in the Geomatics/Surveying Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design, or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have collected all required data needed to complete their final report.

This course will be delivered by a technical instructor.
Prerequisite(s): PR2890

PR2895 - Capstone Project III
The capstone project enables the student completing a Diploma in the Geomatics/Surveying Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design, or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.

Prerequisite(s): PR2893 and all courses in previous academic semesters

PR3000 - Applied E-Commerce Website Project •
This applied project course enables students to demonstrate the application of knowledge and skills developed throughout their program of studies. Students taking this course will work in teams on a project, under the supervision of a faculty supervisor, and will perform the following:
a. an in-depth analysis of a problem that requires an e-commerce or enterprise technical solution
b. a design of the problem solution
c. implementation of the problem solution
d. presentation of their solution

The focus of this course is on presenting a clear concise solution with brief supporting documentation. This project can be one from industry or one assigned by the College. If it is an industry driven project, prior faculty approval must be provided to ensure it meets the scope, depth and focus required to meet the course outcomes.

The Applied E-Commerce Website Project course provides students with an opportunity to utilize and demonstrate the tools, knowledge, and skills developed during their program. Students will analyze the requirements of a substantial development project, design and create a dynamic e-commerce solution security, and database interactivity. Emphasis is placed on developing a creatively designed, standards-compliant solution which meets the business goals of the project requirements.
Prerequisite(s): CP2080, CP2075, CP3155, CP3105, CR2805, CP2205, CR1355, CP1505, CP1580, CP2030, CP1895, CP1292, CP1501, CM1401, MA1905

PR3110 - Petroleum Risk Assessment
The course is designed to enable the student to complete an Offshore Petroleum Risk Assessment and Analysis to meet safety standards in the Petroleum industry. The purpose of this course is to ensure adequate measures are taken to protect people, the environment and assets from harmful consequences of the activities being undertaken within the petroleum and offshore industry. This includes but is not limited to health, environment and safety.
Prerequisite(s): MA1670, PM2330

PR3150 - Project Management & Financial Analysis

This course introduces students to the topics of project management and financial analysis, by the introduction of the concepts, tools and techniques of formal project management and financial analysis. Topics include: project management, risk management, project scheduling, concepts of financial management, economic decision making, analysis of alternatives, and depreciation. Students are introduced to the use of project management software.

Prerequisite(s): MA1101 or MA1140

PR3200 - WIL Project •
This course provides an opportunity for students to gain experiential learning with an approved industry partner that focuses on providing inclusive programming and/or supports indirectly to children in the early years and/or their families e.g., Inclusion Consultant, AECENL, Easter Seals. Students will work with an assigned mentor to complete an industry-driven project on a related topic of interest. The completion of the project will involve collaboration with the mentor either in-person or virtually.
Prerequisite(s): EE3100, EE3105, EE3110, EE3115, EE3120
Co-requisite(s): EE3205, EE3200, EE3210, EE3215 *These courses may have been completed as prerequisites

PR3600 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Industrial Engineering Technology (Co-op) program to demonstrate the application of knowledge and skills developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester of their program.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is mandatory that students attend these meetings.

This course will be co-delivered to the students by a technical instructor and a communications instructor.
Prerequisite(s): All courses in previous academic semesters and a minimum cumulative GPA of 2.0

PR3620 - Capstone Project I (Seminar)
The capstone project enables the student completing a Diploma in the Mechanical Engineering Technology program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope. At the end of this course, the student will have completed a proposal of their capstone project that will be completed in the following academic semester of their program.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be co-delivered to the students by a technical instructor and a communications instructor.
Prerequisite(s): All courses in previous academic semesters and a minimum cumulative GPA of 2.0

PR3621 - Capstone Project II
The capstone project enables the student completing a Diploma in the Mechanical Engineering Technology (Manufacturing) Co-op program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is **mandatory** that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR3620 and all courses in previous academic semesters

PR3640 - Work Integrated Learning Project •
One of the two options available to complete the Strategic Leadership and Project Management post-diploma is the seven-week work integrated learning project. The project is aimed at enriching students by connecting different program areas of study, providing an integrative experience. The work integrated learning project-based course provides an opportunity to apply the skills and concepts acquired throughout the program and make connections between study and industry. This project combines leadership and strategic concepts that lead to organizational sustainability and provide actionable improvement considerations for organizations.

Students will work under the supervision of a faculty supervisor. This project can be one from industry or one assigned by the College. If it is an industry-driven project, prior faculty approval must be provided to ensure it meets the scope, depth, and focus required to meet the course outcomes.
Prerequisite(s): GPA 2.0, PJ1010, PJ1015, PJ1020, PS2340, PJ1205, PJ1210, PJ1215, LD1220, MN1210, PJ1305, PJ1310, EP1320, MN2100, PJ2000, MN3105, MN2605, MN2410, PJ2005, PJ2010, PJ2015

PR3725 - Capstone Project II
The capstone project enables the student completing a Diploma in the Industrial Engineering Technology (Co-op) program to demonstrate the application of skills and knowledge developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams of two to carry out an in-depth study of a problem, design or technical application, and fully document and present their findings. Larger teams may be permitted depending upon project scope.

Students can commence planning for the course prior to the beginning of the final year of studies. Since the project and report are to be prepared through independent study, the assigned hours represent only part of the time that students are expected to allocate to the course. Regular meetings with a faculty supervisor will be scheduled within the assigned hours and it is mandatory that students attend these meetings.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.
Prerequisite(s): PR3600 and all courses in previous academic semesters

PS1140 - Psychology I •
This is an introductory psychology course. Current experimentation in the field and the various methods of psychological research are emphasized throughout the course. This course introduces the student to topics such as psychology as a science, brain and behavior, human development, sensation and perception of stimuli, states of consciousness, learning and memory.

PS1145 - Psychology II •
This is the second part, and hence a continuation of the introductory psychology course. The course introduces students to psychological theory and research in the areas of cognition, intelligence and creativity, human emotion, motivation, stress and its impact on health, personality, psychological disorders and their treatments, and social psychology.
Prerequisite(s): PS1140

PS1150 - Introduction to Psychology I •
This course introduces students to psychological theory and research in the areas of neuroscience, human development, learning and memory, sensation and perception, and states of consciousness. This course is transferable to MUN Psychology 1000.

PS1151 - Introduction to Psychology II •
This course provides an introduction to psychological theory and research in the areas of human cognition and emotion, motivation, personality, psychological disorders and treatment, social psychology, health and stress, and sexuality. This course is transferable to MUN Psychology 1001.
Prerequisite(s): PS1150 or MUN Psychology 1000.

PS1200 - Drugs & Behaviour
This course examines the relationship between drugs, especially psychoactive substances, and their influence on behaviour. The focus is less on the pharmacology of drug use and more on the impact of drugs on users and their families. Basic concepts and terminology pertaining to substance abuse will be defined. Emphasis will be placed on theories of dependency, pharmacological concepts, major drug classifications, prevention, and treatment paradigms.

PS1240 - Understanding Addictions
This course takes a detailed look at how alcohol and/or drug addiction affects an individual. First, it examines the nature of dependency on a physical, psychological, and emotional level. This information will then be utilized to teach students basic assessment, intervention, and counseling techniques. Students will also receive a detailed understanding of the process of change, relapse prevention, and stages of recovery in addiction. They will also learn how addiction impacts upon a family. Students will also acquire more knowledge on how addiction affects specific populations (youth, women, seniors, Aboriginal persons, and adult children of alcohol/drug users).
Prerequisite(s): PS1145

Co-requisite(s): PS1200

PS1330 - Organizational Behaviour
This course is designed to provide an understanding of the basic principles underlying workplace behaviour with particular emphasis on the applications for effective supervision in the contemporary workplace.

PS1420 - Health Care Organization and Structure •
This course is an introduction to the study of organizational behaviour and structure within the healthcare system. Students will familiarize themselves with the healthcare system, specifically the roles that directly influence structure and function. Students will examine individual and inter-disciplinary relationships and roles of health professions within the hospital organizational structure. Students will also gain an understanding of the importance of conflict resolution, stress management, and how professionalism guides a healthcare practitioner's ability to work in the demanding and dynamic environment of healthcare.

PS2200 - Developmental Psychology
This course familiarizes students with basic concepts, principles, and theories of human development and examines each stage of development from conception to adolescence.
Prerequisite(s): PS1145

PS2340 - Organizational Behaviour •
This is an introductory course in the study and practical application of organizational behavior. Through the use of workplace examples and the analysis of the interrelated levels of individual behavior, group functioning, and organizational structure, students will examine how employees within organizations achieve both personal and organizational goals. Topics such as motivation, leadership, group dynamics, and organizational communication are studied.

PT1020 - Reciprocating Engines
This course will provide students with the basic knowledge of the design, construction and theory of operations aircraft reciprocating engines and engine components. Students will test, troubleshoot, repair, and adjust power plants and related systems. Students will perform engine ground-runs and basic aircraft servicing.

PT2120 - Reciprocating Engine Systems
This course will provide the student with knowledge of reciprocating engine internal systems, their design, construction, operation, and maintenance. Students will test, troubleshoot, repair, adjust, remove and replace reciprocating engine systems.

PT2121 - Reciprocating Engine Overhaul

This course will provide the student with the knowledge of reciprocating engine inspection removal, installation, overhaul and maintenance procedures, so that he can develop sound maintenance practices. Students will test, troubleshoot, repair, adjust, remove and replace power plants and related systems.

PT2210 - Turbine Engine Maintenance
This course is designed to provide the student with a comprehensive knowledge of turbine engine design and operation. Students will be dismantling a turbine engine and required to identify each component.

PT2240 - Turbine Engine Systems
This course will provide the student with a detailed description of turbine engine systems and their installations. Particular attention is paid to the lubrication and fuel control systems of the Pratt and Whitney PT6 and Allison 250 engines. Helicopter application of turbine engines is also discussed in detail.
Prerequisite(s): PT2210

PV1100 - OHS for PV Installation
This course equips individuals in the solar PV installation field with the essential knowledge, skills, and attitudes to perform work activities effectively while adhering to Occupational Health and Safety (OHS) requirements. Students will acquire an understanding of relevant Acts, regulations, and guidelines, with a specific focus on practical applications within the photovoltaic system installation environment. Course highlights encompass an overview of measures to enhance personal safety, emphasizing the proper use and maintenance of Personal Protective Equipment (PPE). Additionally, the course covers hazard identification and strategies to minimize and report risks, addressing crucial aspects related to knowing how to respond in the event of accidents and emergencies. Upon completion, students will be well-equipped to navigate the unique safety challenges of solar PV panel installation, prioritizing personal and collective well-being.

PV1110 - Tools & Equipment
This course covers various tools and equipment used in solar installation and maintenance, including both hand and power tools, as well as joining equipment. Students will learn about the inspection, maintenance, use, and storage of these tools, along with selection and safety procedures. The content is designed for individuals in the solar photovoltaic industry to competently identify, use, maintain, and store appropriate tools and equipment.
Prerequisite(s): PV1100

PV1115 - Handling & Lifting
This course outlines the essential knowledge and skills needed by individuals in the photovoltaic installation industry to safely handle materials manually. The course covers safe practices in hoisting, lifting, and rigging. Participants will gain expertise in hazard identification and the proper selection, inspection, maintenance, and utilization of equipment for these activities. Additionally, the course addresses effective communication methods during hoisting, lifting, and rigging operations.
Prerequisite(s): PV1100

PV1120 - Access Equipment for Heights
This course explores safe practices for working on high surfaces using access equipment. It emphasizes tools like PPE, scaffolding, and ladders, and covers health and safety risks. The importance of workplace plans and record-keeping is also discussed.

Prerequisite(s): PV1100

PV1125 - Basics of Solar Energy
This course equips students with fundamental knowledge of solar energy concepts. Students will explore factors affecting solar energy potential, such as geographical location and climate, along with the use of solar resource data and its significance for energy planning. Additionally, the photovoltaic effect introduces students to the principles of solar cells and factors influencing energy production, including an understanding of the importance of panel tilt angle and orientation for effective solar energy conversion.

PV1130 - Task Planning
This course equips individuals in the photovoltaic industry with the essential knowledge, skills, and attitudes needed for proficiently planning routine tasks. Covering key topics such as task requirements, task planning, and plan review and revision, individuals will gain the competence to develop effective plans for safe task execution.

PV1135 - Reading & Sketching
This course aims to equip individuals in the photovoltaic installation industry with essential skills for interpreting drawings in solar PV installation. Students will develop proficiency in reading, identifying, and interpreting sketches, drawings, and symbols. The focus includes understanding plan locations, dimensions, and production techniques, along with the critical skill of reading for parts and locations. The course emphasizes practical knowledge for effective work in the industry, including the creation of freehand sketches.

PV1140 - Electrical Theory
This course provides students with foundational electrical concepts essential for solar panel installation and maintenance. Students gain the knowledge and skills needed to calculate and apply electrical formulas and laws to circuits and components. The emphasis is on developing the expertise required for electrical/electronic measurements in the context of solar panel work, covering both AC and DC circuits up to 1500v using suitable measuring devices.
Prerequisite(s): PV1100

PV1145 - Canadian Electrical Code
This course provides individuals with essential knowledge and skills for the safe installation of basic electrical equipment in accordance with Canadian regulations. Students will develop proficiency in interpreting the Canadian Electrical Code (CEC) across various scenarios, showcasing their ability to locate and interpret relevant information. Furthermore, an emphasis on cultivating familiarity with solar photovoltaic (PV) standards will aid students in applying these standards to ensure safety, adherence to pre-installation procedures, proper installation, and effective maintenance of solar PV systems.
Co-requisite(s): PV1140

PV1150 - Renewable Energy & Efficiency
This course offers a comprehensive overview of sustainability, concentrating on two pivotal areas: renewable energy and energy efficiency. Students will examine various renewable energy concepts, exploring different types and factors crucial for selecting a renewable energy system, while also addressing the significance of renewable energy in tackling environmental challenges.

Furthermore, students will delve into energy efficiency principles and the responsible use of clean energy. Understanding building science principles is essential for maximizing energy efficiency, particularly in effectively utilizing clean energy. With a specific focus on solar renewable energy, students will acquire foundational knowledge of building science principles, including the role of building envelopes in optimizing solar panel performance and their impact on overall energy efficiency in solar PV installations. Through this course, students will gain essential insights into integrating building science principles within the context of renewable energy, fostering a holistic understanding of sustainable energy practices.

PV1200 - Trade Skills for Solar
This course focuses on essential trade skills, safety practices, and hands-on experience to prepare students for success in the solar industry. It emphasizes the knowledge and skills needed to accurately measure, construct, repair, and reinforce structures necessary for solar installations, ensuring the site remains in a sound condition after installation.
Prerequisite(s): PV1110, PV1120, PV1150, PV1135, PV1115, PV1130

PV1205 - Solar PV Systems I

This course equips individuals with the knowledge, skills, and attitudes necessary for working with photovoltaic systems. It encompasses the identification of major components and their purposes, highlighting crucial conditions for installation and maintenance, in adherence to relevant standards and safety precautions. The course emphasizes activities for preparing the solar system for installation, including locating, testing, handling, and positioning photovoltaic panels. It underscores the importance of correct selection, quantity, and testing procedures. Additionally, the course explores basic cleaning activities for solar photovoltaic systems, ensuring effective functionality and achieving specified energy output.

PV1210 - Applied Electrical Techniques
This course empowers students with practical skills in basic electrical work for solar installation and maintenance. Delving into electronic system components and essential electrical tasks, students gain proficiency in wiring installation, disconnection/reconnection, cable/plug handling, and the techniques of soldering and desoldering. In addition, students will gain an understanding of how to safeguard electrical installations against potential risks and ensure the reliability and safety of the systems.

It is important to note that successful completion of the course does not confer certification as a licensed electrician. Students must adhere to all regulations and permitting requirements, ensuring their work is inspected by the appropriate authorities to meet safety standards and compliance.
Prerequisite(s): PV1140, PV1145, PV1110

PV1215 - Marking Off/Out
This course equips students with essential knowledge and skills crucial in the photovoltaic installation industry—marking off and marking out. Students develop a structured approach, beginning with understanding job requirements, transferring dimensions from drawings using marking procedures, creating templates, and executing precise marking off and marking out for optimal panel placement and alignment.
Prerequisite(s): PV1135

PV1220 - Solar PV Systems II
This course emphasizes preparation for photovoltaic panel installation, covering task and site assessment, structure evaluation, and readiness. Students will gain the knowledge, skills, and attitudes needed to determine installation details, including type, location, and features, and to assess the intended structure. The unit specifically guides students through the process of preparing existing structures, encompassing various preparation types, methods of securing materials, and ensuring compliance with specifications.
Prerequisite(s): PV1205, PV1200, PV1215

PV1225 - PM - Solar PV Install
This course equips students with essential concepts in project organization, time management, materials takeoff, and estimating for installation projects. By analyzing real-world case studies in solar PV projects, students will apply their acquired knowledge and skills, working collaboratively as a team to create a comprehensive project plan.
Prerequisite(s): PV1220

PV1230 - Solar PV Systems III
This practical course guides students through hands-on solar panel installation, encompassing pre-installation tasks, secure fixing of brackets and mounting kits, and proper panel connections. It also addresses conditions necessary for a safe post-installation environment. Emphasis is placed on maintaining safety and precision to specifications throughout the process, addressing unexpected events and ensuring correct actions in various scenarios.
Prerequisite(s): PV1220, PV1210, PV1225

PV1300 - System Maint. & Troubleshoot
This course equips students with the knowledge and skills needed for post-installation maintenance and troubleshooting in solar systems. It involves visual inspections and electrical testing to identify and address faults in electrical components. Students will use critical thinking skills to evaluate, implement corrective actions, and create reports for ongoing and preventative maintenance.
Prerequisite(s): PV1230

PV1305 - Entrepreneurial Awareness
This course introduces students to the field of entrepreneurship, focusing on the characteristics of entrepreneurs, the advantages and challenges of self-employment, and basic steps in business startup. Participants will engage in modules covering personal readiness assessment, recognizing business opportunities, and understanding the entrepreneurial process, including economic considerations, within the solar PV industry. At the end of the course, students will have acquired fundamental knowledge and practical insights to navigate the entrepreneurial path effectively.

PV1310 - Customer Service
This course emphasizes the delivery of quality customer service, highlighting the significance of soft skills, communication, and problem-solving techniques. It equips students with the skills to identify customer wants, needs, and concerns. The course fosters an understanding of the value of a positive attitude and explores essential skills for actively listening to customer requests, addressing concerns, and resolving problems. Overall, students will apply the acquired skills to ensure a consistently high level of service for customers, not only in the solar energy sector but also

across various industries.

PV1315 - Solar PV Capstone Project
The capstone project will immerse students in practical exercises related to solar PV installation and maintenance, emphasizing skills crucial for their roles as installers. Students will collaborate in groups to identify potential projects, assess tools, equipment, safety requirements, and installation needs. Through hands-on activities, students will gain insights into the functionality of PV systems and their components, followed by installing and maintaining various components. Additionally, students will engage in the essential skill of collaborative work and gain practical experience in project management and leadership. At the end of the capstone, students will compile their project findings into a comprehensive report and deliver a presentation showcasing their work and insights gained.

This course will be delivered to the students by a technical instructor in collaboration with a communications instructor.

Prerequisite(s): PV1100, MC1110, PV1110, PV1115, PV1120, MA1135, PV1125, CM2125, PV1130, PV1135, PV1140, PV1145, PV1150, PV1200, PV1205, PV1210, PV1215, PV1220, PV1225, PV1230 + 2.0 GPA

PW1112 - Mechanics & Dynamics
Elementary Mechanics focuses on the behavior of physical objects, particularly when these objects are subject to external forces. The study of mechanics includes statics, where objects placed under load remain stationary; or dynamics, where objects are subject to motion due to external forces. Once there is an understanding of these physical events, they can be interpreted in mathematical form. The mathematical expression may then be used to solve everyday problems. The purpose of this course is to develop confidence describing the physical world, using mathematical expressions.

PW1113 - Phys. & Chem. Thermodynamics
This course describes and defines physical and chemical systems and explains how atoms and molecules combine to form compounds, mixtures and solutions. It then moves to thermodynamics properties such as temperature, pressure and specific heat within the context of two important thermodynamic laws. Of special importance is the effect of heat transfer fluid on heat exchanger performance and maintenance. The primary focus is on the main working fluid in energy plants: water in its liquid and gaseous states. To understand the thermodynamics of steam, this course introduces the Steam Tables; its use and applications is essential for Power Engineers.

PW1114 - Canada Power Eng. Leg. & Reg.
Power Engineers deal with regulations that govern all aspects of their work, the equipment they use and how work is performed. In Canada, there are federal, provincial, territorial and municipal government jurisdictions. The jurisdictions are responsible for adopting, enacting and enforcing codes, standards and legislation. Some legislation applies only provincially or territorially, while other legislation applies across the country. It is the responsibility of all Power Engineers to be familiar with and to understand the applicable regulations for the jurisdictions they work in. The course also introduces the various Codes and Standards that apply to the Power Engineering profession and explains why they were developed and how they are maintained.

PW1115 - Intro to Plant & Fire Safety
The need for operational safety of energy plants needs to be considered in all phases of their life cycle. The use of appropriately developed and properly installed technology is the key to the safe and efficient operation of all plant processes. A well thought out safety program integrates equipment and technology operation with operator understanding of conditions and hazards to protect both equipment and system from failure.

PW1116 - Plant Operation & Environment
This course will examine specific effects human emissions have on the eco-system. Topics include how greenhouse gases affect global temperatures and how noise affects the environment. Perhaps the most important concept in this course is “attitude”: both individual and collective. The best way to perform a job is not necessarily the “way things have always been done.” The proper attitude towards plant operations and the environment is one of continuous

examination and improvement.

PW1117 - Mat. Science & Welding Tech.
This course introduces the basics of boiler and pressure vessel construction. It shows how to identify, categorize and select materials. These are based on properties that are the most useful such as strength, temperature resistance and toughness. Also discussed is how engineering materials develop their properties. Soldering, brazing and welding methods are addressed. It concludes by covering common weld defects and non-destructive testing methods used by boiler and pressure vessel inspectors to find defects.

PW1118 - Fluid Handling Technology
Piping and valves are essential components in an energy plant. Without them the plant simply could not operate. This course will discuss piping materials, expansion joints, water hammer, insulation and types of valves their construction & operation.

PW1119 - Electro-Technology Concepts
Society has advanced greatly due to its ability to generate, distribute and utilize large amounts of electric power. Power Engineers play a key role in the generation, distribution and utilization of electricity. This course, by introducing basic electric and electro- magnetic theory provides fundamental information not only for understanding the generation, distribution and utilization of electric power, but for further studies in instrumentation, control and energy management.

PW1122 - Energy Plant Inst. & Controls
Instrumentation involves the measurement, evaluation and control of various energies, so that energy exchange achieves the desired outcomes. This course begins with fundamental control theory, process measurement and basic components used in control systems. It then moves on to cover different systems used by industry today to achieve process control, programmable logic controls, electronic controls and electric controls.

PW1123 - Industrial Communications
Any language or form of communication requires rules that are understood by both the initiator and the audience. Standard rules also apply when creating and interpreting plant drawings. These rules are usually presented with the use of symbols, which have an agreed upon meaning. Some symbols are universally agreed upon and some are exclusively used in one type of drawing. As well, plants themselves may have a unique set of communication tools. From designers and construction personnel to operations and maintenance professionals, these drawings are valuable communication tools that help every team member understand what the plant does and how it does it.

PW1124 - Introduction to Boiler Designs
Industries that use boilers are so varied in their process fluid requirements that it would be impossible to design one boiler to meet all their needs. For this reason, there are boilers designed to meet practically every specification. The design and development of boilers has proceeded over a few hundred years. Advances in design and technology have led to the present modern-day boiler. These historical advancements inform present-day boiler design. This course examines the historical development of boilers and the different boiler varieties available today.

PW1125 - Elements of Boiler Systems
Good boiler design, construction and installation ensure that heat generation and transformation is efficient, safe and reliable. Successful plant operations depend on the design of the boiler and its associated systems. This is centered on the ongoing creation of heat, its transfer to external processes and boilers support systems.

PW1126 - Power Ops. & Maint. Lab I
Students will have the opportunity to perform lab projects while safely being introduced to a variety of hand tools. Plant maintenance and equipment tasks such as gauge glass replacement, flue gas analysis and various piping procedures will be carried out. This course will provide the student with a basis for safety and environmental awareness of power plant and boiler operation. Students will experience startup and shutdown of fire tube and water tube boilers with emphasis on operation of equipment and their functions in the plant cycle. Logging of plant parameters will be carried out.

PW1201 - Lubrication & Bearings
Bearings are fundamental components of all machines with moving parts. Properly installed, maintained and lubricated bearings is essential to keep a machine operating smoothly, safety and efficiently. This course covers bearing types, bearing installation, principles of lubrication, lubricant types and methods of bearing lubrication.

PW1202 - Pumps and Compressors
This course introduces pumps and their use as a modern industrial plant. As the course moves along, it will familiarize the student with the types, working principles and construction of a variety of pumps and compressors. The operation, maintenance and troubleshooting will be discussed and illustrated.

PW1203 - Boiler Safety Devices
This course explores the design and operations of pressure relief valves, firing controls, low water level instruments and a variety of boiler fittings. Because they must comply with jurisdictional regulatory requirements they will be designed and operated in alignment with a variety of national and international codes including; ASMW Section I, ASME SECTION IV, ASME Section VIII, ASME CDS-1 and CSA B51. The use of devices directly attached to the pressure part of a boiler, called fittings, are also regulated under the same codes as boilers themselves. They are necessary for the efficient and safe operation of the boiler and other pressure vessels.

PW1204 - Plant Operation & Maintenance
This course introduces the elements of boiler and auxiliary plant operations. It begins with typical preparatory steps for placing a power plant in service. It then follows the startup, routine operations and shutdown of both heating and power boiler plants. The importance of shift handover, performing rounds, documenting conditions and safety is stressed throughout. As well this course performs a detailed examination of how to recognize and respond to various adverse conditions that arise on occasion. The processes and procedures discussed in this course form the core Power Engineer's duties and responsibilities.

PW1205 - Energy Plant Maintenance
A boiler maintenance program is a key element to safe and efficient boiler operation. These programs include not only repairs but preventive maintenance as well. The repair and preventative maintenance tasks covered in this course are designed to achieve a reasonably long and safe useful boiler life. These tasks also ensure that the boilers operate as intended.

PW1206 - Water Treatment
This course introduces the basic concepts of water treatment and the various plant systems with particular treatment needs. The challenge in any water quality process is that water is a "universal solvent". As a result, all sources of water contain various natural concentrations of dissolved minerals and gases, in addition to suspended solids and biological matter. The relative amount of each of these impurities varies by geographic location and season. This makes choosing appropriate water treatment a complex decision.

PW1207 - Prime Movers & Heat Engines
The systems discussed in this course explore applications of thermodynamic theory. Power Engineers must understand the technology, systems and equipment used to generate power in thermal plants. The Power Engineer must also comprehend how thermal energy is converted into other forms of energy. A basic understanding of how prime movers convert heat to work is central to this knowledge. This course introduces the principles behind the operation of prime movers, including many familiar types of heat engines.

PW1208 - Plant Auxiliary Systems
This course introduces the various auxiliary support systems for building and power plant operators.

PW1209 - Compress. & Absorption Refrig.
Across Canada, the provincial and territorial jurisdictions agree that refrigeration plants presents potential public safety hazards that Power Engineers are best suited to handle. Therefore, Power Engineers under the various provincial and territorial regulations, operate large building cooling systems, arena ice-making machinery and industrial refrigeration plants. Refrigeration is an important element to a variety of industrial sectors. This course

emphasizes the use of “natural refrigerants” such as ammonia and CO2.

PW1211 - HVAC for Facility Operators
Nearly all buildings contain HVAC systems to improve human comfort. Power Engineers, as qualified operators, are often charged with the management of air conditioning systems within their facility. This course describes the thermodynamics and operating processes, equipment and auxiliaries used to condition air for human comfort and health.
Prerequisite(s): PW1209

PW1212 - Bldg. Enviro - Systems & Ctrl.
In today’s environment, energy costs are high and technological choices are increasing. Building owners, tenants and occupants demand a high level of comfort, healthy environment and more efficiency. New building materials, sophisticated infrastructure requirements and the increasing economic impact all expand the duties of the facility operator and make the role more demanding. Qualified Power Engineers, who are also the facility operators, must have basic knowledge of how these systems are designed. Also how adjustments to HVAC control systems affect the efficiency of human comfort systems.

PW1213 - Ind. Plant Configurations
This course looks at each of these plant types in identifying common processes and equipment that Power Engineers play a role in managing or operating plants. Although many Power Engineers are employed in plants and processes dedicated solely to the production and use of steam, such as thermal power stations and direct heating / cooling plants, the majority of Power Engineers work in industries which use steam or heat as part of a production process. Examples of these types of plants within the energy intensive sectors can include hot oil, wood and biomass processing, liquid hydrocarbon processing, natural gas plants, food processing or metallurgical processing plants.

PW1302 - Power Ops. & Maint. Lab II
In this course students will have the opportunity to carry out power lab projects while being safely introduced to a variety of hand tools. Plant maintenance and equipment tasks such as gasket making, valve and steam trap maintenance will be performed along with a variety of lab operations. Students will be required to practice lockout procedures for equipment and components in accordance with NL provincial regulations. The student will be provided with a basis for safety and environment awareness of power plant and boiler operations. The student will experience inspections, startups and shutdowns of fire tube and water tube boilers with emphasis on operation of equipment and their functions in the plant cycle. Logging of plant parameters will be carried out as well as auxiliary equipment inspections, operation and maintenance.
Prerequisite(s): PW1126

PW2100 - Applied Mathematics
This course serves to build upon and enhance the basic principles of a Power Engineering career learned at the fourth class Power Engineering level. Math skills are further developed to prepare students to apply mathematic principles in Power Engineering. This course is a critical building block to enable students to interpret findings and evaluate specific conditions in the Power Engineering field.

PW2110 - Applied Science
This course will provide the student with additional knowledge to that already gained at the 4th Class level in basic science and is sequentially designed to provide a stronger base from which to build upon in the Power Engineering field. This course covers principles in thermodynamics, thermal expansion, heat transfer, gas laws, chemistry fundamentals, metallurgy, materials and corrosion principles to enhance the ability of the leaner to see the relevance in the applied principles of Power Engineering. It is a critical building block.

PW2111 - Ind. Drawings, Leg. & Codes
This course will build on and enhance the knowledge already acquired at the 4th Class Power Engineering level. It will add to the concept of sketching center lines and dimensioning standard object views, sketching techniques and sectioning. This course also provides a practical exercise that enables the student to employ the learned concepts by completing applied drawings. Students will also explore the legislation requirements for Power Engineering.

PW2112 - Code Calculations - ASME I
In this course the student will use the ASME Code - Section 1 and ASME Section II to calculate the design thickness and pressure of boiler tubes, drums and piping and calculate the capacities of pressure relief valves.

PW2113 - Fuels, Combust. & FG Analysis
In this course the student will learn about the properties and combustion of common fuels and the analysis of combustion flu gas. It will build upon the foundation acquired at the Fourth Class Level.

PW2114 - Piping, Valves & Traps
This course will discuss codes, designs, specifications and connection for ferrous, non-ferrous and non-metallic piping and explain expansion and support devices common to piping systems. It will also include discussions on steam traps, causes and prevention of water hammer and the importance of good insulation. This will be followed by discussions of the various valves used in the Power Engineering industry and their actuators.

PW2115 - Electrical Theory & Calc.
In this course we will build upon our knowledge of the basic concepts in the production of electricity and the design, characteristics and operation of AC & DC generators and motors as well as AC systems, transformers Switch gear and safety.

PW2116 - Instrumentation & Control
This course will explore the operation and components of pneumatic, electronic and digital control loops and discuss control modes and strategies. How they are used to measure and control process conditions. It will also explore the general purpose, design, components and operation of distributed and programmable logic control systems.
Prerequisite(s): PW1122

PW2117 - Safety & Fire Prevention
This course will explore safety management and fire protection systems. It will explore typical legislation and programs that are used to manage safety in the industrial workplace. It will also explore the classes and extinguishing media of fires and explain systems that are used to detect and extinguish industrial fires.

PW2118 - Boiler Designs
This course will explore common designs, configurations, and circulation and construction patterns for modern bent-tube water-tube boilers and steam generators and how boilers are rated. It will also explore boiler components, firing methods, heat transfer, operating considerations and special boilers used in industry. High pressure external and internal boiler fittings design and operation will be discussed and explored.

PW2119 - Power Ops. & Maint. Lab III
In this course, students will perform lab projects while utilizing proper plant maintenance and equipment procedures such as repair and replacement. This course will build upon your current knowledge of safety and environment awareness of power plant and boiler operations. You will experience boiler/controls, pumps, pressure valves, steam condensate and boiler operations.
Prerequisite(s): PW1302

PW2200 - Boilers & Furnace Operation
This course will explore typical burners, fuel supply systems and burner/furnace designs for gas, oil and coal fired boilers. Boiler draft systems, fans and equipment used to remove ash from flue gas are also discussed as well as boiler control systems and boiler procedures.

PW2201 - Boiler Water Treatment
This course will explore internal water treatment methods and systems for the control of scale, corrosion and carryover and explain testing and monitoring strategies. It will also explain the purpose, principles, equipment and monitoring of boiler water pretreatment processes.

PW2202 - Pumps, Welding & P. Vessels
This course will explore pump design and operations as well as welding procedures & inspection, along with pressure vessels. Each of these topics and their understanding is critical to the Power Engineer.

PW2203 - Steam Turbines & Auxiliaries
This course will explore the designs, operating principles and major components of steam turbines, their condensers and auxiliaries. As well as auxiliary support and control systems for steam turbines and their start-up and shutdown procedures.

PW2204 - Gas Turbines, Cogen. & IC Engines
This course will explore common designs, major components, operating principles and arrangements for industrial gas turbines, their auxiliaries, operation and maintenance procedures. It will also explore the operating principles, designs, support systems and operation of industrial internal combustion engines (ICE), as well as, explain cogeneration and describe its common configurations, components and applications.

PW2205 - Compressors
This course will explore classifications, designs and operating principles of industrial air and gas compressors; as well as the controls and system auxiliaries for a typical instrument air system and explain startup procedures for air compressors.

PW2206 - Refrigeration Aux & Operation
This course will explore classifications and properties of refrigerants and describe the operating principles and components of compression and absorption systems. It will also explain control and safety devices on a compression refrigeration system and explain procedures and equipment to control oil, non-condensable, moisture, refrigerant and brine.

PW2207 - Heat Exch. & Wastewater Treat.
This course will explore the design, operation and applications of various types of industrial heat exchangers, as well as direct fired and indirect-fired natural draft process heaters. It will also explore the purpose, designs, processes and control of industrial wastewater treatment.

PW2208 - Plant Maintenance & Admin.
This course will explore typical components of maintenance and administration programs for utilities and process facilities.

PW2209 - Power Ops. & Maint. Lab IV
Students will perform various lab projects while utilizing plant maintenance and equipment procedures such as those for fire tube boilers, feed water systems, steam turbines and auxiliary equipment. This course will provide the student with a continuation of safety and environmental awareness of power plant and boiler operation. Students will experience boilers/controls, steam condensate, pumps, pressure valves and boiler operations.

PW2300 - On the Job Training
Students will gain an appreciation of the real work environment through a six (6) week work placement experience directly related to the area of training. Students will also further develop employability skills such as working independently, team-building, customer service, work ethic, attitude, and accountability, further enhancing their personal growth. Students will be able to perform tasks that are contained within their approved practicum manual.

PY1150 - Photography •
This course will teach students how to operate a digital still camera and the rules of composition through practical and theoretical instruction. Students must have access to a digital still camera.

PY1200 - Photography I
Students will be introduced to the basic principles and mechanics of digital photography as applied to the graphics industry.

PY1201 - Photography III
Students will be introduced to various photographic techniques as applied to the graphics industry.
Prerequisite(s): PY2200

PY1330 - News Photography I
In this course, students will employ basic photographic principles and techniques. They will examine the history of photojournalism, discuss composition, demonstrate the use of digital cameras and lenses, and perform basic image-editing functions using industry-standard digital image editing software.

PY1331 - News Photography II
Building upon the technical foundation acquired in News Photography I, students will demonstrate the principles of news photography including spot news, sports, and event coverage. They will also produce a photo essay, analyze visual literacy, and explore the law and ethics of news photography. Students will continue to operate different kinds of cameras and photographic platforms.
Prerequisite(s): PY1330

PY2200 - Photography II
Students will learn the importance of the well crafted photographic image as it is used in the graphics industry. Consideration of the photographic image as a key element of an overall design, and specifically as a design anchor point, will be especially emphasized.
Prerequisite(s): PY1200

PY2205 - Independent Study
Students will have an opportunity to complete an independent learning project. Working in consultation with their instructor, students will identify a project concept, develop a project plan, complete design research, develop a project design incorporating advanced techniques, and implement the project.
Prerequisite(s): VA1230, CM1400, GA1220, MR1340, VA1231, GA1121, GA1180, CR1531, GA1351, GA1520, GA1880, GA2380, GA2640, PY1201

RM1400 - Wildlife Techniques I
This course will expose students to the various techniques used in wildlife research and management. This course provides theoretical and practical training of mammal and bird capture techniques, handling and tagging, chemical immobilization and radio / biotelemetry techniques. Students will also learn how to identify common songbirds through both visual and song characteristics.
Prerequisite(s): BL1400

RM1401 - Wildlife Techniques II
This course investigates methods to determine sex, age, size and maturity of mammals and birds and management of human-wildlife interactions. Current techniques used to inventory and monitor mammal and bird populations will be studied.
Prerequisite(s): BL1400

RM1500 - Fisheries Techniques I
This course will expose students to the various techniques used in fisheries research and management. This course provides theoretical and practical training of fish capture techniques, handling and tagging, chemical immobilization and radio/biotelemetry techniques.
Prerequisite(s): BL1400

RM1501 - Fisheries Techniques II
This course investigates methods to determine sex, age, size and maturity of fish. Current techniques used to

inventory and monitor fish populations will be studies.
Prerequisite(s): BL1400

RM2200 - Habitat Assessment
This course investigates sampling and sampling design in both terrestrial and aquatic systems. Techniques for quantitative assessment of vegetation, wildlife habitats and freshwater aquatic habitats for fish and wildlife species are the major component of this course. Data management, spreadsheets and sampling data analysis are utilized throughout this course.
Prerequisite(s): FR1330

RM2410 - Wildlife Techniques III
This course is designed to train individuals in field and laboratory techniques used in wildlife research and management. It involves determining the cause of death of mammals and birds, the collection and preservation of biological samples, analysis of diet and the identification of parasites and diseases. It includes information on anatomy, necropsy techniques, parasites, and diseases, preservatives, collecting methods, species identification and safety precautions.
Prerequisite(s): BL1400

RM2420 - Habitat Management
This course identifies the various types of land and wildlife habitat classification systems that are developed for provincial and federal resource management. Fish and wildlife habitat management including habitat enhancement, reclamation, and protection techniques and habitat modeling are thoroughly discussed in this course.
Prerequisite(s): RM2200

RM2500 - Fisheries Techniques III
This course is designed to train individuals in field and laboratory techniques used in fisheries research and management. It involves determining the cause of death of fish, the collection and preservation of biological samples, analysis of diet and the identification of parasites and diseases. It includes information on anatomy, necropsy techniques, parasites, diseases, preservatives, collecting methods, species identification and safety precautions.
Prerequisite(s): BL1400

RP1100 - Introduction to Records Management •
This course is designed to introduce the student to the records and information management discipline. The topics covered will make students aware of the history and role of records management, career opportunities, and professional associations. Students will study the life cycle of records, records inventory procedures, records appraisal, records retention and disposition principles, and the use/function of records manuals. The students will be introduced to electronic document management systems, information governance and current trends in the discipline.

RP1200 - Archives Principles •
This course introduces the student to the area of archival storage. Archives will be examined from their evolution to their current role/function. Students will examine archival principles, procedures and career opportunities in the discipline.

RP1205 - Document Management Systems and Records Control •
This course is designed to introduce students to the fundamentals of an electronic document management system through demonstration and a simulation approach. The course will outline the measures and best practices that will lead to the efficient management of all types of documents ensuring quality control and improvement.
Prerequisite(s): RP1100

RP1301 - Document Control Processes •
This course involves a detailed examination of file management procedures. Students examine records in terms of storage, maintenance, and retrieval procedures; supplies and equipment are examined in terms of suitability and cost. Document control processes are studied. Students will acquire hands-on experience creating and modifying documents using an electronic document conversion software.

RP1400 - Information Security and Procedures •
This course is designed to teach students the fundamentals of information security and procedures. The topics covered will make the students aware of the legislation and litigation procedures involved with information security. Students will study retention requirements, the need for security, and the classification of vital records, as well as disaster prevention and recovery and the use/function of manuals. Students will participate in a combination of field trips and presentations from various professionals within the Records and Information Management industry.

RP2200 - Classification Systems •
This course is designed to teach students the fundamentals of classification systems using an electronic simulation approach. The topics covered will make students aware of the different types of classification systems and show them how to select one that is appropriate for a particular group of records. Students will be given an opportunity to work on projects involving various systems.

RS1100 - Intro to Community Recreation
This course introduces students to the community recreation delivery system. The importance of dynamic leadership in the recreational delivery process will be emphasized. Students will analyze a variety of settings and populations for which recreation programming and services are offered.

RS1110 - Health and Wellness I
Health and Wellness I examines key components of physical health and wellness with special emphasis on the muscular and cardiorespiratory systems. Improving physical health and wellness involves reviewing life choices to facilitate healthy behaviors, proactively working to prevent disease and injury, and mitigating risk factors.

RS1115 - Media & Public Relations
This course is designed for students intending to work in the human service field. Students will develop strategies and campaigns that fit the needs of individual non-profit organizations and will analyze the function of public relations and media. Students will prepare a public relations strategy for an organization, and use various forms of media, including social media, to address the needs of individual organizations. Upon completion of the course, students will be able to address the media through interviews, give presentations, develop a public relations strategy, and use social media to market an organization to fulfill requirements such as recruitment and fundraising.

RS1210 - Intro to Mental Health
This course explores mental illnesses and addictions that can be experienced throughout the human life span. In the course, students will be provided with hands on experience through creating activities/interventions to learn how to develop positive therapeutic relationships in relation to these illnesses and addictions that can be used in the community and therapeutic settings while gaining knowledge of the various treatments for each of these illnesses.
Prerequisite(s): RS1451

RS1215 - Culture, Diversity, and Inclusion
Students enrolled in this course will develop an in-depth understanding and respect for culture, diversity, and inclusion. Throughout this course, students will gain knowledge, skills, and tools that will support them in promoting and supporting culture, diversity, and inclusive practices when working with the various demographics found in the community and community organizations. The knowledge, skills, and tools presented in this course will assist students pursuing a career in the Community and Therapeutic Recreation field to create a more inclusive and respectful work environment. In addition, issues such as access, equality, and social justice will be explored.

RS1240 - Recreation Activities
This course will introduce students to a variety of recreational related activities and recreation service programming. The importance of recreation as a regular component of active living will be emphasized. Students will participate in, plan, lead, and evaluate recreation activities. They will also examine the methods of scheduling teams and individual

sports competitions.
Prerequisite(s): RS1280, RS1100

RS1255 - Outdoor Recreation I
This course is designed to introduce the student to the field of outdoor recreation. Students demonstrate the acquisition of outdoor recreation leadership skills during a winter camp. During the course, students will be provided with a series of activity-based topics and sessions on preparation for outdoor activities (winter related). Students will be introduced to activities such as group planning, winter camping, outdoor cooking, snow shoeing, cross country skiing, survival skills, and other related winter activities. Students may also assist organizations with planning and implementing outdoor recreation activities such as winter carnivals and festivals.
Prerequisite(s): RS1280

RS1260 - Health and Wellness I
Health and Wellness II is a continuation of Health and Wellness I and includes a review of the components of physical wellness. The course focuses on physical wellness, proactive care and life choices to determine healthy eating habits, weight control, nutrition, rest, and working diligently to prevent disease.
Prerequisite(s): RS1110

RS1280 - Program Planning
In this course, students will be introduced to the program planning process. The six steps used to produce quality recreation programs will be covered. These include assessment, program objectives, solutions, design, implementation, and evaluation. Students will analyze human development and select the required resources to provide programming at all stages of life.

RS1320 - Recreation Administration
This course is a study of the administrative and organizational procedures used in the management systems of community and volunteer recreation agencies. Students will analyze the history of recreation and recreation management, recreation organization and management, recreation delivery systems, fundraising, grant and proposal writing, and financial management including the use of Excel spreadsheets.

RS1370 - Outdoor Recreation II
In this course, students will analyze the principles of effective outdoor leadership, with a focus on leadership skills, skill development, group dynamics, and the application of those principles to selected outdoor experiences. Students will be introduced to a wide variety of spring/summer outdoor activities and experiences and gain exposure to a variety of outdoor recreation pursuits. Students will develop the knowledge and skills required to adapt various outdoor recreation programs for various demographics within the community. Skills and practical applications such as compass training , survival skills, shelter building, outdoor cooking, camping, team building, and canoe certification will be assessed at the designated canoe and spring camps at the end of the training sessions.
Prerequisite(s): RS1255

RS1380 - Therapeutic Interventions
This course introduces students to a variety of therapeutic interventions and techniques. Through lectures and labs, students will develop an understanding of the benefits and the delivery of these interventions. These interventions will be used in a variety of settings with diverse populations.
Prerequisite(s): RS1451, RS1280

RS1400 - Community Agencies
In this seminar-based course, students study local, provincial, and national organizations involved in providing community and recreation services in Newfoundland and Labrador. Students will conduct research on organizations and present this research through formal presentations and papers.

RS1440 - Recreation Facilities
This course introduces the student to the theory and practice of the planning, design, operation, and management of recreational facilities. As well, the student will become aware of the general trends in recreation which influence the design and management of selected facilities.

RS1451 - Intro to Therapeutic Recreation
This course introduces students to the field of therapeutic recreation. Students will examine therapeutic practices, disabilities and impairments, and forms of abilities and disabilities that exist in the community. The various topics related to therapeutic recreation found in this course will be examined and compared to the current recreation services found in the community.

RS1460 - Recreation Programming for the Older Adult
This course examines the physical, cognitive, and emotional changes that occur as an individual ages. Characteristics of aging and disorders associated with aging will be examined to enable students to devise the necessary framework to design recreation programs for older adults.
Prerequisite(s): RS1451, RS1280

RS1520 - Risk Management and Legal Liability
This course provides an overview of the business and legal issues involving recreation administration and the operation of organizations and facilities in the community and therapeutic recreation field. Students will be introduced to the components of the Canadian legal system, forms of liability, and defenses to negligence, and how these apply to the recreation field. Risk management policies will be examined leading to the development of a risk management plan used within all sectors of the recreation field.
Prerequisite(s): RS1280

RS1530 - Principles & Procedures of Therapeutic Recreation
This course introduces students to key principles and procedures that are paramount in the development and delivery of comprehensive therapeutic recreation services and programs. Course material will focus on the importance of therapeutic recreation programming as well as the theoretical and philosophical foundations used in therapeutic recreation services.
Prerequisite(s): RS1451

RT1100 - Introduction to Respiratory Therapy
In this course, learners will be introduced to the profession of respiratory therapy and the equipment related to medical gas therapy in adult and pediatric patient populations.
Co-requisite(s): HG1110, RT1160

RT1120 - Cardiopulmonary Physiology
This course is an in-depth study of the cardiopulmonary anatomy and physiology, impacting respiratory therapy.
Prerequisite(s): BL1605, RT1100, RT2305
Co-requisite(s): RT1120

RT1130 - Cardiopulmonary Patho I
This course will enable the student to describe the pathophysiologic manifestations, clinical signs, symptoms, diagnosis, and therapeutic management of the major respiratory obstructive and restrictive diseases.
Prerequisite(s): BL1605, RT2305
Co-requisite(s): RT1120

RT1140 - Airway Management I
In this course, learners explore the use of various airway management techniques, related equipment, and associated therapies. The primary emphasis is on the operation principles of the various types of equipment utilized in airway management within respiratory therapy. Additional focus will be placed on adult and paediatric airway management.
Prerequisite(s): Successful completion of Semester 2

RT1150 - Clinical Application I
The course is designed to introduce the respiratory therapy student to adult and paediatric clinical settings, using both the simulation laboratory and the hospital environment. Under direct supervision, students will apply previous classroom and laboratory learning to simulated/clinical performance activities
Prerequisite(s): Successful completion of Semesters 1 and 2

RT1160 - Respiratory Mathematics
Students will focus on the application of formulas used by respiratory therapists in various practice areas. This will build the foundational knowledge and practical application to support the respiratory therapy student throughout the program.
Prerequisite(s): RT2305, RT1100

RT2110 - Airway Management II
In this course, learners explore the use of various types of airways: including management techniques, related equipment, and associated therapies used in respiratory therapy. Additional focus will be placed on the adult and paediatric airway management modalities.
Prerequisite(s): RT1140, RT1150
Co-requisite(s): RT2150

RT2120 - Mechanical Ventilation I
This course is the first in a series of courses designed to provide students with the knowledge and critical thinking skills required to operate mechanical ventilators effectively and safely in adult pediatric and neonatal patients. The performance of these procedures will take place in a simulated clinical environment.
Prerequisite(s): RT1140, RT1150
Co-requisite(s): RT2150, RT2470, RT2110

RT2130 - Clinical Application II
This course is a continuation of Clinical Application I and is designed to further assimilate the respiratory therapy student to the adult and paediatric clinical settings. Under direct supervision, students will integrate previously learned knowledge and skills through experience in the simulation, laboratory and the hospital environment.
Prerequisite(s): RT1140, RT1150, HG2051

RT2140 - Cardiac Diagnostics
This course introduces the student to the theory and application of hemodynamic monitoring, invasive procedures, cardiovascular assessment and management as utilized in respiratory therapy in adult and pediatric populations. The performance of these procedures will take place in a simulated clinical environment.
Prerequisite(s): RT1150
Co-requisite(s): RT2150

RT2150 - Cardiopulmonary Patho II
This course will enable the respiratory therapy student to describe the pathophysiologic manifestations, clinical signs, symptoms, and therapeutic management of the major neuromuscular, cardiovascular, renal diseases, and extrapulmonary disorders to facilitate the development of treatment protocols. Important topics such as the effects of thermal injury and hypo/hyperbarism will also be discussed.
Prerequisite(s): RT1150

RT2160 - Mechanical Ventilation II
This course focuses on the physiological implications of instituting, maintaining, and discontinuing mechanical ventilatory support. Emphasis is placed on patient monitoring and evaluation of mechanical ventilation management. The performance of these procedures will take place in a simulated clinical environment.
Prerequisite(s): RT2120, RT2470, RT2130, RT2150, RT2110, RT2140
Co-requisite(s): RT2170

RT2170 - Pulmonary Diagnostics
This course introduces students to the principles of pulmonary diagnostic procedures and explores the significance of the various test data to the respiratory therapist.
Prerequisite(s): RT2130
Co-requisite(s): RT2160

RT2180 - Neonatal Clinical Application
This course provides students with a comprehensive understanding of Neonatal Respiratory Care. Under direct supervision, students will be expected to apply the theoretical knowledge and skills previously learned in the

simulation, laboratory and hospital environment.
Prerequisite(s): RT2470, RT2120, RT2110, RT2130

RT2190 - Mechanical Ventilation III
This course focuses on advanced modes and management strategies for mechanically ventilated patients, utilizing current research and best practices. Students will be introduced to lung recruitment maneuvers; specialty inhaled gases to treat specific conditions; mechanical ventilation in the home setting; neonatal mechanical ventilation; transport of the critically ill; brain death, and apnea testing standards as a diagnostic tool in brain death determination.
Prerequisite(s): Successful completion of Semester 5

RT2240 - Cardiopulmonary Resuscitation
This course will provide respiratory therapy students with the knowledge and skills necessary to better recognize and treat critically ill adults, infants, and children. The course will include the latest standards in neonatal resuscitation (NRP), pediatric advanced life support (PALS), and advanced cardiac life support (ACLS) programs. Presentation of these emergency management strategies will use a combination of laboratory, simulation, and classroom presentations.
Prerequisite(s): RT2130, RT2140, RT2470, RT2150, RT2110

RT2251 - Clinical Application IV
The course is designed to further assimilate the respiratory therapy student to the adult, paediatric, and neonatal clinical setting through experience in both the simulation laboratory and the hospital environment. Under direct supervision, students will be expected to expand their knowledge and skills of respiratory therapy procedures and build upon previously learned materials.
Prerequisite(s): RT2320, RT2160, RT2170, RT3430, RT2180, RT2240

RT2305 - Pharmacology
This course is an introductory course in Pharmacology as applied to Respiratory Therapy. General principles relating to drug administration are studied. Emphasis is placed on drugs affecting the respiratory and central nervous system.
Prerequisite(s): Successful completion of Semester 1

RT2320 - Anesthesia
This course is an introductory course in the principles and practices of anesthesia pertinent to the respiratory therapist. Major course topics include anesthesia machines, vaporizers, breathing circuits, anesthetic ventilators, preoperative procedures, monitoring the anaesthetized patient, and complications of anesthesia.
Prerequisite(s): RT2130, RT2110, RT2120, RT2140
Co-requisite(s): RT2160

RT2460 - RT Techniques
This course introduces the student to the theory and application of clinical assessment and management skills requisite to the practice of respiratory therapy in a simulated environment.
Prerequisite(s): RT1100, RT1160, RT2305, TM1130
Co-requisite(s): RT1120, RT1130

RT2470 - Neonatal Respiratory Care
This course introduces students to the neonate's anatomical and physiological differences and the clinical management of these patients. Topics include gestational lung development, fetal-neonatal transition, newborn assessment, thermoregulation, neonatal cardiopulmonary pathophysiology, and neonatal ventilation. The performance of the procedures within the course will take place in a simulated clinical environment.
Prerequisite(s): RT1150, RT1140
Co-requisite(s): RT2120, RT2110

RT3000 - Practicum I
This course is part one of two full-time, fifteen (15) week practicums. The practicum will allow students to apply theoretical knowledge and practical skills acquired throughout the programs' first six semesters to real-time clinical

environments. Students are expected to demonstrate independent critical thinking, demonstrate positive and effective interactions with peers, preceptors, faculty, and other healthcare professionals, and assume responsibility for clinical actions and decisions.

Students will be assigned to various clinical environments that will focus on caring for neonatal, pediatric, and adult patients. The practicum will have a delivery format, including class sessions, discussions, assignments, simulation labs, and bedside care. Core values relating to professional behavior, ethical standards, communication, and safe practices will be emphasized and assessed using the Core Competency Evaluation.
Prerequisite(s): RT2250

RT3010 - Practicum II
This course is part two of two full-time, fifteen (15) week practicums. The practicum will allow students to apply theoretical knowledge and practical skills acquired throughout the programs' first six semesters to real-time clinical environments. Students are expected to demonstrate independent critical thinking and assume responsibility for clinical actions and decisions. Students are expected to demonstrate independent critical thinking, demonstrate positive and effective interactions with peers, preceptors, faculty, and other healthcare professionals, and assume responsibility for clinical actions and decisions.

Students will be assigned to various clinical environments that will focus on caring for neonatal, pediatric, and adult patients. Practicum II will have a delivery format, including class sessions, discussion, assignments, simulation labs, and bedside care. Core values relating to professional behavior, ethical standards, safe practices, and effective communication will be emphasized and assessed using the Core Competency Evaluation.

Furthermore, it is expected that skills attained during Practicum I will be performed again as opportunities present themselves. Students will continue to master skills related to clinical and core competencies and are expected to progress to a highly autonomous and independent role as compared to Practicum I.
Prerequisite(s): RT3000

RT3020 - Practicum III
This final practicum course enables students to integrate theories and skills acquired throughout the previous two clinical practicums. Students will complete any remaining skills related to clinical and core competencies. Students will be evaluated on skills proficiency, time management, organizational skills, and decision-making at a high level of independence. Students will also be expected to take a lead role in providing patient care, further mastering/refining skills necessary to function as an entry-level respiratory therapist.

Comprehensive examinations will help prepare students to challenge the national certification exam for entry to practice (CBRC exam). These comprehensive examinations will be delivered in diverse formats, including classroom/online/self-study, where learners will be presented with case studies, quizzes, and discussions that will emphasize the competency areas in the Canadian National Competency Framework (NCF). These examinations will help the learner identify specific respiratory therapy areas where further study is required.

This course will conclude with a Graduate Examination (format similar to the CBRC examinations).
Prerequisite(s): RT3010

RT3430 - Clinical Application III
This course is a continuation of Clinical Application II. The course is designed to further assimilate the respiratory therapy student to the adult and paediatric clinical setting through experience in both the simulation laboratory and the hospital environment. Under direct supervision and by building upon previously learned materials, students will further expand their knowledge and skills of respiratory therapy procedures.
Prerequisite(s): RT2130, RT2120, RT2110, RT2140

RV1101 - Decks and Fences
This course will focus on the special requirements for constructing fences, decks and other exterior unprotected wooden and synthetic structures. Learners will apply their knowledge through the construction of a fence and deck.
Prerequisite(s): AJ1111, AJ1160

RV1120 - Building Systems I
The learner will be introduced to structural requirements of buildings and the principles of controlling air, moisture, thermal and sound movement and transmission in buildings. Practical exercises in the control of air, moisture, thermal, and sound will be utilized to enhance the learner's ability to apply the concepts.
Prerequisite(s): AJ1111, AJ1160

RV1140 - Accommodated Construction
This course will enable the student to become aware of the requirements and specifications surrounding the basic requirements of barrier-free access for residential and commercial renovations projects. Students will apply the theory through a practical application of construction by planning, drawing and constructing a barrier free structure.
Prerequisite(s): AJ1111, AJ1160

RV1160 - Renovation I
This course provides the learner with the knowledge of construction of heritage and obsolete buildings and the issues surrounding renovating these structures. Learners will apply the knowledge they have gained through practical application of a heritage renovation emphasizing the recycling of reusable materials.
Prerequisite(s): AJ1111, AJ1160

RV1161 - Renovation II
The course will introduce the basic concepts of shoring and needling, and structural tie-ins. Practical work will concentrate on more complex structural integrations, particularly as applied to roof frames. Learners will be introduced to the concepts of challenges associated with unique building structure designs.
Prerequisite(s): RV1160

RV1170 - Basement Renovation
This course will focus on basement renovation techniques and unique situations and solutions when renovating basements. Learners will obtain an understanding through practical application of the presented topics by performing a simulated or complete basement renovation.
Prerequisite(s): AJ1111, AJ1160

RV1200 - Green Renovating
This course will enable the learner to apply good practices of energy conversation, waste management, environmental impact, and indoor air quality management to projects. The learner will gain practical experience through performing a green building practical lab on residential or commercial structure.
Prerequisite(s): AJ1111, RV1160

RV1230 - Project Manager I
The learner will become familiar with the concepts of project organization, time management, materials takeoff and estimating for construction projects. Learners will perform practical projects that apply the concepts of management of a project.
Prerequisite(s): AJ1111, RV1160

RV1231 - Project Manager II
The learner will apply skills acquired in RV1230 - Project Manager I to produce a complete project plan, required specifications, match the working drawings, create the materials take-off and labor estimate for a project.
Prerequisite(s): RV1230

RV1250 - Renovator's Basic Plumbing
This course will introduce the learners to the basics of residential plumbing systems and how to organize them with the renovation project. Learners will perform practical exercise to complete associated renovation plumbing tasks.
Prerequisite(s): AJ1111, RV1160

RV1260 - Renovator's Basic Electrical
This course will introduce the learners to the basics of electrical AC and DC theory as it relates to residential wiring systems, how to enable to identify the materials and tools so they can identify how they can interact with the certified electrical professional is required during a renovation project.

Prerequisite(s): AJ1111

RV1270 - Renovator's Basic HVAC
The learner will be introduced to principles and concepts of equipment, design and operation of Heating, Ventilating and Air Conditioning (HVAC) systems and components as they relate to residential and light commercial building applications. Practical exercises in heat load calculations, HVAC controls, use of testing instruments, and air balancing will utilized to enhance the student's ability to apply the concepts.
Prerequisite(s): AJ1111

RV1300 - Residential Estimating II
In this course, the learner will apply knowledge gained from completing AJ1170 - Residential Estimating to construction drawings and situations. All calculations and layouts are to be quality checked using the Canadian Building Code.
Prerequisite(s): AJ1170

RV1320 - Foundation Systems
The learners will develop an understanding of the numerous components and associated installation practices that combine to produce typical residential and light commercial concrete foundations and structures. Several residential forming systems, as well as ICF, will be studied in detail. Practical assignments and activities will support the delivery of this subject matter.
Prerequisite(s): AJ1111, AJ1160

RV1341 - Cabinet Layout and Design
This course will enable the learner to summarize requirements for cabinetry design, site preparation, and installation techniques. Learners will be introduced to both new home and renovation cabinet installation procedures. Learners will receive in class instruction and also have the opportunity to practice and apply the lessons through practical activities.
Prerequisite(s): AJ1111, RV1160

RV1350 - Flooring
Learners will gain an understanding of different types of flooring installation and removal procedures. Topics to be covered include underlayment, resilient tile, wood floors, laminate floors, engineer plywood floors, ceramic, porcelain tile, stone, resilient, and cement floors installation and removal procedures. Additional topics include site preparation, demolition, moisture monitoring, and estimation. Learners will complete practicals in the installation and removal of floors and floor finishes.
Prerequisite(s): AJ1111, AJ1170

RV1360 - Special Trims
Learners will gain an understanding of numerous types of interior trims and finishes. Topics to be covered include interior plastering and wall finishes/drywall, moldings, and painting/wood finishing. Learners will complete practicals in the installation and removal of trims, plastering, priming and painting.
Prerequisite(s): AJ1111, RV1160

RV1400 - Demolition and Waste Management
This course will provide the learner with a basic understanding of demolition and disposal practices. Recognizing hazardous materials will be emphasized in this course. Safe work practices will be emphasized to reduce the risk of accidents and injuries during demolition work. The need for proper waste diversion strategies will also be tabled during the course.
Prerequisite(s): AJ1111

RW3140 - Rotary Wing Aircraft
This course is to introduce the student to the helicopter and the helicopter industry. Its aim is to provide students with knowledge of helicopter fundamentals, theory of flight and the different main rotor systems. This is to enable students to perform maintenance functions on a helicopter main rotor and associated systems.

RW3141 - Rotary Wing Aircraft Systems
This course is to provide the students with knowledge of the basic systems found on a helicopter. This will enable the student to perform maintenance inspections and repairs on the complete aircraft.
Prerequisite(s): RW3140

RX1110 - Pharmacy Law and Professionalism
Pharmacy Technicians are professionals whose practice is guided by national and provincial regulations and standards. These are in place to ensure quality and consistency in the pharmacy duties performed by pharmacy technicians within their scope of practice. Professionalism is also critical for pharmacy technicians to ensure optimal patient care, accountability, and creation of successful collaborative relationships.

RX1220 - Pharmaceutical Calculations
The student will develop a working knowledge of the various systems of metric and imperial weights, as well as other measurements encountered in pharmacy. The student will become familiar with strength designations, and will perform various dosage, compounding and conversion calculations. The student will be able to perform calculations required for various prescription types. Accuracy is stressed throughout the course.

Prerequisite(s): MA1021

RX1230 - Pharm Fundamental Application
Effective pharmacy practice requires application of technical knowledge, adherence to ethical principles, and building professional relationships with patients. Patient safety and patient care must be integral to the practice of a pharmacy technician. Students will learn what patient information is pertinent to clinical decision making and how to optimize pharmacy safety. Inventory control, medication devices, and medication labelling will also be examined.
Prerequisite(s): RX2140

RX1251 - Pharmacy Computer Systems
The student will learn the fundamentals of both community and hospital pharmacy computer systems. The student will develop skills, in accurate and efficient data entry, retrieval of information, and the generation of computer labels using actual pharmacy computer systems. Students will also learn to identify the physical appearance of medications, and dosage forms for sample prescriptions used for order entry.

RX1300 - Compounding I - Non-Sterile
Certain medications are not available commercially and must be compounded by Pharmacy Technicians within community and hospital pharmacies. Compounding of non-sterile preparations is a process encompassing several technical steps that must be carefully executed to ensure safe and effective medications reach the patient. Standards and regulations exist that guide compounding activities and will be followed within this course.
Prerequisite(s): RX1220

RX2100 - Prescription Processing
Prescriptions contain information added by the prescriber that will be translated into medication dispensed for the patient. To ensure safety, accuracy, and legality it is critical to conduct rigorous processing of prescriptions. Basic concepts in the pharmacy dispensing process from prescription drop off to prescription pick up will be covered. These concepts will occur in the lab simulating real life situations.

RX2110 - Patient Care
Pharmacy technicians have an integral role in caring for patients. Effective patient care requires clear and concise communication, health promotion strategies, and evidence-based practice. This course explores concepts from each of these elements to prepare pharmacy technicians to provide quality patient care.

RX2140 - Pharmacy Fundamentals
This is an introductory course to pharmacy practice. It investigates the history of the profession and scope of practice

for pharmacy technicians in Canada. Essential foundational aspects are covered including classification of medication, dosage forms, routes of administration, and prescriptions. Safety aspects for Workplace Hazard Material Information Systems (WHMIS) and a 16 hour job shadow to observe pharmacy operations are included in this course.

RX2170 - Pharmacology I
In this first of a two-part course, the student will be introduced to the principles of pharmacology - the study of drug-altered function. Focus will be placed on drug classes, mechanics of drug action, disease types, and body systems. The goal is to provide pharmacy technicians with sufficient background information to play a key role in avoiding dispensing errors. Students will learn basic pharmacokinetics and various drug types, such as: central nervous system, endocrine system, antibiotics, gastrointestinal system, muscle and joint disease, and pain drugs.

RX2180 - Pharmacology II
This is the second course in pharmacology. The student will continue to build on the knowledge gained in Pharmacology I by discussing additional medications in a variety of therapeutic classifications. The student will learn generic and brand names, mechanisms of action, therapeutic dosages and indications, drug interactions, adverse events, and dispensing considerations. The pharmacy technician role and scope of practice will be emphasized throughout the course.
Prerequisite(s): RX2170

RX2190 - Collaborative Practice in Pharmacy
Provision of patient care is optimized through collaborative practice. When intra- and inter-professionals work together different skill sets are combined to develop effective patient care plans. To foster positive collaborative practices this course will also examine strategies that facilitates concise and clear communication between professionals.

RX2210 - Community Pharmacy
This course examines the role of pharmacy technicians within community pharmacies and how they are organized. Students will build proficiency in collecting patient information, assessing prescriptions prior to pharmacist clinical assessment, and product verification. Community pharmacy inventory, patient education regarding medical devices, and problem solving for commonly encountered issues will be covered.

RX2240 - Hospital Pharmacy
Pharmacy technicians have essential roles within hospital pharmacies in gathering patient health information and optimizing product distribution. This course introduces the student to the organization of hospital pharmacies, processing of prescriber orders, and accurate product dispensing and delivery. Patient interactions such as collection of best possible medication histories will also be performed.
Prerequisite(s): RX2100, RX2140

RX2250 - Leadership and Management
The success of a team is dependent on the actions and direction from leaders and managers. In this course students will explore the principles of leadership and management. Promotion of team functionality through time, stress, and conflict management will be learned. Students will also focus on workflow optimizations, management of risk, innovation, and adaption to change

RX2255 - Clinical I
This 7-week clinical placement is designed to enable the student to apply the fundamental principles of pharmacy practice within a community or hospital pharmacy setting. Students will be evaluated on their ability to perform National Association of Pharmacy Regulatory Authorities (NAPRA) and the Canadian Pharmacy Technician Educators Association (CPTEA) competencies. The student's professional and ethical conduct will also be evaluated.
Prerequisite(s): RX2100, RX2140, BL1605, MA1021, RX1110, RX2170, RX1220, RX1251, HG2051, RX2180, RX1300, CM1270, RX2210, RX2110, RX2240, RX2190, RX2250, RX2260 and Valid CPR/First Aid certification

RX2260 - Compounding II - Sterile
Students will learn to compound sterile preparations. Fundamentals of aseptic techniques will be learned to prepare students to work sterilely. Students will perform their work in accordance with the laws, regulations, and standards that govern the preparation of sterile products. Preparation of sterile products include infusion pump cassettes, intravenous admixtures, total parenteral nutrition, eye preparations, and irrigation solutions.
Prerequisite(s): RX1220

RX2310 - Clinical II
This 7-week clinical placement is designed to enable the student to apply the fundamental principles of pharmacy practice within a community or hospital pharmacy setting. Between Clinical I & Clinical II students must complete 7 weeks in both community and hospital settings. Students will be evaluated on their ability to perform NAPRA and CPTEA competencies. The student's professional and ethical conduct will also be evaluated.
Prerequisite(s): RX2255

SC1110 - Intro to Sociology •
Introduction to Sociology introduces students to the foundations of sociology, social structures, social difference, social institutions, and global perspectives. Using sociological theory students will analyze population groups and social issues. While studying culture leads to understanding socialization and how people fit within the social structure of society, studying Canadian society positions students to grasp the effects of a multi-cultural society on health, employment, and families. Through examination of the effects of stratification, students assess inequality, racism, gender relations, and crime and deviance.

SC1121 - NL Society and Culture
This is the second of two introductory courses in sociology. Students use sociological methods and perspectives to examine aspects of Newfoundland and Labrador society and culture.

SC1130 - Family Studies •
This course introduces students to cultural variations among families in Canada and includes an examination of cultural influences, attitudes, and relations. Media influence, aging populations, and feminist theory will be analyzed in addition to family processes, forms, and structures. Students will study parenting responsibilities from both community and family perspectives, and will examine challenges facing modern families including violence, abuse, and divorce. Additionally, students will discuss trends concerning families in the 21st century, will focus on the purpose of marriage and other forms of partnering while exploring how communities adjust as needs of families and the challenges thereof continue to change.

SC1150 - Principles of Sociology •
Sociology 1150 is an introduction to sociological topics, theories, and research that help us understand how people interact to form society. Theoretical foundations of modern sociology are understood through Functionalist, Marxist, Symbolic, Interactionist, and Postmodern approaches. They help the student interpret society and human behavior. Theories from Emile Durkheim, Karl Marx, and Max Weber introduce the student to contemporary perspectives and the marginalized voices of women and minority groups. In addition to understanding research, culture and socialization, students will determine factors that influence inequities in society, crime, and health. The role of technological, political, and economic changes in the emergence of globalization will also be explored. Students will utilize sociological theory to explain the dynamics of society. Transferable to MUN Sociology 1000.

SC1160 - Sociology of Families •
Sociology of Families is a comprehensive and thought-provoking course that examines the dynamics and diverse nature of families within contemporary society. This course explores the social, cultural, economic, and political factors that shape family structures, roles, and experiences. By employing sociological theories, research methodologies, and critical analysis, students will develop a deeper understanding of the complex interplay between families and broader social systems. Throughout the course, students will critically examine types of families and will delve into the effects of globalization, migration, and social inequality on family structures and relationships. Transferable to MUN 2270.

Note: This course does not promote a specific family model or impose a particular value system. It aims to foster a

respectful and inclusive learning environment that encourages open-mindedness and critical thinking.

SC1240 - Healthy Aging
This is an introductory course in the area of aging. Using a multidisciplinary approach, students will gain knowledge and understanding of the aging process and older adults. Students will explore, identify and promote healthy aging strategies and lifestyles by rethinking outdated assumptions about aging. They will identify current issues and challenges experienced by the older population. Students will explore proactive alternatives for promoting longevity and quality of life among older adults.

SC1400 - Sociology - Labrador Society and Culture
This course will provide students with an opportunity to take a critical look at Labrador society and culture. By developing a sociological perspective, students gain a better understanding of their own society and culture.

SC1430 - Labrador Society and Culture
This course examines Labrador Society and Culture from its pre-Contact origins through to the present day. Through coursework, guest speakers and documentaries attention will center on specific cultural groups/traits within Labrador, as well as their interrelationships, which constitute Labrador society.

SD1020 - Orientation to Trades Bridging
This course will introduce students to the Trades Bridging program, the world of trades, and the College/campus learning environment. It provides an opportunity to explore the trades shop, the classroom facilities, and Student Services. Students will discuss goals, careers, and learning styles. Students will learn about safety practices, College values, and best practices.

SD1120 - Positive Mindset •
This course introduces students to the applications of having a positive mindset. Students will study the benefits of having a positive mindset, as they will learn about meaningful experiences, character strengths, relationships, and practices. This course examines the positive aspects of people's thoughts, feelings, social interactions, habits, dispositions, responses to environments, and how these facilitate well-being, achievement, and harmony. Students will apply this knowledge through analyzing videos, creating reflective journal entries, and engaging in interactive discussions. The self-awareness, techniques, and insights gained from this course will enable the student to effectively navigate challenging situations and environments. Upon completion, students will be able to utilize the concepts and practical components throughout their social lives, educational pursuits, and professional careers.

SD1170 - Technology Awareness I
This course (with Technology Awareness II) is designed to raise career awareness levels for engineering technology students by providing information regarding the engineering technology profession. This course will prepare students for the workplace by illustrating how the skills and practices of successful students parallel the skills and practices of successful professionals.

SD1171 - Technology Awareness II
This course (with Technology Awareness I) is designed to raise career awareness levels for engineering technology learners by providing information regarding the engineering technology profession. This course will prepare learners for the workplace by illustrating how the skills and practices of successful students parallel the skills and practices of successful professionals.
Prerequisite(s): SD1170

SD1210 - Personal Development
This course introduces students to healthy living skills necessary for student success in post-secondary environments and beyond. It focuses upon creating a healthy self-concept, developing sound financial sense, and establishing an awareness of good nutrition and healthy eating habits. In addition, it assists students in achieving a sense of general well-being.

SD1230 - Career Exploration •

This course takes the student through the process of career exploration, acquiring the skills needed to make informed decisions about their future education and career goals. The student will be engaged in personal discovery and self-assessment, will apply multiple research methods to gather career-related information, and develop skills in the career decision-making process.

SD1350 - Portfolios
This course is designed to give students the knowledge and skills necessary to complete a portfolio that documents their achievements; their career plans; and the scope and quality of their experience, training, skills, and abilities. Students will also explore a construction industry overview. The portfolio can be used for job applications and during job interviews in preparation for entry into the job market.

SD1570 - Effective Learning •
This course is designed to equip students with essential skills, strategies, and resources required for achieving success in a college environment. Upon completing this course, students will have gained a deeper understanding of their own learning styles, and they will apply effective learning approaches to enhance their academic performance. Additionally, students will better define their educational and career objectives, and they will familiarize themselves with a wide array of campus resources designed to support their academic journeys.

SD1580 - Critical Thinking •
This course is designed to help students develop analytical and critical thinking skills for practical application. Students will cultivate and enhance their ability to think critically, evaluate arguments, and make reasoned decisions. By examining concrete examples, diverse perspectives, and a variety of topics, students will develop skills in questioning assumptions, challenging biases, and addressing complex issues. This course will also introduce students to the ethical implications of critical thinking, emphasizing the responsible use of reasoning skills in personal, professional, and societal contexts.

SD1710 - Job Search Techniques
This course is designed to give students an introduction to the critical elements of effective job search techniques. Upon completion of this course, students will be able to demonstrate effective use of Job Search Techniques.

SD2200 - Work Exposure Orientation •
The Work Exposure Orientation is designed to provide students with the necessary knowledge and skills to prepare for a successful work exposure. The course covers major topics including work exposure documentation, employment trends, work exposure preparation, and workplace professionalism. This course is designed to provide students with a comprehensive understanding of what is expected of them during their work exposure. Students will learn how to document their experience, prepare for the workplace, and maintain a high level of professionalism. Students will be able to successfully acquire their own work exposure placement by utilizing effective job search strategies and networking techniques, demonstrating their ability to independently apply the knowledge and skills learned in class to the real-world context of the job market.

SE1010 - Fire Protection •
This course is designed to give students a thorough understanding of the potential loss, due to fire, both in terms of human values and economic impact. The theory and practices of fire prevention, fire containment, and fire extinguishing will also be introduced. Students will also apply regulatory codes, and fire protection standards, to various situations.

SE1021 - OHS - Loss Control •
This course familiarizes the student with health and safety losses to human and financial resources, both on and off the job, and provides the student with an understanding of loss control techniques that may be used to minimize these losses in the workplace. The course project requires the student to develop an Individual Health and Safety Program Manual based on current legislation and best practices.

SE1030 - Occupational Hygiene I •
This course introduces the student to occupational health and safety issues associated with chemical and biological

agents. The course provides the student with an understanding of the methods of recognition, evaluation, and control of health hazards involving toxic chemicals, dusts, and biological agents in the workplace.

SE1041 - Ergonomics
This course is designed to provide students with knowledge and skills related to the human-machine and human-environment interfaces in the workplace from a design perspective, such that the workplace can be as safe, efficient and comfortable, as possible. The student will consider aspects of engineering, mechanics, motion, light, sound, physiology, psychology, biomechanics, and anthropometrics to ensure that the demands of operating a system do not exceed the capabilities of the user, in terms of individual well-being or system effectiveness. It will also include the application of specific CSA standards and provincial legislation and guidelines.
Prerequisite(s): CG1500

SE1061 - Workplace Safety: Law & Ethics •
This course introduces the student to the interpretation and application of workplace health and safety legislation. A key component of this course will be an individual project that focuses on applying appropriate legislation, CSA standards, ANSI standards, and reputable guidelines to a chosen topic (e.g., hazardous energy control, swing stage safety, machine guarding, fall protection, crane safety, forklift safety, silica, asbestos, etc.).

SE1075 - OHSMS Culture & Development •
This course is designed to provide an understanding of the principles of organizational behavior that will enable the occupational health and safety practitioner to effectively interact with the various workplace parties to enhance occupational health and safety. This will also involve learning the functions of management, approaches to management, leadership styles, conflict management, and business processes. Students will use their understanding of appropriate concepts and apply these to case studies. The course project will require development of a comprehensive strategy detailing how to implement each component of one of the following standards - CSA Z1000:14, OHSAS 18001, or ISO 45001 - based upon a specific element of a Health and Safety Program. (e.g., Hearing Conservation Program, Inspections, Incident Investigation, etc.).

SE1091 - Applied Safety Fundamentals •
This course is designed to provide students with a working knowledge of safe work practices, procedures and standards for construction and production operations. The use and application of the CSA standards, ANSI standards, and pertinent reputable guidelines along with the associated legislation assists students to develop and implement various safety plans around specific hazards including machinery, confined spaces, hazardous energy, heights, excavation, and asbestos. Students will develop and implement various safety plans around specific hazards including electricity and manually and power operated machinery.

SE1400 - Auditing OHS Systems •
The course is designed to provide students with a working knowledge of audits as a tool to ensure that organizations' policies/practices/procedures are aligned with corporate standards, and in compliance with legislative requirements. The course will focus on audit planning, audit implementation, and post-audit reporting activities. The course project will require the development of an audit tool for a specific Health and Safety Program element based upon legislation, Best Management Practices (BMP's), and OHSAS 18001, ISO 45001, or CAN/CSA Z1000/CSA 45001.

SE1530 - Occupational Health and Safety
This course will introduce the student to the interpretation and application of occupational health and safety legislation and key safety program elements. The importance of an industrial regulatory system is studied. Safety procedures of personal protective equipment and handling of various dangerous chemicals are discussed. In addition, the student will become familiar with the concept of due diligence and behavior-based safety approaches.

SE2000 - Occupational Hygiene II •
This course introduces the student to occupational health and safety issues associated with physical agents. The course provides the student with an understanding of the methods of recognition, evaluation, and control of health

hazards involving ventilation, radiation, air quality, and other physical changes in the workplace.

SE2045 - Environmental Management •
This course is designed to provide the student with a knowledge of environmental issues, legislation, and processes that relate to the health and safety of workers and the physical environment. The course will focus on the health effects of various types of pollution as well as the management and legislative processes and systems for prevention and mitigation.

SE2051 - Emerg. Preparedness & Response •
This course introduces the student to the various considerations that must be addressed in an emergency preparedness and response plan for the workplace. The course provides the student with an understanding of legislation, support agencies, and incident command systems for the preparation of an Emergency Preparedness and Response plan. An overview of hazard and risk assessment and response management enables the student to prepare emergency exercises and evacuation plans for a workplace. Case studies and an introduction to continuity programs aid the students' knowledge in the function of mitigation, preparedness, response, and recovery to the continuous improvement process in emergency programs.

SE2055 - Health & Wellness •
This course familiarizes the student with how worker health and well-being influences workplace production and psycho-social environment and provides the student with an overview of various health and wellness resources that may be used to help workers maintain health and well-being on and off the job.

SE2065 - Ergonomics •
This course is designed to provide students with knowledge and skills related to the human-machine and human-environment interfaces for safety in the workplace. The course introduces aspects of engineering, mechanics, motion, light, sound, physiology, psychology, biomechanics, and anthropometrics to assist students in determining safe and efficient work practices and operations. Together, with the application of specific CSA standards and provincial legislation and guidelines, students can develop a workplace ergonomics plan that is effective for individual and system well-being.

SE2070 - Emerging Trends in Safety •
In this course, students will engage with a range of emerging concepts and technologies as it relates to the future direction of safety engineering technology and the health and safety profession. Students will research, develop, and present a seminar and paper on selected topics/trends that are relevant and forward-looking in the field. In addition, students will have the opportunity to research and critique current journal articles.

SE2150 - Safety Certifications
This course will provide students with certifications needed for work in the Chemical Processing Industry. Certificate courses will be offered during intersession in Semester 3. Students are required to complete these courses to meet safety standards and the purpose of this course is to ensure adequate measures are taken to protect students, the environment and assets from harmful consequences of the activities being undertaken within the chemical processing industry.

SE2321 - Risk & Process Safety Management •
The course is designed to enable the student to utilize industry-recognized standards and methodologies to assess risk, measure the magnitude of risk, and develop plans to minimize and control risk. Canadian and international risk management frameworks and decision-making approaches will also be introduced. Process safety management elements will be outlined with particular attention paid to various process hazard analysis techniques, management of change, mechanical integrity, and energy analysis. Case studies from the oil and gas industry, and the chemical process industries, will be used to demonstrate the necessity for a comprehensive Process Safety Management

Program. The role of design in prevention and risk avoidance will be addressed.

SE3310 - Process Safety and Risk Management
The course is designed to enable the learner to utilize industry-recognized standards and methodologies to assess risk, measure its magnitude, and develop plans to minimize and control it. Case studies from the oil and gas and chemical process industries will be used to demonstrate the necessity for comprehensive Risk Management Systems. Process Safety Analysis/Risk Management, Management of Change and Control of Work systems will be applied.
Prerequisite(s): SE1530

SI1015 - Earth Science
In this course, students will examine the basic principles and concepts of Earth science, including the processes that shape the planet, the formation of rocks and minerals, and the evolution of the Earth's surface. Students will also analyze the physical and chemical properties of the oceans and the causes of weather patterns and climate change. Throughout this course, students will develop critical thinking and analytical skills using scientific data and observation. The course will emphasize the interdisciplinary nature of Earth science, integrating concepts from physics, chemistry, biology, and mathematics.

SI1020 - Science
This course in introductory conceptual science presents knowledge about the nature of science concepts to prepare students for success in the trades field. It provides knowledge of science related to on-the-job skills and practices and uses shop problems to help students relate science to employment situations. Upon completion of the course, students will be able to apply science concepts to trade practices. Topics covered include scientific method, matter, atomic structure, thermal energy, magnetism, and electricity.

SI1205 - Environmental Science
This course provides an interdisciplinary approach to understanding the relationship between humans and the natural world. Students will examine the effects of human activity on the environment, including air and water pollution, land use, climate change, and the depletion of natural resources. Students will also develop critical thinking and problem-solving skills by analyzing case studies and engaging in hands-on activities.

SN1160 - Sound & Microphones
This course is designed to introduce students to the fundamentals of sound, the basics of human hearing, basic acoustics, psychoacoustics and ear training. Students also learn about microphones which are used to transduce sound pressure into electrical voltages which can then be manipulated, encoded, stored to a desired medium or turned back into sound pressure.

SN1170 - Music Production Techniques
This course is designed to get the student out of the classroom and into the recording studio. Students will learn the titles and job descriptions of studio personnel, session flow and terminology, session preparation, microphone and other recording techniques. Students will also get some hands-on time with various signal processing tools and learn about studio signal flow. Lastly, mobile recording equipment and techniques will be discussed.

SN1180 - Exploring Your Industry
This course is designed to give the student much needed insight into the industry they have chosen. Through research and networking with industry professionals, the student will explore their industry in areas such as technical innovation, recent trends, employment prospects and professional organizations within the industry.

SN1190 - Electronic Music Production
This course will introduce the student to the basic equipment, terminology and techniques used in the production of electronic music. Musical instrument digital interface (MIDI), MIDI sequencers, synthesizers and samplers will be examined in terms of their fundamental capabilities and workflows. Upon completion of this course, students will

possess the basic skills and knowledge to explore production in much of today's modern genres, like hip-hop, pop and electronic dance music.

Prerequisite(s): MM2340

SN1200 - Music Business
This course will give students an insight into the Music Business. It will deal with Contractual Agreements between participants as well as Copyright laws and Performing Rights Organizations. Career Planning and other employment opportunities will be discussed as well as the perks and pitfalls of Independent Record Productions.

SN1410 - Stage Lighting
This course is designed to introduce the student to the components and applications of stage lighting for the music industry and the performing arts. It will cover such topics as history of stage lighting and design, methods of lighting, design and procedure, introduction to lighting fixtures, consoles, dimmers, DMX, intelligent lighting and lighting control software. Electrical safety practices will be explained and emphasized.

SN2110 - Mixing & Mastering
This course is designed to expose the student to the final two phases of the recording process: mixing & mastering. Mixing philosophies and techniques will be examined as well as intermediate and advanced use of EQ, dynamics processing and special effects. Mastering will touch on the basics of the process and the tools used to create radio-ready final products.
Prerequisite(s): SN2200

SN2120 - Sound in Practice I
This course is designed to immerse the student in a practical, hands-on, interdisciplinary environment. Theory from other courses will be put into practice as students liaise with students in other media arts disciplines. All projects will be assigned and mentored by the instructor.
Prerequisite(s): SN1160, SN2200
Co-requisite(s): SN2420, SN2110

SN2130 - Career Management
This course will introduce learners to the fundamentals of managing a career in the sound recording and production Industry. It will identify the skills necessary for successful financial management and will introduce the importance and basics of financial planning. It will review the financial aspects of recording such as budgeting, funding, record keeping and government reporting. Learners will also be introduced to the fundamentals of project management and will be presented with career opportunities that are available in the industry. A combination of theories/concepts and practical illustrations are used to explain the application of sound financial planning.

SN2140 - Acoustics & Studio Design
Acoustics & Studio Design is a Sound Recording & Production course. It is designed to prepare students for a career in the field of sound recording and production. Students will learn the necessary physics of sound and acoustics. They will then apply this theory to the studio, allowing them to design spaces specifically for particular acoustical requirements. Finally, they will take this learning outside of the studio to apply all that they know toward speaker and stage layouts, both enclosed and open air.

SN2150 - Sound in Practice II
This is a continuation of the first Sound in Practice course and is designed to immerse the student in a practical, hands-on, interdisciplinary environment. Theory from other courses will be put into practice as students liaise with students in other media arts disciplines and external community bodies. All projects will be assigned and mentored by the instructor.
Prerequisite(s): SN2120, SN2201

SN2200 - Recording I
This course is an introduction to sound recording technologies. The evolution of those technologies is traced from when sound was first captured and moves to a comprehensive overview of contemporary technologies. Topics include History of Recording, Magnetic Recording, Digital Recording, Analog and Digital Consoles, Analog and Digital Processing.
Co-requisite(s): SN1160

SN2201 - Recording II
This course is designed to give the student hands-on experience of a recording session from pre-production right through the entire modern digital recording process. Modern editing for timing and pitch will be covered as will vocal comping and editing techniques.
Prerequisite(s): SN1160, SN2200
Co-requisite(s): MM2340, SN1170

SN2420 - Sound for Visual Media
This course explores the unique requirements for sound recording and production for visual media. This includes film and video production, digital animation and video game design. Students will review the key technical requirements of these industries and will, through practical sessions, demonstrate required competencies.

SN3100 - Live Sound Production
This course is designed to introduce the student to the various components that make up a public address system. Cabling and connections will be examined and explained. Mixing sound indoors will be compared and contrasted to mixing sound outdoors.

Prerequisite(s): SN1160

SP1200 - Machine Shop Practice
This is an introductory course designed to give students a knowledge and understanding of the fundamental metal-removal and general machine shop concepts which will form the basis for further studies in science and technology.

SP1210 - Machine Shop Practice
This is an introductory course designed to give students a knowledge and understanding of the fundamental metal-removal and general machine shop concepts which will form the basis for further studies in science and technology.

SP1320 - Radiation Safety
This course will have the learner explore the health and safety concerns related to working with industrial radiography radiation sources. The primary intent of the course is to introduce the learner to safe handling, standard operating principles and procedures and emergency operation principles and procedures for industrial radiography exposure devices. Through the principle of ALARA (As Low As Reasonably Achievable) and the concepts of Time, Distance and Shielding this course will prepare the learner for calculating and verifying working radiation dose rates, accumulated dosages, safe distances, and shielding requirements. The relevant sections of the Canadian Nuclear Safety Act and Regulations will be explained in detail. Successful completion of this course will provide the learner the opportunity to further pursue the CEDO Certified Exposure Device Operators designation through the NDT (Non-Destructive Testing) Certifying Agency of CANMET Materials Technology Laboratory, Natural Resources Canada in accordance with the Canadian Nuclear Safety Commission Regulatory Guide G229.

SP1420 - Asset Maint. & Reliability
Development and application of preventive and predictive maintenance programs for industrial equipment and facilities is emphasized. Condition monitoring of equipment, predictive techniques including vibration analysis and fluid sampling are explained with practical applications and related exercises. A preventive and predictive maintenance program is developed as a project, using industry-recognized methods.

SP1450 - Quality Management Systems
This course introduces the learner to the concepts and systems of Quality Assurance. The context of the course will be centred around the elements of quality assurance as it impacts the welding industry. It emphasizes the elements and it demonstrates the practices and procedures that companies employ to meet the requirements of a Quality Management System.

SP1730 - CNC Machining I
This is an introductory course in Computer Numerical Control (CNC). Programming concepts learned through the lecture time will be applied using both a CNC Lathe and CNC Milling Machine.
Prerequisite(s): SP1200

SP1731 - CNC Machining II
This is a course in Computer Numerical Control (CNC) using Computer Applied Manufacturing (CAM) software. It is delivered using computers to produce CAD/CAM programs that are applied through shop floor exercises with CNC Machining Centers. Instruction will be done through lecture, computer lab and hands-on work in the shop.
Prerequisite(s): SP1730

SP1805 - Metrology and Quality Control I
This course integrates the application of statistical process control with the control of quality for a product or service. Measurement of the physical characteristics of a product and its relationship to the manufacture, quality and cost is emphasized. The student will use a variety of measuring tools such as micrometers, scales, the optical comparator and the coordinate measuring machine (CMM) for inspection procedures. In addition, the student will be introduced to the application of Statistical Process Control which will be integrated into the quality control procedures required in the manufacture of the product.
Prerequisite(s): SP1210, MA1670

SP1835 - Applied Statistics and Quality Control
This course integrates the application of statistical process control with the control of quality for a product or service. Measurement of the physical characteristics of a product and its relationship to the manufacture, quality and cost is emphasized. The student will use a variety of measuring tools such as micrometers, scales, the optical comparator and the coordinate measuring machine (CMM) for inspection procedures. In addition, the student will be introduced to the application of Statistical Process Control which will be integrated into the quality control procedures required in the manufacture of the product.

Prerequisite(s): SP1200 or SP1210

SP2110 - NDT-MT & RT
This course is intended to introduce the learner to the theory and practice of the Non-Destructive Testing (NDT) disciplines of Magnetic Particle Inspection (MT) and Radiographic Inspection (RT).
Prerequisite(s): PH1100, WD1440, SP1320

SP2120 - NDT-PT & UT
This course is intended to introduce the learner to the theory and practice of the Non-Destructive Testing (NDT) disciplines of Liquid Penetrant Inspection (PT) and Ultrasonic Inspection (UT).

Prerequisite(s): CF1100

SP2131 - Applied Metrology I
This course provides a hands on introduction to precision measurement using a variety of manual metrology tools. Measurement of the physical characteristics of a product and its relationship to the manufacture, quality and cost is emphasized. The student will use a variety of measuring tools such as micrometers, verniers, height gages, depth gages, steel rule, radius gage, sinebar, surface plates, gage blocks and protractor. The students will be make radius, angularity and thread measurements using an optical comparator. The students will be introduced to the coordinate measuring machine (CMM). In addition, the student will receive a comprehensive introduction to Geometric

Dimensioning and Tolerancing including making measurements of form, orientation, runout, profile and location. The students will be introduced to control charts and acceptance sampling.
Prerequisite(s): SP1200 or SP1210
Co-requisite(s): MA1670

SP2132 - Applied Metrology II
This course builds on the theory and practice covered in the previous applied metrology courses. It focuses on application of geometrical dimensioning and tolerances, precision measurement using a contact based co-ordinate measuring machine (CMM), a machine vision system and other digital gages interfaced to computer hardware equipped with statistical process control software. The student will also make surface roughness measurements using contact and non-contact profilometer. The students will also apply a non-contact CMM to scan and measure three dimensional parts.
Prerequisite(s): SP2131, MA1670

SP2325 - Quality Assurance
This course is designed to introduce the concepts, philosophy and application of Total Quality Management, and the International Standards Organization (ISO) 9000 quality standards. Emphasis will be placed on the integration of total quality management philosophy into the production process. Development of quality procedures and documentation will be discussed including reference to existing industry quality specifications. The implementation process for quality assurance manuals and their auditing procedures will be outlined.

SP2355 - QA/QC for NDT
This course is designed to give students an understanding of the requirements of Quality Assurance (QA) and Quality Control (QC) such as interpreting standards, controlling the acceptance of raw materials, controlling quality variables, and documenting the process. Through completion of this course, students will apply QA/QC procedures as related to Non-Destructive Testing (NDT).

SP2370 - Quality Assurance
This course is designed to introduce the concepts, philosophy and application of Lean-six sigma, Total Quality Management, Statistical Process Control and the International Standards Organization (ISO) 9000 quality standards. Emphasis will be placed on the integration of total quality management philosophy into the production process. Development of quality control procedures and documentation will be discussed including reference to existing industry quality control specifications. The implementation process for quality assurance manuals and their auditing procedures will be outlined.
Prerequisite(s): SP1830

SP2450 - OHS Management Systems
This course will introduce the student to the interpretation and application of workplace occupational health and safety (OHS) legislation and provide the student with an understanding of due diligence. The course is designed to enable the student to utilize industry-recognized standards and methodologies to assess risk, determine its magnitude, and develop plans to minimize and control it. Case studies from manufacturing or other industrial settings may be used to demonstrate the necessity for proactive safety systems.

SP2455 - Petroleum OHS Management
This course introduces the student to the interpretation and application of workplace legislation and regulations and key safety program elements. In addition, the student will become familiar with the concept of due diligence and behavior-based safety approaches.

SP2510 - Plant and Facility Layout
The course examines the contribution that a competently performed plant or facility layout plan can make toward achieving a profitable and efficient company or non-profit organization. The course combines fundamental principles and practical methodologies in plant and facility layout and material handling. The student will investigate and apply these principles and techniques in a variety of realistic situations. Further, since any proposal for innovation or change must be analyzed and described thoroughly, this course also emphasizes development of competencies in CADD and communication, with emphasis on the written report.

Prerequisite(s): EG1430

ST2405 - Apparel Design II
In this course students will learn more advanced apparel design and construction techniques. Topics include intermediate sewing techniques and draping techniques. Students will create flat patterns and construct full garments.
Prerequisite(s): TX1400, VA1201

ST2406 - Apparel Design III
In this course, students will continue to learn advanced apparel design techniques. Topics include using specialty fabrics in garment designing, constructing, and constructing outerwear garments.
Prerequisite(s): ST2405, VA2260

ST2450 - Fabric Design II
In this course, students will learn more advanced fabric design techniques through knit, weave and felt. Students will continue to maintain records of their work.
Prerequisite(s): TX1220, VA1201

ST2455 - Surface Design II
This is a course in intermediate surface design techniques. Topics covered include intermediate dye techniques, intermediate surface embellishment techniques and intermediate rug hooking techniques. Students will learn to maintain accurate records of their work.
Prerequisite(s): TX1225, VA1201

ST2461 - Fabric Design III
This course provides students with an opportunity to complete an independent learning project. Working in consultation with the instructor, students will identify, design, and develop a project concept, complete design research, and carry out project to completion. Topics for independent learning project will include intermediate techniques in knit, weave and felt.
Prerequisite(s): ST2450, VA2260

ST2465 - Surface Design III
This course provides students with an opportunity to complete an independent learning project. Working in consultation with the instructor, students will identify, design and develop a project concept, complete design research, and carry out project to completion. Topics for independent learning project will include intermediate dye techniques, intermediate surface embellishment techniques and intermediate rug hooking techniques.
Prerequisite(s): ST2455, VA2260

SU1130 - Mine Surveying I
This is an introductory surveying course for Mining Engineering Technicians. Topics studied include, but are not limited to: measurement of angles, direction and distance with appropriate instruction in the corresponding areas of traverse and coordinate computation. Also included are differential, profile, trigonometric, and cross section leveling. An introduction to the use of global positioning system (GPS) is included. Field labs and practical exercises emphasize use and care of surveying equipment, note taking, and interpretation and plotting of field notes.

SU1150 - Field Navigation
This course is designed to expose students to concepts of land-based field navigation. It is essentially a field-oriented course in which students will be introduced to navigational skills using: map and compass, aerial photos, and recreational-grade GPS receivers. Students will also be introduced to viewing and manipulating digital data through desktop and mobile mapping apps. The knowledge and skills developed in this course are applied in all field-based courses in the remaining semesters in the programs. Field navigational competencies are validated through the practical examination.

SU1200 - Plane Surveying
Plane Surveying is an introductory surveying course for technologists. Topics studied include, but are not limited to: measure of angle, direction and distance with appropriate instruction in the corresponding areas of traverse and

coordinate computation. Also included are differential, profile, trigonometric, and cross-section leveling. An introduction to the use of global positioning system (GPS) is included. Field labs and practicals emphasize use and care of surveying equipment, note taking and interpretation and plotting of field notes.
Prerequisite(s): MA1101

SU1210 - Construction Surveying
This is the second course in surveying for students in the Civil Engineering Technology Program. This course expands on the survey skills learned in SU1200; introducing survey equipment such as total station, data collector, and Global Positioning System (GPS). In addition, students will explore knowledge areas directly related to construction surveying
Prerequisite(s): SU1200

SU1230 - Mine Surveying II
In this course, students will progress through a logical continuation of the contents from Mine Surveying I and progress towards performing survey applications related to underground mines. Students will cover locating and installing survey stations in 3-D; traverse and coordinate calculations in 3-D; determination of irregular areas and volumes; field determination and plotting of profiles and cross-sections; cross sectional area and quantity determination; contours; introduction to electronic distance measurements; computer applications for various survey projects. In addition, students will examine line and grade, drill hole layout and pick-up, and raise location with control.
Prerequisite(s): SU1130

SU1240 - Intro to Programming for GSET
This course serves as an introduction to programming concepts and techniques tailored specifically for geomatics applications. Students will be provided with foundational knowledge in various programs used to solve typical survey calculations, including Microsoft Excel and Python, with a focus on GIS applications. Through a combination of theoretical knowledge and hands-on coding exercises, students will learn fundamental programming concepts and apply them to solve geomatics-related problems.

SU1250 - Professional Practice
This course is designed to help geomatics/surveying engineering technology students develop an understanding of the fundamental concepts of professional practice within the geomatics sector. This course will include aspects of business law & practices, professionalism, ethics & sustainability, ethical approaches to problem solving, codes of ethics for employees, health & safety, and diversity, equity, & inclusion.

SU1315 - Intro to Geodesy & Geomatics
This course is designed to introduce students to the concepts and applications of geomatics. Geomatics is a broad discipline that uses art, science, and technology to gather, store, process, model, analyze, and deliver spatially referenced or location information. It encompasses the fields of geodesy, Global Navigation Satellite Systems (GNSS), land surveying, hydrography, mapping, remote sensing, photogrammetry, and Geographic Information Systems (GIS). This course covers topics such as geodetic systems, data acquisition and management, spatial analysis, and applications of geomatics in various fields. Students will be introduced to the geospatial technologies used to collect and analyze geospatial data, coordinates systems, geodetic datums, and projections used in geomatics, and understand how geomatics is applied in various fields.

SU1320 - Plane Surveying I
This is an introductory course in surveying presented to Geomatics Engineering Technology (Co-op) program. The topics to be covered are: introduction to the theory of surveying on a plane, the acquisition of linear distances, horizontal angle, vertical angles, the calculation of coordinates and areas, the determination of elevations using spirit leveling, profiles and cross-sections, the graphical presentation of acquired data. The student will use tapes, total stations and spirit levels to acquire the required data.
Prerequisite(s): EG1430, MA1101, PH1100

SU1321 - Plane Surveying II
This is the second course in Plane Surveying in the Geomatics Engineering Technology (Co-op) program. This course expands on the topics covered in SU1320: vertical and horizontal datums, data transformation, total station instrumentation, data collectors, horizontal and vertical curves, and construction surveying.
Prerequisite(s): SU1320, SU1500

SU1325 - Plane Surveying
Plane Surveying builds upon the SU1315 Intro to Geodesy & Geomatics course completed in Semester 1 and will focus on more advanced plane surveying methodologies employed in modern surveying. Through a combination of hands-on practical exercises and theoretical knowledge, students will expand on their knowledge in topics such as, coordinate geometry, route surveys (horizonal & vertical curves), topographic surveys, construction surveys, location surveys, site planning, introduction to control surveys, introduction to dimensional control surveys, and principles and procedures of field checks. Students will also be introduced to modern surveying equipment including robotic total stations, global navigation satellite system technology, and various data collectors and processing software.
Prerequisite(s): SU1315, SU1240, SU1505

SU1330 - GPS Data Collection & Mapping
This course is designed to build critical skills necessary to the planning and use of mapping-grade GPS technology to create GIS data for mapping and analysis projects. Students will learn how to plan and execute GIS mapping projects from the data design phase to collection, differential correction, and creation of geodatabases. The knowledge on GNSS fundamentals will be covered to support a project-based delivery. Students will capture attributed spatial features in the field using GPS-based data collection software; process these data within GPS data processing software and export spatial and attribute data into geodatabases. This course will cover these processes and build skills using the TerraSync- PathfinderOffice-ArcGIS workflow.
Prerequisite(s): SU1150, SU3210

SU1360 - Graphics for Geomatics Engineering Technology
This course introduces a surveying software package. The course utilizes and expands on theory and practice from previous cartography, CAD, and plane surveying courses applying this knowledge to a surveying graphics package. Topics covered include applied drafting skills, traverse computations, software adjustments, earthwork volume determination, road design, area calculations, and subdivision design.
Prerequisite(s): SU1320, SU1500
Co-requisite(s): SU1321

SU1450 - Geographic Info. Systems (GIS) I
This is the first of two GIS courses and focuses on introducing GIS and its components. The course introduces GIS and its connection with the real world. Geospatial data and its influence on maps are explained. The various types of data models and geodatabases are introduced as well as database management. The use of GIS as a facility management tool is addressed with emphasis on the combining of the various themes to answer posed questions. The application of Web and Mobile GIS are explored and their influence on the evolution of GIS is discussed.
Prerequisite(s): SU1315

SU1451 - Geographic Info. Systems I
This is the first of two GIS courses and focuses on introducing GIS and its components. The course introduces GIS and its connection with the real world. Geospatial data and its influence on maps are explained. The various types of data models and geodatabases are introduced as well as database management. The use of GIS as a facility management tool is addressed with emphasis on the combining of the various themes to answer posed questions. The application of Web and Mobile GIS are explored and their influence on the evolution of GIS is discussed.
Prerequisite(s): SU1315

SU1460 - Geographic Info. Systems II
This course focuses on data analysis and management. Topics included are data exploration and analysis, vector and raster data analysis, terrain mapping and analysis, viewshed and watershed analysis, spatial interpolation, geocoding, network analysis, analytical modeling, and project design and management. There will be a strong emphasis on how GIS is utilized to aid in the analysis and management of data with a brief introduction to GIS design and management.
Prerequisite(s): SU1451

SU1500 - Cartography
This course is an introductory course offered to Geomatics Engineering Technology (Co-op) students. The course is divided into two modules. Module one covers topics in cartography while module two expands on the CAD skills acquired by the student in Engineering Graphics EG1110.
Prerequisite(s): MA1101, PH1100, EG1430

SU1505 - Cartography
This course is an introductory course offered to Geomatics / Surveying Engineering Technology (Co-op) students. It is designed to introduce students to the fundamentals of cartography and map projections. The course will cover the basic principles and techniques used in cartography, the history and evolution of maps, the different types of map projections used in modern cartography, and an introduction to digital map design and production.
Co-requisite(s): MA1700, SU1315

SU1540 - Hydrography I
This course is an introductory course in hydrographic principles and procedures. It is designed to emphasize the theoretical and practical applications of hydrography and the marine survey environment.
Prerequisite(s): SU1321

SU1541 - Hydrography II
This course is an advanced course in hydrographic principles and procedures. It is a continuation of SU1540 (Hydrography I) with emphasis on advanced hydrographic systems and their use in marine engineering projects.
Prerequisite(s): SU1540, SU2570

SU1545 - Hydrography
This course provides students with foundational knowledge of the principles, techniques, and applications in the field of hydrographic surveying, which is a discipline within geomatics that measures and describes the physical features of water bodies and the land areas adjacent to those water bodies.
Prerequisite(s): SU1315, SU1325
Co-requisite(s): SU2330

SU1570 - Remote Sensing
This course introduces the student to the principles of remote sensing. The concept of acquiring data outside our visual range and the use of that data to identify and classify objects and phenomena is investigated. The basic data recording systems in common use are addressed.
Prerequisite(s): SU2500, SU2570, SU1460

SU1575 - Remote Sensing Applications for Natural Resources
Remote sensing is an important technology used in base mapping, creating and updating resource inventories, and environmental monitoring. It is continually evolving, with the development and refinement of new sensors, new platforms, and new analysis tools. Consequently, it is essential that technicians understand how and when remote sensing can be used in natural resources management and how it complements field-based measurements and observations. This course is intended to provide an introduction to the fundamentals of remote sensing, along with the technical skills needed to solve practical problems and support natural resource applications and decision-making using remotely sensed data.
Prerequisite(s): SU1150, SU3210

SU1710 - Forest Surveying
This is an introductory course in surveying including the basic fundamentals of plane surveying and the use and care of equipment. The measurement of distance, direction and elevation is emphasized. The rope chain, level, and hand compass are the major pieces of equipment studied.

SU2330 - Geodesy & Geodetic Positioning I
This course introduces Geomatics/Surveying Engineering Technology students to the topic of Geodesy and Geodetic Positioning, focusing on fundamental concepts such as measurement and representation of the earth's surface, coordinate systems and coordinate transformations, geoid models and heights, geodetic datums, reference systems

and reference frames, and geodetic positioning techniques. The course provides foundational knowledge of geodetic concepts, techniques, and applications, emphasizing the importance of accurate positioning.
Prerequisite(s): MA2100, SU1325

SU2500 - Photogrammetry
This course is an introduction to photogrammetry for the Geomatics Engineering Technology (Co-op) program. The course introduces the student to the use of aerial photography for the production of maps. The principals of photogrammetry are addressed and the use of stereoplotters for map compilation is explored. The sources of aerial photography acquisition are identified. The aerotriangulation process for the photo to ground geometry is investigated. The use of aerial photography for the production of rudimentary maps is also addressed.
Prerequisite(s): SU1320, SU1500

SU2540 - Cadastral Surveying I
This is an intermediate level course designed to familiarize the student with legal principles and applicable legislation in the area of Cadastral Surveying. The student will also make practical application of this knowledge.
Prerequisite(s): SU1321

SU2541 - Cadastral Surveying II
This course will build upon the foundation established in Cadastral Surveying I and provides context for surveying real property. Practical examples will be used to illustrate how survey boundary law principles and statutory and jurisdictional requirements are applied in the field and office practices of Land Surveyors in Canada.
Prerequisite(s): SU2542, EG1435

SU2542 - Cadastral Surveying I
This is an introductory level course designed to familiarize the student with legal principles and applicable legislation in Cadastral Surveying. Students will learn the legal and technical aspects of surveying land boundaries, create and manage land records, and understand the role of cadastral surveying in land administration. Students will also be introduced to the United Nations Convention on the Law of the Sea (UNCLOS).
Prerequisite(s): SU1315

SU2550 - Remote Sensing I
This course provides students with an in-depth introduction to the fundamental principles and applications of remote sensing. Remote sensing involves acquiring information about an object or phenomenon without physical contact. This course explores the theories, techniques, and technologies behind this discipline, emphasizing their significance in the field of geomatics.

SU2570 - GNSS and Spatial Referencing
This course introduces the student to the Global Navigation Satellite System (GNSS) as a precise measuring tool. The satellite systems, operational control and user applications of the GNSS are investigated. A strong emphasis is placed on the fundamentals of NAVSTAR – GPS. The GPS signal structure, broadcast information and the parameters of the navigation message are examined. Celestial, Terrestrial and Orbital Coordinate Systems pertinent to space positioning are defined and coordinate computations performed. The procedural tasks associated with various GPS modes of operation are practiced through completion of specified survey projects. Quality assurance and data analysis is performed to investigate the accuracies of the various GPS methods such as Static, RTK and Post processed solutions. Concepts of Astronomy and the determination of position by use of classical astronomic means within the Celestial Coordinate System is also addressed.
Prerequisite(s): SU2330
Co-requisite(s): MA3130

SU2575 - GNSS and Spatial Referencing
This course introduces the student to the Global Navigation Satellite System (GNSS) as a precise measuring tool. The satellite systems, operational control, and user applications of the GNSS are investigated. A strong emphasis is placed on the fundamentals of NAVSTAR – GPS. The GPS signal structure, broadcast information and the parameters of the navigation message are examined. Celestial, Terrestrial and Orbital Coordinate Systems pertinent to space positioning are defined and coordinate computations performed. The procedural tasks associated with various GPS modes of

operation are practiced through completion of specified survey projects. Quality assurance and data analysis is performed to investigate the accuracies of the various GNSS methods such as Static, RTK and Post processed solutions. Concepts of Astronomy and the determination of position by use of classical astronomic means within the Celestial Coordinate System is also addressed.
Prerequisite(s): SU2330
Co-requisite(s): MA3130

SU2580 - Remote Sensing II
This course builds upon the fundamental principles taught in Remote Sensing I, providing students with an in-depth exploration of progressive topics in the field of remote sensing, including Tilted and Oblique imagery, Analytical Photogrammetry, Aerotriangulation, Terrestrial and Close-Range Photogrammetry, Photogrammetric Computer Vision, Mobile Mapping Systems, and an Introduction to Reality Capture.
Prerequisite(s): SU2550
Co-requisite(s): SU3500, MA3130

SU2590 - Adv. Applications in RS & GIS
This course builds upon the fundamental principles taught in Remote Sensing I & II by introducing students to advanced topics in Remote Sensing and GIS. Students will explore advanced concepts including Business Information Modeling (BIM), Big Data Analytics, Artificial Intelligence (AI), Deep Learning & Machine Learning, Spatial Analysis and Data Science, 3D Modeling, Python, and Advanced Remote Sensing Applications.
Prerequisite(s): SU2580, SU1460, MA3130

SU3210 - Geographic Information Systems (GIS)
This course is designed to provide students with an overview of Geographic Information Systems (GIS) technology and an in-depth appreciation of the role of GIS technology in natural resources applications. Students will gain valuable skills and hands-on experience to support resource-based GIS projects typical in the workforce. Using vector-based GIS data models, students will create databases, manage spatial and attribute data, generate map-based and tabular outputs, and perform geographic analysis. The course culminates with a major GIS project designed to reinforce the skills covered in the course.
Prerequisite(s): MC1850, SU1150

SU3300 - Geodesy & Geodetic Positioning II
This course expands on the concepts introduced in Geodesy & Geodetic Positioning I, and focuses on the concepts of gravity, height systems and transformations, network design and implementation, and the fundamentals of map projections.
Prerequisite(s): MA3130, SU2575, SU2330

SU3500 - Adjustments
This course explores practical applications of the Least Squares technique for the adjustment of survey observations. It covers the theory of observational errors, measures of precision and accuracy; the law of propagation of errors; confidence regions and statistical hypothesis testing; concepts of least squares adjustments; and pre-analysis of survey data.
Prerequisite(s): SU2330
Co-requisite(s): SU2575, MA3130

SU3510 - Precision Surveying
This course is designed to provide students with fundamental knowledge of precision survey applications including deformation monitoring and analysis, mining surveys, tunnelling surveys, and metrology/alignment surveys. Students will also explore modern survey instruments, precision survey standards and specifications, different methods of analyzing and evaluating collected measurements, and various survey design methodology used to meet precise survey standards.
Prerequisite(s): SU3500, SU2575, MA3130

SW1110 - Intro to Social Work
Social work is a dynamic profession that offers opportunities to make a difference in the lives of individuals, families, groups, and communities across a variety of work settings. This course provides an introduction to social work

knowledge and skills grounded in core values and competencies necessary for effective practice in diverse contexts. The curriculum emphasizes developing students' abilities in engaging with others while advocating for self-determination. Students will receive an overview of historical practice, will critically analyze current issues, and will explore a range of social work theory and models.

TA1142 - Orientation to Rehabilitation •
This course aims to introduce the student to the field of rehabilitation, the role of the Rehabilitation Assistant, professional organizations, and areas of specialization. This course also includes 35 hours of clinical observation at an approved clinical site where students will be exposed to the rehabilitation profession.

TA1150 - Intro to Musculoskeletal Anatomy •
This course will provide an overview of the study of anatomy, physiology, and provide an overview of key body systems related to rehabilitation. This course will emphasize a greater focus on the musculoskeletal system and its movement to provide a foundation for work as a Rehabilitation Assistant (OTA & PTA).

TA1231 - Human Movement and Kinesiology •
This course will enable students to describe the human body in motion and to demonstrate safe body mechanics. This course will be based on the theoretical and practical study of human movement and kinesiology and how it applies to persons with atypical movement patterns. The course will include a lab component and a practical skills exam.
Prerequisite(s): TA1150

TA1395 - Anatomy & Physiology for Rehabilitation Assistants •
This course will provide an overview of select body systems and focus on the human body's cells, tissues, organs, and body systems. A particular focus will be placed on the primary organs, tissues, structures, and the associated pathologies commonly observed.

TA1601 - Introduction to Clinical Skills •
This course will enable students to effectively handle and move patients using safe body mechanics. The course will include a lab component and a practical skills exam.

TA1612 - Advanced Clinical Skills •
This course is a continuation of TA1601 – Introduction to Clinical Skills. The student will learn the theory behind and practice in the lab setting, advanced handling and positioning skills, and therapeutic interventions. Students will utilize appropriate equipment and techniques to enhance client participation in therapeutic procedures. The student will practice these skills in the lab and complete a practical skills exam.
Prerequisite(s): TA1601, TA1142, TA1150

TA1701 - Clinical Placement I •
The student will demonstrate, in the clinical setting, advanced handling and positioning skills and therapeutic interventions. Students will utilize appropriate equipment and techniques to enhance client participation in therapeutic procedures.
Prerequisite(s): TA1612, TA1142, TA1231

TA2140 - Disease, Injury and Intervention I •
Students will be introduced to a selection of diseases and injuries based on broad diagnostic categories, including developmental, physical, and psychosocial conditions in pediatric, adult, and geriatric populations. Emphasis will be placed on the impact these conditions present to the individual and the rehabilitation management of these conditions.
Prerequisite(s): TA1150

TA2141 - Disease, Injury and Intervention II •

Students will continue their study of a selection of diseases and injuries based on broad diagnostic categories, including developmental, physical, and psychosocial conditions in pediatric, adult, and geriatric populations. Emphasis will be placed on the impact these conditions present to the individual and the rehabilitation management of these conditions.
Prerequisite(s): TA2140

TA2150 - Community Rehabilitation and Wellness for the Older Adult •
This course defines and explores the emerging trend towards rehabilitation care in the community and the Rehabilitation Assistant role (OTA & PTA). In addition, this course explores the unique needs and concerns of the aging population and specific supports to enable greater independence.

TA2221 - Communication Disorders in Rehabilitation •
This course addresses communication problems associated with neurological and sensory illnesses, which inhibit a person's ability to communicate effectively. This course focuses on teaching the students practical skills to enhance their communication skills with speech and language difficulties encountered with patients/clients.

TA2521 - Mental Health Concepts and Techniques •
This course provides a general overview of common mental health conditions and their management and mental illness and psychosocial practice theories. As well, current issues in mental health and social-cultural and developmental perspectives will be explored. To facilitate the integration of theory and knowledge into practice, consideration will be given to the role of the OTA, PTA, and Rehabilitation Assistant in this setting.

TA2615 - Therapeutic Skills II for the Rehabilitation Assistant (OTA and PTA) •
This course l builds on the knowledge learned in *Therapeutic Skills I for OTA* and *Therapeutic Skills I for PTA*. The course focuses on the duties and role of the Rehabilitation Assistant and the integration of OTA and PTA skills in this role. Professional behaviours such as responsibility and accountability are addressed. Emphasis will be placed on therapeutic interventions with specific populations.
Prerequisite(s): TA2685, TA2671

TA2671 - Therapeutic Skills I for OTA •
This course will introduce students to and familiarize them with the occupational therapist assistant's theoretical knowledge and entry-level practical skills. Students will learn practical skills in therapeutic exercise and activity, occupations of daily living (self-care, productivity, and leisure), adapted techniques, modification of the environment, and adaptive equipment. These skills will be applied to a variety of disabling conditions in the rehabilitation setting.
Prerequisite(s): TA1231, TA1612, TA1701

TA2685 - Therapeutic Skills I for PTA •
This course aims to provide a foundation of exercise principles and techniques and the use of therapeutic modalities. The student will also learn to adjust and fit ambulatory devices and apply the techniques learned to the most common neurological and musculoskeletal conditions.
Prerequisite(s): TA1231, TA1612, TA1701

TA2710 - Clinical Placement III for the Rehabilitation Assistant (OTA and PTA) •
This six-week clinical placement will provide the opportunity for students to continue to develop the therapeutic skills learned in *Therapeutic Skills I for OTA* and *Therapeutic Skills I for PTA*. The student will demonstrate in the clinical setting advanced handling and positioning skills and therapeutic interventions. Students will utilize appropriate equipment and techniques to enhance client participation in therapeutic procedures. The student will practice entry-level competence as a Rehabilitation Assistant, integrating both roles and the higher-level clinical skills learned in *Therapeutic Skills II for the Rehabilitation Assistant* (OTA and PTA).
Prerequisite(s): TA1150, TM1130, CM1270, TA1142, TA1601, PS1420, TA1395, TA2140, TA2221, TA1231, TA1612, TA1701, HG1300, TA2141, TA2685, HG1681, TA2671, TA2521, TA2150, TA2741, TA2751, TA2615

TA2741 - Clinical Placement II for OTA •

This five-week clinical placement will provide the opportunity for students to continue to develop their therapeutic skills learned in *Therapeutic Skills I for OTA* and *Advanced Clinical Skills* and practice entry-level competence as an Occupational Therapist Assistant.
Prerequisite(s): TA1701, TA2671, TA1612, HG1300, TA2521

TA2751 - Clinical Placement II for PTA •
This five-week clinical placement will provide the opportunity for students to continue to develop their therapeutic skills learned in *Therapeutic Skills I for PTA* and *Advanced Clinical Skills* and practice entry-level competence as a Physiotherapist Assistant.
Prerequisite(s): TA1701, TA2685, TA1612, HG1300

TD2100 - Thermodynamics
This is an introductory course in thermodynamics. The course will provide the student with the basics of thermodynamics and its application to various processes.
Prerequisite(s): PH1100 or PH1150, CH1121

TD2120 - Thermodynamics
This course follows from Thermodynamics TD2100 and applies the knowledge obtained in that course to specific mechanical systems. These applications are ones which the mechanical engineering technologist is likely to use in his/her future work.
Prerequisite(s): TD2100

TD2140 - Thermodynamics
This course follows from Thermodynamics TD2100 and applies the knowledge obtained in the course to specific mechanical systems. These applications are ones which the mechanical engineering technologist is likely to use in his or her future work.
Prerequisite(s): TD2100

TD3100 - Thermodynamics
This is both a theory and practical course in the topic of refrigeration and air conditioning. It should draw on knowledge gained in Thermodynamics in the specific application refrigeration.

Prerequisite(s): TD2100

TD3140 - Heat Transfer
This is an introductory course in heat transfer which is designed to familiarize the student with the subject and its application to various system components that they may work with as mechanical engineering technologists.
Prerequisite(s): TD2100

TF1010 - TV & Film Industry Foundations
Working on a TV or film set is both fascinating and demanding. It is a complex work environment that requires attention to detail, resourcefulness, and a strong work ethic. This course is designed to provide an overview of best practices and will introduce students to set etiquette, two-way radio usage, film crew responsibilities, call sheets, unions, and set safety. Students will also participate in a realistic two-location shoot, both inside a studio and at an outside film shoot location.

TF1015 - TV & Film Analysis
Film is both a narrative and visual art form that has evolved from moving pictures to the blockbuster productions of today. In this course, students will be introduced to the cultural and historical contexts that influence film, as well as central concepts in film form and aesthetics. They will develop skills in film analysis and critical interpretation by examining cinematography techniques, various film genres, and cinematic history. The main goal of the course is to familiarize the student with analytical tools to investigate and explain film's multiple effects – in short, to articulate how a film works.

TF1016 - History & Theory of TV & Film
In this course, students will learn about the history of television and film, with a focus on analyzing and interpreting diverse forms of visual storytelling. Through lectures, discussions, screenings, and assignments, students will explore key theories, movements, and influential works that have significantly impacted the realm of television and film.

TF1020 - Screenwriting Fundamentals
This course explores the artistic and technical facets of screenwriting, and how the script serves as a blueprint for TV and film production. In this course students will be equipped with a comprehensive understanding of the basics of screenwriting.

TF1025 - Post-Production Process
Students will gain an understanding of the Post-Production pipeline. This course introduces the Post-Production process and workflow. Students will examine the various phases of activity in Post-Production, crew positions and their responsibilities.

TF1030 - Film Design & the Art Dept
This course is aimed at students in Television and Film who want to expand their knowledge in the field of film design and the Art Department; they will explore the essential elements needed to work in a professional Art Department. Using a combination of theory and practical instruction, students will gain a greater understanding of film design and the role of the Art Department, the positions within the department, the working relationship between those positions, the purpose and professional requirements of those roles and the relationship of those in the art department with other departments.

TF1035 - Intro to Rigging & Special Effects
In this course, students will be introduced to rigging and special effects in television and film. Students will analyze how rigging is used in different departments, study rigging fundamentals, calculate safe working loads, erect, stabilize and dismantle equipment, work safely at heights, and apply and use all rigging and associated equipment. Students will be provided with the fundamentals of industry safety standards and procedures for safe operation in a practical and collaborative hands-on environment, which will enable them to support shoots with professionalism and accuracy.

As well, students will examine how special effects help tell a story and assess how they are incorporated seamlessly on screen. Students will explore various types of physical and practical effects, such as atmospheric effects.

TF1040 - Directing the Documentary
In this course on documentary storytelling, the focus is on honing narrative craft and understanding effective production planning, complemented with instruction in basic camera, lighting, audio and editing skills. The curriculum guides students from the development and pitching of a compelling idea, through all stages of its production, post-production, and final delivery. The course concludes with each student creating a short documentary film based on their approved pitched idea.

TF1110 - Intro to Camera, Lighting & Grip
Camera, lighting, and gripping are key areas in cinematography. This course explores each area and how they support the role of Director of Photography. Topics such as the camera department, camera systems and support, lighting, and gripping are introduced.

TF1115 - Intro to Sound & Sound Recording
On a television and film set, sound recording is an essential part of the entire production. This course is designed to introduce students to the fundamentals of sound and its transmission as it propagates through an acoustic environment. In addition, students will gain knowledge and skills about the use of microphones and how they are used to capture sound which, in turn, can be manipulated, encoded, and stored for the purpose of conversion into sound pressure in homes and theaters.

TF1120 - Intro to Rigging & Special Effects
In this course, students will be introduced to rigging and special effects in television and film. Students will examine how special effects help tell a story and assess how they are incorporated seamlessly on screen. In addition, students will analyze how rigging is used in different departments, and study rigging fundamentals. Students will investigate a range of atmospheric effects such as haze machines, smoke & fog machines, air cannons, flame bars, wind machines, snow machines, rain rigs, and wave makers, and observe how physical and practical effects are used on set.

TF1130 - Script Supervision
In this course, students will acquire the skills and knowledge required to conduct and maintain continuity of persons, plots, objects, places and events for every set up, take, scene, and sequence in a production, thus facilitating post-production editing. Students will study the fundamentals of script supervising, continuity and film grammar, and will collaborate with directors, producers, actors, and other crew members to maintain the internal continuity of the script. They will gain insight into the history and development of the position and develop the skills necessary to track details of each shooting session.

TF1135 - Acting for TV & Film Fundamentals
This course explores the artistic, technical, and business facets of acting for television and film. Students will examine acting techniques, assess acting as a career, and evaluate the requirements of acting on set.

TF1140 - Picture Editing I
Editing is the process of combining picture and sound to realize the director's vision. In this course, students will be introduced to assembly and editing of picture and sound in a post-production environment. Students will operate a non-linear video editor while applying techniques to create a professional edit. Particular attention will be given to the fundamental concepts and practices used in post-production studios.

TF1145 - Colour Grading
Colour grading is a critical stage of post-production where the colours of television show or film are corrected then adjusted to achieve a desired look. In this course, students will be introduced to the process of colour correction and grading a television or film production. Topics include colour theory, colour calibration and management, colour grading and correction, Digital Imaging Technician functions, and backup and data transfer.

TF1210 - Acting on Camera I
This course introduces students to the process of acting on camera. Starting with the fundamentals, students conduct script analysis and explore the techniques of working on camera. They will learn to navigate the technical demands of working on camera in solo performance. In addition, students will have the opportunity to enhance their skills through filmed exercises that are reviewed in class.

TF1215 - Directing I
In this course, students will be introduced to the art and craft of directing for television and film. Students will learn the language of film, and analyze the frame, shot composition, and mise-en-scène elements from both practical and aesthetic perspectives. The final assignment will be a non-sync sound film that tells a story using a variety of camera shots, composition principles, and lighting and editing techniques explored in the course.

TF1220 - Acting on Camera III
This course builds on the skills acquired in Acting on Camera II. Students will delve deeper into the techniques of acting on camera and the practice of scene study. Students will learn to navigate the technical demands of working on camera in performances of three or more actors. Students will have the opportunity to enhance their skills through filmed exercises that are reviewed in class.

Prerequisite(s): TF2130

TF1225 - Acting on Camera IV
In this course, students will practice the skills developed in previous semesters. In a student led setting, participants will prep and shoot full multi-camera scenes and engage in the dailies process.
Prerequisite(s): TF1220

TF1230 - TV Writing & Story Editing
Building on Screenwriting Fundamentals, this course further explores the creative and technical facets of screenwriting, with a focus on script series. Students will be equipped with a comprehensive understanding of the evolution of script series, standard series genres and formats, how to pitch their series, how a TV writing room works, and how TV scripts are written.
Prerequisite(s): TF1020

TF1235 - TV & Film Operational MGMT
In this course, students will learn about televisional and film business affairs and operational management. They will learn standard operating procedures along with essential paperwork and forms covering production from development to wrap.
Prerequisite(s): TF2240

TF1310 - Film Project - TV & Film Creation
In this course, students will participate in the production of a short film. Using the skills and knowledge attained in the previous semesters, students will participate as members of a creative team in varying roles. Students will work as a team with others from related programs during all phases of production.
Prerequisite(s): TF1135, TF1210, TF1010, CM1450, TF1016, CP2115, TF1020, TF2130, TF1215, TF2140, CM1115

TF2010 - Post-Production Supervision
The supervision of the post-production process is an important task. This course will introduce the role of the Post-Production Supervisor. It will explore the primary task of overseeing a post-production project from beginning to end. There will be a focus on identifying the workflow then creating and managing the budget and timeline of a post-production project.
Prerequisite(s): TF1025

TF2110 - Location Sound Recording
In this course, students will set up and use sound equipment and accessories to record dialogue and live sound effects on location for screen productions according to safety and production requirements. Students will work collaboratively in a team environment to meet production requirements and follow procedures for finalizing sound recordings at the conclusion of production.
Prerequisite(s): TF1115

TF2115 - Camera I
The camera department captures every frame on a television or film project. In this course, students will be introduced to skills required of the camera assistant. Through lectures, demonstrations, and hands-on assignments, topics such as camera systems and support, filters and lenses, and the basic skills of setting up a cinema camera will be demonstrated. In addition, students will learn about the camera assistant's role in blocking a scene and slating.
Prerequisite(s): TF1110

TF2120 - Rigging
Rigging is a vital skill required on a television or film set as it supports camera and lighting operations. To effectively rig, students will be required to calculate safe working loads, erect, stabilize and dismantle equipment, work safely at heights, and apply and use all rigging and associated equipment. In this course, students will be provided with the fundamentals of industry safety standards and procedures for safe operation in a practical and collaborative hands-on environment. This, in turn, will enable them to support shoots with professionalism and accuracy.
Prerequisite(s): TF1120

TF2125 - Props

This course introduces students to the function and responsibilities of the Property Department within the overall production team on a television or film set. Students will analyze the daily operations of the Prop Shop, identify props requirements for a script, build and maintain props, and manage props on set to ensure continuity. By the end of the course, students will break down a script to determine which props need to be built, purchased, or rented; devise a budget for the props needs of a script; coordinate with and compare script breakdowns from different departments; and manage the workflow of the Property Department.

TF2130 - Acting on Camera II
This course builds on the skills acquired in Acting on Camera I. Students will continue to investigate the techniques of acting on camera and practice scene study and auditioning. Students will learn to navigate the technical demands of working on camera in partnered performance. In addition, they will have the opportunity to enhance their skills through filmed exercises that are reviewed in class.
Prerequisite(s): TF1210

TF2135 - Scripts I
This course builds on the knowledge and skills acquired in Screenwriting Fundamentals. In this course, students will delve into character development, conflict, and dialogue in film scripts. Basic concepts of developing the protagonist/antagonist relationship, story conflict, and resolution will be introduced in addition to writing scenes.
Prerequisite(s): TF1020

TF2140 - Production Scheduling
In this course, students will acquire the skills and knowledge necessary to compile production schedules during the pre-production and production planning phase in the television and film industry. Students will analyze production requirements and vet schedules to deliver productions on time and on budget. Students will also take part in the pre-production process for the Film Projects.

TF2145 - Scripts II
The craft of screenwriting shapes the writers' work toward a meaningful script that serves as the blueprint for production. Building on Scripts I, students will explore story, plot structure, and theme, and will enhance their screenwriting skills through a series of exercises culminating in writing a five to ten page short film script.
Prerequisite(s): TF2135

TF2150 - Post-Production Audio
Soundtrack construction for a television or film production is a creative process where recording, editing, track laying, and mixing takes place. While operating industry-standard hardware and software, students will record, edit, process, and mix dialogue, music and sound effects for film and television productions.

TF2155 - Dialogue Editing & Recording
Dialogue is an important audio element in any production. Effective dialogue can pull viewers into a story to keep them watching. In this course, students will be introduced to tools and techniques to create seamless dialogue tracks. For production dialogue lines that are unsalvageable, students will identify, document, cue, record, and edit new dialogue in a process called automated dialogue replacement (ADR) or looping.
Prerequisite(s): TF2150

TF2160 - Compositing & Effects
This course introduces students to digital compositing for film and television projects. Students will operate digital compositing software while applying the fundamental concepts and techniques of digital compositing. Animation, plate cleanup, noise and grain, rotoscoping and keying, motion tracking and stabilization, effects, and rendering are explored.

TF2210 - Camera II
As a continuation from Camera I, students will learn intermediate camera systems and support, the data management workflow, best used on-set communications, camera operation and movement, focus pulling, and introduction to filmmaking techniques. Students will continue their training with hands-on assignments to build upon their

previously acquired skills.
Co-requisite(s): TF2115

TF2215 - Grip I
Grips are the key technical support of cinematography on television or film production. In this course, students continue to refine their grip skills. Students will work with both lighting and camera departments to determine how to shape light and shadows that affect the shot, in addition to acquiring knowledge and skills integral to working as a grip on set.
Prerequisite(s): TF1110
Co-requisite(s): TF2120

TF2216 - Grip I
Grips are the key technical support of cinematography on television or film production. In this course, students continue to refine their grip skills. Students will work with both lighting and camera departments to determine how to shape light and shadows that affect the shot, in addition to acquiring knowledge and skills integral to working as a grip on set.
Prerequisite(s): TF1110
Co-requisite(s): TF1035

TF2220 - Lighting
In this course, students will study the fundamentals of providing relevant lighting and power for a film, either on a studio set or on location. Students will be introduced to electrical theory and electrical safety and will safely operate a generator. In addition, they will prepare, install, test, and adjust lighting equipment for a shoot in a team environment.
Prerequisite(s): TF1110
Co-requisite(s): TF2120

TF2225 - TV & Film Finance & Budget
In this course, students will acquire the skills and knowledge necessary to create and manage a production budget for television or film. Students will explore sources of financing for a production, and follow the full budget cycle from project development to completion. In addition, they will examine industry standard banking and petty cash practices.

TF2230 - Directing II
In this course, students will focus on the practical considerations and creative strategies employed in directing actors in the execution of scenes for the screen. Students will apply visual storytelling techniques and production methods while working with actors and other team members. Students will complete a scene as their final project.
Prerequisite(s): TF1215

TF2235 - Directing III
Building upon Directing II, students will work with actors and combine the elements of mise-en-scène to complete a short film. In addition, students will apply cinematic components to illustrate a vision for a film. Utilizing techniques and directing approaches from the course, students will direct, shoot, assemble and deliver a short film that engages in visual storytelling.
Prerequisite(s): TF2230

TF2240 - Business of TV & Film
In this course, students will engage in a comprehensive review of the typical business models for television and film production companies. They will approach production from the perspective of financing and legal obligations. Using case studies and examples, this course will detail the main funding models, sources, and organizations by project type. Expected business practices within the Canadian industry will be detailed. In addition, students will analyze green production practices and the importance of diversity and inclusion in the industry.

TF2245 - Picture Editing II
Editing is much more than putting images together. At its best, it is the conscious action of bringing out a film's text

and subtext to fulfill a larger vision. In this course the students will read a script for a story, analyze the shot footage for a story, and assemble all picture and sound elements together to achieve the intended vision.
Prerequisite(s): TF1140

TF2250 - Sound Effects & Foley
Sound effects provide a plethora of information to the audience. They can create and enhance mood which is important in telling the story. In this course, students will be introduced to the art of sound effects (SFX) and Foley. Students will build hard sounds, backgrounds, and record SFX in sync with the picture.
Prerequisite(s): TF2150

TF2255 - Audio Mixing for TV & Film
Mixing audio is the final step in the audio production process for television and film. It includes assembly of dialogue, music, and effects, balanced in perfect harmony, and then incorporated into the picture. In this course, students will be introduced to setting up for a film mix, managing data from dialogue, music and effects sessions - while applying balancing, processing, de-noising, and routing and bussing techniques.
Prerequisite(s): TF2150

TF2260 - Managing On-Set Production
In this course, students will analyze the skills and knowledge required to effectively manage television and film on-set productions. Students will examine leadership, teamwork, and time management skills required for the proper functioning of the set. In addition, they will evaluate the departments and teams responsible for logistics, safety, and production.

TF2310 - Camera III
In this course, students will build on their knowledge and be introduced to advanced techniques of camera operation, lenses, and filters. As well, they will explore filmmaking scenarios, working with various departments and actors, and how blocking is achieved by operators and directors of photography.
Co-requisite(s): TF2210

TF2315 - Grip II
In this course students will build on the grip skills acquired in Grip I. Training will include how to work with the camera department to create intricate camera moves with dollies and cranes, in addition to manipulating natural and sourced light to create a desired shot.
Co-requisite(s): TF2215

TF2316 - Grip II
In this course students will build on the grip skills acquired in Grip I. Training will include how to work with the camera department to create intricate camera moves with dollies and cranes, in addition to manipulating natural and sourced light to create a desired shot.
Co-requisite(s): TF2216

TF2320 - Scenic Paint
In this course, students will be introduced to the art of scenic painting and other scenic areas within the Art Department. Materials and processes will be examined in the creation of set walls, surface treatments, and sculptural elements. Students will work collaboratively while being introduced to carpentry, plastering, painting, to create a simple studio set.

TF2325 - Set Decoration
This course explores how set decorators visually interpret a film or television show from script to scene through set décor. The course encompasses all the processes and procedures involved in set decoration, including selection, procurement, and fabrication; storage, movement, and placement; maintenance and replacement; on-set continuity; and workflow management. By the end of the course, students will understand how to tell a story by creating a background for the action unfolding onscreen.

TF2330 - Production Office Management
In this course, students will be introduced to the structure, members, and responsibilities of the production office. Students will evaluate hiring practices in the industry, discuss constructive methods of dealing with conflict, and practice effective communication skills. In addition, they will analyze the duties of key members of the production office team.

TF3010 - Career Development
This course focuses on building a professional and creative career in the television and film industry. Students will plan their short-term, mid-term, and long-term goals, and explore opportunities available within the industry for on-going career advancement. Students will discuss membership in professional organizations and unions, in addition to discussing the purpose of agents, lawyers, managers, and casting directors. Throughout the course, students will determine how to market and promote themselves and how to achieve their career goals.

TF3110 - Film Project - Technical Production
In this course, students will participate in the production of a short film. Using the skills and knowledge attained in the previous semesters, students will participate as members of a film crew in their field(s) of expertise. Students will work as a team with others from related programs during all phases of production.
Prerequisite(s): TF1010, TF1015, CP2115, TF1110, TF1115, TF1120, CM1115, plus: TF2110, TF2115, TF2210, TF2310, or: TF2120, TF2215, TF2315, TF2220, or: TF1130, TF2125, TF2320, TF2325

TF3115 - Field Placement Preparation
This two-week field placement preparation course is designed to assist students enrolled in Television and Film Technical Production or Television and Film Production Management programs in obtaining relevant occupational experience. In this course, students will prepare for the six-week field placement by completing pertinent industry certifications and other preparatory work.
Prerequisite(s): TF1010, TF1015, CP2115, TF1110, TF1115, TF1120, CM1115, plus: TF2110, TF2115, TF2210, TF2310, or: TF2120, TF2215, TF2315, TF2220, or: TF1130, TF2125, TF2320, TF2325
Co-requisite(s): TF3110

TF3120 - Capstone Project - TV & Film Creation
In this capstone project, students will plan and participate in a short film shoot. Using the skills and knowledge attained in the previous semesters, students will collaborate with other television and film programs in organizing and executing a film production. Starting with an idea, students will pitch their project, develop a budget, organize the production crew, shoot the film, and oversee the editing process.
Prerequisite(s): TF1310

TF3125 - Film Project - Production Management
In this course, students will participate in the production of a short film. Using the skills and knowledge attained in the previous semesters, students will participate as members of a production team in their field(s) of expertise. Students will work as a team with others from related programs during all phases of production.
Prerequisite(s): TF1010, TF2240, TF1130, CM1115, CP2115, TF1016, TF1235, TF2260, TF2330, TF2225, TF2140

TF3130 - Field Placement Preparation
This two-week field placement preparation course is designed to assist students enrolled in Television and Film Technical Production or Television and Film Production Management programs in obtaining relevant occupational experience. In this course, students will prepare for the six-week field placement by completing pertinent industry certifications and other preparatory work.
Prerequisite(s): TF1010, TF2240, TF1130, CM1115, CP2115, TF1016, TF1235, TF2260, TF2330, TF2225, TF2140
Co-requisite(s): TF3125

TF3210 - Field Placement
This field-related course is designed to assist students enrolled in Television and Film Technical Production or

Television and Film Production Management in obtaining occupational experience. The purpose of this six-week field placement is to provide students with the opportunity to apply the knowledge and skills acquired in class to an entry level position in the television and film industry.

The supervising program instructors will assist students in securing a suitable and approved placement. The instructors will evaluate student progress in conjunction with the field placement supervisor. Arrangements and expenses for transportation, lodging, and meals are the sole responsibility of the student. (Please note: under extenuating circumstances wherein an external field placement is not secured, an equivalent industry-related project approved and supervised by the instructor is acceptable).
Prerequisite(s): TF1010, TF1015, CP2115, TF1110, TF1115, TF1120, CM1115, plus: TF2110, TF2115, TF2210, TF2310, or: TF1130, TF2125, TF2320, TF2325
Co-requisite(s): TF3115

TF3220 - Capstone Project
The course allows students to demonstrate the application of knowledge and skills acquired throughout the program. Students will be involved in the creation of a television or film project while participating in a simulated professional post-production environment.
Prerequisite(s): TF2010, TF2155, TF2245, TF2160, TF2250, TF2255

TF3225 - Field Placement
This field-related course is designed to assist students enrolled in Television and Film Technical Production or Television and Film Production Management in obtaining occupational experience. The purpose of this six-week field placement is to provide students with the opportunity to apply the knowledge and skills acquired in class to an entry level position in the television and film industry.

The supervising program instructors will assist students in securing a suitable and approved placement. The instructors will evaluate student progress in conjunction with the field placement supervisor. Arrangements and expenses for transportation, lodging, and meals are the sole responsibility of the student. (Please note: under extenuating circumstances wherein an external field placement is not secured, an equivalent industry-related project approved and supervised by the instructor is acceptable).
Prerequisite(s): TF1010, TF2240, TF1130, CM1115, CP2115, TF1016, TF1235, TF2260, TF2330, TF2225, TF2140
Co-requisite(s): TF3130

TI1000 - Trades Profiles
The Trades Profiles course will introduce students to the wide variety of trades offered at College of the North Atlantic (CNA).

TI1010 - Job Search Workshop
This Job Search Workshop is intended to help students prepare for a job search. Students will create a resume, cover letter and will learn how to prepare for an interview.

TI1020 - Certifications
This course provides students with the knowledge and skills to identify and assess workplace crisis and to implement appropriate strategies for prevention and intervention. Students will acquire the appropriate knowledge and skills through the completion of a series of workshops and certifications.

TM1100 - Medical Terminology I •
This course is designed to guide the student from the fundamentals of word building to complete mastery of a medical word building system. Correct spelling and pronunciation are emphasized.

TM1111 - Medical Terminology
This course provides the engineering technologist with the terminologies commonly used in the areas of practice encountered in a healthcare environment to allow them to effectively communicate, on a technical level, with other healthcare professionals. The course integrates the terms for anatomy, physiology and pathology of specified body

systems in a manner that meets these needs.

TM1130 - Medical Terminology •
This course is designed to guide the student from the fundamentals of word building to complete mastery of a medical word-building system. Correct spelling and pronunciation are emphasized. The course integrates the terms for anatomy, physiology, and pathology of specified body systems in a manner that maximizes learning opportunities.

TM1150 - Medical Terminology •
This course is designed to guide the student from the fundamentals of word building to complete mastery of a medical word-building system. Correct spelling and pronunciation are emphasized. The course integrates the terms for anatomy, physiology, and pathology of specified body systems in animals.

TM1301 - Medical Terminology for the Legal Field
This course is designed to provide students in the office administration legal program with an understanding of medical terminology often found in legal reports and client files. Students will learn the fundamentals of word building leading to the ability to interpret medical terms. Spelling and pronunciation are emphasized. Topics cover specific body systems that are common to civil actions in Supreme Court. Case law examples will demonstrate the occurrence and use of medical language in court and in the legal office environment.

TM1310 - Technical Modeling - Mechanical Drawings
This intermediate level course is designed to provide students with the ability to interpret and prepare drawings used in specialized areas of mechanical engineering. Students will prepare and interpret Assembly Drawings, Fit Tolerance Drawings, Piping Drawings, Welding Drawings and P & ID diagrams.
Prerequisite(s): EG1430

TM1320 - Technical Modeling - 3D Modeling
This is an advanced course in computer aided drafting and design. Parametric 3D CAD software is used for both virtual prototyping of mechanical systems and development of related working drawings. The command tools commonly used for 2D sketch development, 3D feature creation, and part assembly, 2D drawing generation, 2D drawing annotation, and 3D simulation are explored. For 2D drawing annotation, particular emphasis is placed on the command tools used for geometric dimensioning and tolerancing.
Prerequisite(s): EG1430

M2100 - Medical Terminology II •
This course is a continuation of TM1100 with emphasis on building and interpreting terminology related to the anatomy, physiology, and pathology of the human body. Correct spelling and pronunciation are emphasized**.**
Prerequisite(s): TM1100

TR1100 - Cultural Tourism & the Arts
This course introduces the concept of Cultural Tourism and its connection to the Arts. Students will learn the principles and typologies of the cultural tourism industry while focusing on the effect that it has on art, heritage, culture and vice versa. Students will examine tourism's leading role in community economic development through the presence and promotion of the arts & culture.

Arts, cultural & heritage tourism have emerged as a major market segment and a significant pull factor to travel to a specific location. A major aspect of this course is an understanding of how Newfoundland and Labrador and other destinations around the world can capitalize on its arts, culture & heritage in a sustainable manner.

TR1140 - Customer Service •
The course focuses on customer service theory and practice for the tourism and hospitality sector. Students will develop skills to meet and exceed customer expectations, while cultivating a service-oriented culture to ensure exceptional guest experiences. Throughout the course, students will become equipped to deliver outstanding service while honing interpersonal skills required for success in tourism and hospitality. Students will also complete a

customer service training workshop.

TR1145 - Food & Beverage I •
In this course, students will examine the fundamentals of professional service and bartending. They will focus on a range of industry-related topics, including product and service knowledge, professionalism, guest communication, table settings, serving and bartending skills, as well as the integration of current technology and trends in the industry. Students will apply these food and beverage service skills and complete the Serve Responsible (or equivalent) training.

TR1150 - Introduction to Tourism •
This is an introductory course designed to provide students an overview of the exciting world of tourism. Students will explore the five major industries of tourism: travel services, transportation, accommodations, food & beverage, and recreation & entertainment. Future trends, impacts, marketing tourism, and job opportunities within the sector will also be covered.

TR1155 - Tourism Destinations •
This course will examine local, national, and global tourism destinations. Students will develop knowledge of the tourism product and key selling features of various destinations. Global tourism trends and the highlights and attractions of selected locations will be covered.

TR1215 - Accommodations I •
This course introduces the student to the operations, procedures, and responsibilities of front desk and housekeeping in accommodations. Students will acquire the knowledge and skills to effectively work as front desk and housekeeping personnel.

TR1220 - Cultural & Heritage Tourism •
Cultural and heritage tourism has emerged as major market in the tourism sector, often serving as a primary motivator for travelers seeking unique experiences. In this course, students will examine cultural and heritage tourism resources, planning and development, festivals and events, rural tourism development, current trends, and the significance of living heritage, intangible culture, and Indigenous communities. Students will also complete Indigenous Cultural Diversity training.

TR1225 - Digital Tourism •
The emergence of digital tourism has revolutionized the way people engage with the tourism sector, reshaping research, booking, and overall experiences. This course explores the latest technologies employed by tourism organizations to enhance customer engagement and elevate guest experiences. Students will learn about digital tourism essentials, social media utilization, web presence, mobile technology integration, and as well as other specialized areas.

TR1230 - Intro to Sustainable Tourism •
This course provides an introductory exploration of sustainable tourism, examining its economic, socio-cultural, and environmental effects. Topics include corporate social responsibility, ethics, values, as well as policies, governance, and partnerships for sustainable development. Students will analyze sustainability within the tourism experience, examine various measures and tools aimed at promoting sustainability and reflect on the future of sustainable tourism.

TR2100 - Accommodations II
Continuing from Accommodations I, this course covers accommodation management, including topics such as guest

service excellence, the role of an accommodations manager and /or general manager, leadership strategies for effective management, revenue management and facilities management.
Prerequisite(s): TR1215

TR2105 - Food & Beverage II
Building on Food & Beverage I, students will explore the management functions necessary to successfully operate a food and/or beverage facility in the hospitality industry.
Prerequisite(s): TR1145

TR2110 - Tour Guiding
Tour guiding is leading and educating travelers through experiences and destinations while creating memorable journeys for all. This course is designed to provide students with knowledge and skills to excel as a tour guide. Students will learn about tour guiding as a profession, through covering the fundamental tour guiding principles, various types of tours and guides, knowledge and duties requirements, interpretative and narrative skills, strategies for handling challenges, and tour development.

TR2115 - Tourism Planning & Development
Tourism planning and development involves the coordination of resources and efforts to facilitate sustainable growth, enhance visitor experiences, and maximize economic benefits within destinations. In this course, students will learn the concepts and principles of tourism growth, development, planning, and management as well as the obligations and roles of stakeholders, partnerships, and collaboration in the tourism sector. Destination management and the best practices and strategies for achieving sustainability in tourism planning and management will be covered. Finally, students will examine trends and scenarios that may shape the future of tourism planning and management.
Prerequisite(s): TR1230

TR2235 - Events Management
Events management is the strategic planning, coordination, and implementation of gatherings or events while guaranteeing smooth logistics and memorable experiences for attendees. This course introduces students to the diverse and evolving field of event planning and management. While learning how to plan, deliver, and evaluate successful events, students will explore topics such as planning processes, research, venue selection, logistics, staffing, marketing, budgeting, event execution, and current trends.

TR2205 - Independent Tourism Project
The course provides opportunity for students to apply knowledge and skills they have acquired throughout the program in an independent learning project. Under the instructor's guidance, students will focus their learning on a tourism and hospitality project. This may also involve collaboration with an industry partner. Course delivery may include lectures or self-directed research.
Prerequisite(s): CM1280

TR2210 - Professional Certifications
This course will encompass nationally recognized credentials granted to a candidate upon successful demonstration of competence as outlined in a series of training and seminars. Certification is one of the most important ways of promoting and recognizing a highly skilled workforce in the tourism industry. Students will also prepare for their second field placement.

Students should be aware that additional fees apply for the certifications.

TR2215 - Tourism Law & Risk Management
This course will familiarize students with concepts of legal liability, risks, and responsibilities as they apply to the business of tourism and hospitality, focusing on local and national laws impacting the sector. Key topics include legal foundations, torts & contracts, discrimination, harassment, aspects of management, assessing risk and responding to emerging issues.

TR2220 - Tourism Marketing
Tourism marketing is the strategic communication and promotion of destinations, attractions, and services to attract

visitors and drive economic growth within the tourism sector. This course equips students with foundational knowledge and skills in marketing the tourism sector. Topics covered include the essentials of marketing, customer insights, customer-driven marketing strategies, product and brand management, pricing, distribution channels, customer engagement, destination marketing and the ever-evolving landscape of direct, online, social media, and mobile marketing.

TS1510 - Occupational Health and Safety
This course is designed to give participants the knowledge and skills necessary to interpret the Occupational Health and Safety Act, laws and regulations; understand the designated responsibilities within the laws and regulations; the right to refuse dangerous work; and the importance of reporting accidents. Upon successful completion of this unit, the apprentice will be able to: prevent accidents and illnesses; improve health and safety conditions in the workplace.

TS1520 - Workplace Hazardous Materials Information System (WHMIS)
This course is designed to give participants the knowledge and skills necessary to define WHMIS, examine hazard identification and ingredient disclosure, explain labeling and other forms of warning, and introduce material safety data sheets (MSDS).

TS1530 - First Aid
This course is designed to give the apprentice the ability to recognize situations requiring emergency action and to make appropriate decisions concerning first aid.
Prerequisite(s): Complete a St. John Ambulance Standard First Aid Certificate course.

TS1550 - Workplace Hazardous Materials Information System (WHMIS)
This course is designed to give participants the knowledge and skills necessary to define WHMIS, examine hazard identification and ingredient disclosure, explain labeling and other forms of warning, and introduce material safety data sheets (MSDS).

TX1100 - Fibre & Fabric Exploration
This course is an introductory course designed to introduce students to various fibers and their properties. Students will learn the basics of studio safety, fibre properties, techniques and applications.

TX1200 - Introduction to Sewing
This course will introduce students to basic sewing skills. Students will be introduced to the industrial straight stitch, the four-thread overlock, the five-thread finishing machine, the industrial blind hemming machine, the double needle machine, the industrial walking foot machine, industrial fur sewing machine and the industrial gravity feed steam iron. Topics include basic sewing tools and techniques transferred into a series of weekly sewing samples while also gaining knowledge in basic flat pattern construction and application. Students will be required to make a pattern, create a knit garment and create a duplicate garment.

TX1210 - Industrial Sewing
In this course, students will use industrial sewing machines and equipment. Students will work with the industrial straight stitch, the four-thread overlock, the five-thread finishing machine, the industrial blind hemming machine, the double needle machine, the industrial walking foot machine, industrial fur sewing machine and the industrial gravity feed steam iron in an industrial production setting. Students will also use industrial cutting tools. Students will develop speed and accuracy using industrial equipment and produce samples according to industry standards. As a group, students are required to complete a production of 50-100 products and use their computer skills to design and create labeling for the product.
Prerequisite(s): TX1200, TX1400
Co-requisite(s): CG1400

TX1220 - Fabric Design I
This course introduces students to basic fabric design, construction and finishing techniques. Content includes knit, weave and felt. Knit and felt includes shaping, texture, and colour usage, while weave content covers basic weave structure, texture and colour in tapestry and floor loom weaving. Students will learn to maintain accurate records of their work.

Prerequisite(s): VA1200, TX1100

TX1225 - Surface Design I
This is an introductory course in surface design techniques. Topics covered include basic dye chemistry and techniques, basic surface embellishment techniques and basic rug hooking techniques. Students will learn to maintain accurate records of their work.
Prerequisite(s): VA1200, TX1100

TX1230 - Studio Practice I
In this course students will create a final body of work, including concept development, planning and budgets. They will use dedicated studio hours, infrastructure, equipment, and resources towards the creation of the final body of work in their chosen majors. Investigation and development of ideas concerning presentation, documentation, and professional conduct in the studio space will also be considered.
Prerequisite(s): Successful completion of two of the following courses: ST2405, ST2450, ST2455
Co-requisite(s): One of the following courses: ST2406, ST2461, ST2465

TX1235 - Studio Practice II
Students will curate and present their body of work. They will work with industry partners to install and curate a group presentation of final works, as decided upon by students and instructor. Upon successful presentation students will critically evaluate the final presentation, make recommendations, and develop corresponding documentation as a group committee.
Prerequisite(s): TX1230

TX1400 - Apparel Design I
This is the first in a series of courses in apparel design. An overview of the apparel industry is provided with emphasis placed on mastering basic sewing techniques for the purpose of producing garments according to industry standards. Students are required to complete a sleeveless dress and pant.
Prerequisite(s): TX1200, VA1200

TX2101 - Art Marketing
In this course, students will create an online presence to display their work. Topics include product photography, branding, online portfolio and product marketing.
Prerequisite(s): GA1130, CM1450

UL1200 - Fundamentals of Sonography
This course provides a general overview of the fundamentals of sonography. Terminology and principles to ultrasound will be reviewed. Orientation to the laboratory will be completed to include orientation to the equipment, usage and maintenance. The student will learn the necessary preparation and implementation of an ultrasound examination. This course will focus on the ergonomics and patient care for the sonographer and patient. This course will also provide the students with the opportunity to learn their role in interventional procedures, trauma and emergency situations. A full professional overview will be completed to include student accounts necessary for clinical placements, Code of Ethics, Scope of Practice, provincial and federal legislation and regulations to include professional liability.

UL1205 - Scanning I
This is a comprehensive course designed to provide the student with sufficient practice to acquire the basic skills necessary to produce diagnostic ultrasound images. Instruction will be provided in ultrasound practice, principles and protocol. Emphasis will be placed on the recognition of normal sonographic findings utilized for abdominal and abdominal vascular examinations.
Co-requisite(s): UL1210, UL1200

UL1210 - Abdomen
This course is designed to enable the student to acquire a comprehensive knowledge of abdominal ultrasound. The didactic phase of the program will include instruction in abdominopelvic organs and vasculature. Emphasis will be placed on cross-sectional anatomy, pathophysiology, examination procedures and protocol, and normal/abnormal sonographic appearances. This course will provide further opportunity to develop skills and integrate knowledge

from first semester courses. Ultrasound images with documented pathology will be presented and reviewed. The etiology, signs and symptoms, differential diagnosis and sonographic appearance will be examined.
Co-requisite(s): UL1205

UL1300 - Scanning II
This is a comprehensive course designed to provide the student with sufficient practice to acquire the basic skills necessary to produce diagnostic ultrasound images. Instruction will be provided in ultrasound practice, principles and protocol. Emphasis will be placed on the recognition of normal sonographic findings utilized for the gastrointestinal tract and superficial structure examinations. In addition to classroom time, students will attend site orientations to experience the clinical environment.
Prerequisite(s): UL1205, UL1200
Co-requisite(s): UL1305

UL1305 - Abdomen & Superficial Structures
This course is designed to enable the student to acquire a comprehensive knowledge of abdominal and superficial structures ultrasound. The didactic phase of the program will include instruction on the gastrointestinal system and superficial structures. Emphasis will be placed on cross-sectional anatomy, pathophysiology, examination procedures and protocol, and normal/abnormal sonographic appearances. This course will provide further opportunity to develop skills and integrate knowledge from first and second semester courses. Ultrasound images with documented pathology will be presented and reviewed. The etiology, signs and symptoms, differential diagnosis and sonographic appearance will be examined.
Prerequisite(s): UL1210
Co-requisite(s): UL1300

UL2100 - Scanning III
This is a comprehensive course designed to provide the student with sufficient practice to acquire the basic skills necessary to produce diagnostic ultrasound images. Instruction will be provided in ultrasound practice, principles and protocol. Emphasis will be placed on basic, alternate and specialized imaging techniques utilized for gynaecological and vascular examinations.
Prerequisite(s): UL1300
Co-requisite(s): UL4230, UL2105

UL2105 - Vascular
This course is designed to enable the student to acquire a comprehensive knowledge of generalist vascular ultrasound. The didactic phase of the program will include instruction in vascular. Emphasis will be placed on cross-sectional anatomy, pathophysiology, examination procedures and protocol, and normal/abnormal sonographic appearances. This course will provide further opportunity to develop skills and integrate knowledge from other courses. Ultrasound images with documented pathology will be presented and reviewed. The etiology, signs and symptoms, differential diagnosis and sonographic appearance will be examined.
Co-requisite(s): UL2100

UL2111 - Simulation I
This course is designed to prepare learners for practicum placements through synthesizing and integrating knowledge and skills learned in previous courses. Learners will demonstrate proficiency in patient preparation, implementation, and post procedure requirements for sonographic examinations for various patient types in a simulated setting. Using teamwork learners will simulate the adverse and challenging events that a sonographer may be faced with.
Prerequisite(s): UL1205, UL1300, UL1210, UL1305, UL4110
Co-requisite(s): UL2115

UL2115 - Cross Sectional Anatomy
This course is designed to enable the student to acquire a comprehensive knowledge of the abdominopelvic cavity and its structures in the transverse and sagittal planes. Emphasis will be on learning the quadrants, regions, planes, coronal, sagittal and transverse images. This course will build upon prior learning and provide an inclusive look into all structures and relationship anatomy in the abdominopelvic cavity.
Prerequisite(s): UL1210, UL1305

Co-requisite(s): UL2111

UL2200 - Scanning IV
This is a comprehensive course designed to provide the student with sufficient practice to acquire the basic skills necessary to produce diagnostic ultrasound images. Instruction will be provided in ultrasound practice, principles and protocol. Emphasis will be placed on the recognition of how to manipulate measurements, calculations and worksheets required for obstetrical examinations.
Prerequisite(s): UL2100
Co-requisite(s): UL4210

UL2206 - Simulation II
This course is designed to prepare learners for practicum placements through synthesizing and integrating knowledge and skills learned in previous courses. Learners will demonstrate proficiency in patient preparation, implementation, and post procedure requirements for sonographic examinations for various patient types in a simulated setting. Using teamwork learners will simulate the adverse and challenging events that a sonographer may be faced with.
Prerequisite(s): UL4230, UL2105, UL2100, UL2111, UL1210, UL1305

UL4110 - Ultrasound Physics
This course is designed to instruct the student in the theoretical and practical application of ultrasound physics and instrumentation. Selected topics include the interaction of sound and matter, properties of ultrasound transducers, pulse echo instrumentation, images and artifacts, and Doppler instrumentation.
Prerequisite(s): MA1700, PH1110

UL4210 - Obstetrics
This course is designed to enable the student to acquire a comprehensive knowledge of obstetrics. The didactic phase will include instruction in normal embryo / fetal growth and development from fertilization to parturition. Emphasis will be placed on cross-sectional anatomy, pathophysiology, examination procedures and protocol, and normal /abnormal sonographic appearances.
Prerequisite(s): UL4230
Co-requisite(s): UL2200

UL4230 - Gynecology
This course is designed to enable the student to acquire a comprehensive knowledge of female pelvic anatomy and physiology. The didactic phase of the program will include instruction in pelvic musculature, peritoneal compartments, reproductive organs and vasculature. Emphasis will be placed on cross-sectional anatomy, pathophysiology, examination procedures and protocol, and normal / abnormal sonographic appearances.
Co-requisite(s): UL2100

UL4605 - Clinical III
This phase of the program is designed to enable the student to acquire, to the fullest extent, the technological skills necessary to become competent in the practice of ultrasonography. Emphasis is placed on extensive "hands on" scanning in the clinical setting. Upon completion of training the student will be able to produce high quality scans in all general and most specialty areas in an efficient and effective manner.
Prerequisite(s): UL4611

UL4610 - Clinical I
This phase of the program is designed to enable students to acquire, to the fullest extent, the technological skills necessary to become competent in the practice of ultrasonography. Emphasis is placed on extensive "hands on" scanning in the clinical setting. Upon completion of training the student will be able to produce high quality scans in all general and most specialty areas in an efficient and effective manner.
Prerequisite(s): UL2200, UL2206, HG2051, UL1200, UL4210

UL4611 - Clinical II
This phase of the program is designed to enable the student to acquire, to the fullest extent, the technological skills necessary to become competent in the practice of ultrasonography. Emphasis is placed on extensive "hands on"

scanning in the clinical setting. Upon completion of training the student will be able to produce high quality scans in all general and most specialty areas in an efficient and effective manner.
Prerequisite(s): UL4610

VA1100 - Introduction to Drawing
This course is designed to introduce students to the rudiments of drawing. Students practice observation, identify variations within subject matter, and translate these visions into the drawn form. A variety of basic techniques and drawing styles are introduced and developed during the semester.

VA1101 - Drawing Application
This course consolidates and refines skills developed during the Introduction to Drawing course. Experimentation with various media qualities, techniques, and compositional studies are stressed in relation to developing the drawing. Particular individual attention is paid to drawing problem areas to ensure that the student develops strong drawing skills.
Prerequisite(s): VA1100

VA1110 - Drawing Methods & Media •
Students will be engaged in observational drawing exercises using historical and contemporary drawing processes while developing integral perceptual and technical skills. Students will learn to see and evaluate the visual world and learn to translate visual impressions using a wide range of media. Over the duration of the course, students will document the improvement in their individual drawing skills through the keeping of a working portfolio. Students will benefit from both group and individual instruction and critique.

VA1115 - 2D Design •
This is an introductory course in the elements and principles of design related to two dimensional works. Students will be provided with an understanding of design concepts, the elements of design, the principles of design, and how they can be used in visual communications.

VA1120 - Digital Imaging •
This course introduces students to the digital manipulation of images. Working from photographs, drawn and scanned images and objects, students will focus on the creative process of image development using Adobe Photoshop Creative Cloud. The course will emphasize digital imaging as a tool for the development of ideas, image design and critical thinking. Selected work produced in this course will contribute to personal portfolios.

VA1131 - Drawing Fundamentals
Students will learn the rudiments of drawing as a means of communicating objective ideas. They will study fundamental drawing techniques with a view of developing accurate visual illustration skills required in design, and other collaborative problem-solving disciplines.

VA1140 - Figure Drawing •
Students will develop their observational skills to see and analyze the human figure through focus on different principles of drawing using a variety of media in a sequence of exercises to develop insight into the form, structure and gesture of the human figure. Students will continue to contribute work to their personal portfolios.
Prerequisite(s): VA1110

VA1170 - 3D Design •
Students will utilize the elements and principles of art and design, and apply them to the conceptualization and creation of three-dimensional works of art. The three dimensions will be explored through the use of historical and contemporary media and approaches. Artwork will be analyzed through personal and peer critique. It will emphasize conceptual reasoning and consideration of material choice, craft, form, space, site, presentation and context. Students will select work from this course for their portfolios.

VA1180 - Time-based Media •
This course will look at how the concepts of time, movement and transformation are utilized within the creative industries. Students will focus on developing the basic concepts, tools, vocabulary and principles used in time-based

creative processes to create visual narratives. A short-stop motion animation piece will be produced along with other related projects. It will provide a foundation for more advanced exploration of time-based media practices. Students will develop production and analytical skills through individual and collaborative projects.
Prerequisite(s): PY1150, VA1115

VA1185 - Studio Practice •
This course will develop the skills required for the production of a thematic body of artwork with an emphasis on conceptual and creative processes. Students will develop a written proposal for the production of artwork investigating a thematic concept through research of a topic, media choice and the technical processes required. The course will prepare students for specialized arts training programs that require skills in research, production and documentation of artwork.

VA1200 - Elements of Design
This is an introductory course in design elements. Students will be introduced to the main elements of design and explore basic design concepts through in-class activities; and how these elements can be used in visual communications. Students will have the opportunity to work through one main term project while applying their knowledge of the elements of design.

VA1201 - Principles of Design
This is an introductory course which discusses the basis of design principles for visual design. Students will be introduced to the principals of design and will explore their application through in class activities and a term project. Students will learn how these concepts apply to visual communications, and how they support the connection between the intent and content of a piece.

Prerequisite(s): VA1200

VA1230 - Graphic Design I
Students will gain a clear understanding of the elements and principles of design, and how they can be utilized for basic graphic arts tasks. Students will also be introduced to the role of the Graphic Designer in the graphics industry and will gain exposure to the basic operation of a design studio environment.

VA1231 - Graphic Design II
Students will develop graphic design skills using digital tools. A specific focus of the course is to introduce students to the design requirements of business, including information graphics, business stationery, signage and display advertising.
Prerequisite(s): VA1230, GA1120, GA1430

VA1400 - Colour Theory •
This introductory course offers students an opportunity to gain a basic understanding of the elements and principles of colour theory and how colour can be used to create more effective visual designs through using acrylic paints, and in combination with dye applications.

VA1610 - Sculpture I
Students will design, document, and transpose two-dimensional character designs into three dimensional objects using a tactile approach, figurative subjects, and manual clay sculpture techniques.
Prerequisite(s): MM125, VA1131

VA2100 - Intermediate Drawing
This course will consolidate and refine skills developed in the Introduction to Drawing and Drawing Application courses. The use of various materials, compositions, and drawing techniques are stressed in relation to developing intermediate technique and style in drawing. With individualized guidance from the instructor, students are encouraged to develop more personal responses in all aspects of drawing.
Prerequisite(s): VA1101

VA2101 - Advanced Drawing
This course is designed to allow students to create a body of drawings which demonstrates their ability to make personal choices in all aspects of developing final drawings. Students will incorporate personal ideas and content in this body of work and continue to refine their use of various materials, composition and drawing techniques in consultation with the instructor.
Prerequisite(s): VA2100

VA2171 - Life Drawing
Life drawing is a valuable skill in animation. Studying the live model helps animators understand gesture, anatomy, proportion, and balance. The ability to quickly sketch figures helps in the planning and revision of a shot. In this course, students will develop drawing abilities through observation using live models and drawing from life.
Prerequisite(s): VA1131

VA2250 - Application of Design Theory I
This course is designed to consolidate and refine skills developed in the Elements of Design and Principles of Design courses. Particular attention is paid to developing a personal design process, an individual working method in design that allows the student to use design theory in practical applications. Students will work through a term project that looks at the different aspects of design and how sampled changes can enhance or alter a design concept.
Prerequisite(s): VA1201

VA2251 - Application of Design Theory II
In this course students will design a body of work that will reflect the accumulated knowledge and experience gained in previous design courses. The work will be produced in the student's chosen studio areas (Fabric Design, Surface Design, and/or Apparel Design). Students will demonstrate their knowledge of intent and content to create successful and unique pieces, and work through a design process specific to the student and the designed work. Particular attention is given to independent thinking and the development and creation of personal ideas in terms of style and content with further emphasis on critical analysis.
Prerequisite(s): VA2260

VA2260 - Application of Design Theory I
This course is designed to consolidate and refine skills developed in the elements of design and principles of design courses. Particular attention is paid to developing a personal design process, an individual working method in design that allows the student to use design theory in practical applications. Students will work through a term project that looks at the different aspects of design and how sampled changes can enhance or alter a design concept.
Prerequisite(s): VA1201

VA2610 - Sculpture II
Students will design, document, and transpose two-dimensional character designs into three dimensional objects using advanced modelling and sculpting techniques and tools. This builds upon the fundamentals learned in Sculpture I with the intention of developing production models for use in the capstone project.
Prerequisite(s): VA1610

VA2800 - Package Design
Students will be introduced to the theory and practice of package design. Students will also be exposed to a variety of packaging concepts and options, and will apply their knowledge to the development of several packaging projects that will incorporate their own ideas. Students will develop packaging solutions that meet clients' needs using industry standard software.
Prerequisite(s): GA1120, GA1430, GA1640, PY1200, GA1220

VA3555 - Screening & Peer Critique
Students will engage in weekly peer review sessions during which all students will demonstrate the projects that they are working on. The intent is to enable each student to have projects critiqued by peers and the instructor for the program, while availing of the opportunity to learn from the creative applications of their peers.

VT1100 - Behavior and Ethics •
This course introduces the study of domesticated animal behavior and behavior modifications. With this knowledge students will be able to work with the four main domestic species in a safe manner. Students will learn about regulation and investigate ethics as it pertains to the veterinary profession.

VT1105 - Introduction to Veterinary Technician Practice •
Safe handling of animals is of the utmost priority for veterinary technicians. This course will introduce the student to the profession including canine and feline restraint and handling procedures as well as basic physical examination techniques. Students will be provided the opportunity to visit various veterinary facilities.
Co-requisite(s): VT1100

VT1110 - Immunology and Genetics •
This course will provide an introduction to the transmission of genetics, inheritance, pedigree, cell division, breed identification and genetic diseases. Various aspects of the immune system will also be examined with a focus on vaccine protocols.

VT1200 - Pharmacology and Physio •
This course will focus on the common medical issues in animals focusing on specific body systems. Students will focus on understanding the clinical signs, pathophysiology and treatment of these diseases. From a pharmacological perspective this course will cover legal classifications, storage, dosing and dispensing of drugs used in veterinary practice.
Prerequisite(s): MA1055, BL1070

VT1205 - Diagnostic Imaging I •
This course introduces radiation safety, patient positioning, diagnostic imaging techniques, contrast procedures and evaluating images for diagnostic acceptability using digital processing.
Prerequisite(s): BL1070, TM1150, VT1105

VT1210 - Parasitology •
This course includes the study of the helminth, protozoan, and arthropod parasites that affect animals and learn which parasites are important in North America. Students will focus on diagnostic features, life cycles, pathogenesis, control, and zoonotic potential. Students will learn to perform fecal exams and identify various parasite life cycle stages during laboratory exercises.
Prerequisite(s): CH1080

VT1215 - Hematology •
Students will be introduced to and develop skills in hematology. This will include blood cell morphology and CBC differential evaluation for the four major domestic species. There will also be an emphasis placed on lab and sample safety.
Prerequisite(s): CH1080, MA1055

VT1220 - Hospital & Office Management •
This course focuses on skills required to manage a veterinary office, including medical documentation, record keeping, veterinary office software, inventory control and managing pharmaceuticals. In addition, students will learn how to recognize and support individuals experiencing mental health issues.
Co-requisite(s): VT1200

VT1225 - Clinical Nursing •
This introduces commonly utilized examination and therapeutic techniques in a small animal veterinary facility. These will include ear/eye examinations, sample collection and injection techniques.
Prerequisite(s): VT1105, BL1070

VT1300 - Large Animal Medicine •
This course will provide students with the entry level knowledge needed in large/farm animal veterinary services. There will be a focus on husbandry, common diseases and production. Students will also gain experience in safe handling, restraint and treatment procedures for horses and ruminants.

Prerequisite(s): VT1225, VT1100

VT1305 - Nutrition •
Instruction is provided in the feeding of animals including an understanding of key nutritional factors in disease conditions and therapeutic foods. Advice and education to clients about feeding companion animals, including the prevention of obesity, specialty diets, prescription diets and common products used in veterinary practices are covered.
Prerequisite(s): MA1055

VT1310 - Anesthesia I •
Students are introduced to common anesthetic drug classes, analgesics and anesthetic equipment used in veterinary practice. This course covers the basics of monitoring animals during anesthesia; and describing the evaluation and management of pain.
Prerequisite(s): BL1070, VT1200, MA1055

VT1315 - Virology and Bacteriology •
Students will be introduced to bacteria and viruses of veterinary significance. Antimicrobials and their resistance will be explored as well as proper sample handling and evaluation. Viral structures and pathology will also be studied.
Prerequisite(s): CH1080

VT2105 - Advanced Nursing Skills I •
This course will introduce the student to advanced nursing techniques and procedures commonly used in veterinary hospitals. These will include sample collection, bandage/splint techniques and intravenous skills.
Prerequisite(s): VT1225

VT2110 - Anesthesia II •
This course introduces the principles of anesthetic management. Students will discuss parameters of preanesthetic management and post-operative care. In addition, students will learn how to intubate and apply blocks to control pain.
Prerequisite(s): VT1310

VT2115 - Clinical Pathology I •
In-house diagnostics are a mainstay of modern veterinary facilities. This course will introduce students to laboratory diagnostic tests and equipment used for serology and clinical chemistry evaluations. Students will also learn the importance of quality assurance/quality control programs.
Prerequisite(s): CH1080, MA1055

VT2120 - Surgical Skills •
Students will gain the required knowledge and skills needed to participate in sterile surgical procedures. There will be a focus on proper patient preparation and sterile techniques as well as the selection and care of surgical instruments and principles of instrument sterilization.
Co-requisite(s): VT2105

VT2125 - Exotics and Lab Animals •

This course focuses on the special needs for lab and exotic animals including handling practices, husbandry, animals used in research studies, lab specifications and injection and sample collections.

Prerequisite(s): VT1105, TM1150, VT1225

VT2130 - Diagnostic Imaging II •
This course will further students understanding and competencies in diagnostic imaging. There will be a focus on dental radiographs, large animal radiographic techniques and an introduction to basic ultrasound principles and techniques commonly used by veterinary technicians in practice.
Prerequisite(s): VT1205

VT2205 - Clinical Pathology II •
The use of diagnostic test kits and cell microscopy is commonplace in modern veterinary facilities. This course will prepare students for the use of point-of-care immunological test kits and abnormal cell cytological evaluation. Case reporting and management will be emphasized.
Prerequisite(s): VT2115

VT2210 - Surgery and Anesthesia •
Students will develop anesthetic protocols for animal species undergoing various surgical procedures and apply modifications of protocol based on patient condition and health status. Students will be responsible for the care, preparation and post-surgical care of cases assigned and learn the skills required to be both a circulating and scrub nurse in the operating room. There is emphasis on surgical asepsis, patient management, and equipment and instrument management.
Prerequisite(s): VT2120, VT2110, VT2105, VT1215, VT2115
Co-requisite(s): VT2225, VT2205

VT2220 - Dental Procedures •
This course incorporates dental procedures for animals including oral examinations, disease recognition, care and use of dental equipment, home dental care. Students will perform routine dental prophylaxis and dental radiography on models.
Prerequisite(s): VT2130, VT2110
Co-requisite(s): VT2210

VT2225 - Advanced Nursing Skills II •
This course will introduce the learner to additional advanced nursing techniques and procedures commonly used in veterinary hospitals. These will include urinary sample collection and intravenous fluid therapy skills.
Prerequisite(s): VT2105
Co-requisite(s): VT2210

VT2230 - Urinalysis and Mycology •
Students will learn the diagnostic techniques needed for in-hospital evaluation of urine and effusions as well as vaginal cytology techniques. A portion of the course will be dedicated to the study in identification of common fungi seen in veterinary practices.
Prerequisite(s): CH1080

VT2300 - Clinical Placement •
In this course students will proficiently demonstrate knowledge and perform specific competencies, abilities and job tasks at the competency level for a Veterinary Technician, in a clinical setting.

Prerequisite(s): VT2210, VT2225, CM2215, VT1220, VT2130, VT2220, VT2205, VT2230, VT1315, VT1215, VT1210, VT1110, VT2125, VT1300, VT1305

WA1160 - Fluid Mechanics
This course is included in the Civil Engineering Technology program as an engineering science to provide the learner with a knowledge of the principles of fluid mechanics and knowledge to solve practical applied problems.
Prerequisite(s): MA1101; PH1101

WA1230 - Hydrology
This course is designed to introduce the learner to some of the major concepts of surface hydrology.
Co-requisite(s): MA1530

WC1155 - Work Term I
The work term provides a unique learning experience in a real workplace setting. Work terms must be program-relevant, 12-16 weeks in duration and be a normal work week in terms of at least 35 hours, remunerated (paid), and evaluated. Participation in the work term is determined through a competitive process and successful completion of all courses prior to the work term, with a Grade Point Average of at least 2.00 mandatory for work term eligibility.

This work term follows the successful completion of Semester 2. For most students, it represents their first professional work experience in a business environment and, as such, represents their first opportunity to evaluate their choice of pursuing a career in information technology. Students are expected to learn, develop, and demonstrate the high standards of behavior and performance normally expected in the work environment.

During the on-the-job experience, students develop their employability and technical skills, further enhancing their personal growth. The students are learning from the new network of contacts and widening their perception of life and career choices.
Prerequisite(s): GPA 2.0, CP1135, CP1895, MA1905, CR1130, CM1401, CP1210, CP1935, CP1556, PD1105

WC1160 - Work Term
For most students, this work term represents their first experience working in an engineering environment and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semester 5 in the Architectural Engineering Technology program. Students are expected to learn, develop, and demonstrate the high standards of behavior and performance normally expected in the work environment. Students will be evaluated by their employer and submit a work term report. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Clear Academic Standing and a minimum cumulative GPA of 2.0

WC1200 - Work Term I
For most students, this work term represents their first experience in an Electrical engineering environment and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semester 5 in the Electrical Engineering Technology (Power & Controls) Co-op Program. Students are expected to learn, develop, and demonstrate the high standards of behavior and performance normally expected in the work environment. Students will be evaluated by their employer and submit a technical work term report to the Co-op office on or before the last day of the semester. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC1201 - Work Term II
The second work term provides students possessing significant knowledge from the Electrical Engineering Technology (Power & Controls) Co-op program with the opportunity to contribute to an employer's operation. This work term follows the successful completion of Semester 7. Students are expected to further develop and expand their knowledge and work-related skills and should be able to accept increased responsibility and challenge in the workplace. In addition, students are expected to demonstrate an ability to deal with increasingly complex concepts and problems. Students should conscientiously assess the various opportunities relative to their individual interests. A substantive work report is also to be prepared by the student demonstrating competence in both technical content and communication skills and submitted to the Co-op Office. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC1250 - Work Term •
This optional work term course is designed to allow students who have completed several specialty courses in Occupational Health and Safety to undertake in-depth, on-the-job analysis and/or development of a viable safety program. Students are expected to learn, develop and demonstrate the high standards of behavior and performance normally expected in the work environment. Students will be evaluated by their employer and submit a work term report demonstrating competence in both technical content and communication skills. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC1300 - Work Term I
For most students, this work term represents their first experience in a Geomatics / Surveying environment and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semester 2 in the Geomatics / Surveying Engineering Technology (Co-op) Program. Students

are expected to learn, develop, and demonstrate the high standards of behavior and performance normally expected in the work environment. Students will be evaluated by their employer and submit a work term report to the Co-op Office. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar.

WC1301 - Work Term II
The second work term provides students possessing significant knowledge from the Geomatics / Surveying Engineering Technology (Co-op) program with the opportunity to contribute to an employer's operation. This work term follows the successful completion of Semester 5. Students are expected to further develop and expand their knowledge and work-related skills and should be able to accept increased responsibility and challenge in the workplace. In addition, students are expected to demonstrate an ability to deal with increasingly complex concepts and problems. Students should conscientiously assess the various opportunities relative to their individual interests. A substantive work report is also to be prepared by the student demonstrating competence in both technical content and communication skills and submitted to the Co-op Office. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar.

WC1310 - Co-op Work Term
For most students, this work term represents their first experience in the field of Electronic Systems Engineering Technology and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semester 2 in the Electronic Systems Engineering Technology (Co-op) Program. Students are expected to learn, develop and demonstrate the high standards of behavior and performance normally expected in the work environment. Students will be evaluated by their employer and submit a work term report to the Co-op Office. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC1400 - Work Term I
For most students, this work term represents their first experience in an industrial engineering environment and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semester 5 in the Industrial Engineering Technology (Co-op) Program. Students are expected to learn, develop and demonstrate the high standards of behavior and performance normally expected in the work environment. Students will be evaluated by their employer and submit a major reflective work term assignment(s) to the Co-op Office. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC1401 - Work Term II
The second work term provides students possessing significant knowledge from the Industrial Engineering Technology (Co-op) program with the opportunity to contribute to an employer's operation. This work term follows the successful completion of Semester 7. Students are expected to further develop and expand their knowledge and work-related skills and should be able to accept increased responsibilities. In addition, students are expected to demonstrate an ability to deal with increasingly complex concepts and problems. Students should conscientiously assess the various opportunities relative to their individual interests. A major reflective assignment is also to be prepared by the student demonstrating competence in both technical content and communication skills and submitted to the Co-op Office. The emphasis of this assignment will be placed on the accumulated experiences and skill development over the course of both work terms. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar.

WC1460 - Work Term
For most learners, this work term represents their first experience in a civil engineering environment and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semester 5 in the Civil Engineering Technology (Co-op) Program. Learners are expected to learn, develop and demonstrate the high standards of behavior and performance normally expected in the work

environment. Learners will be evaluated by their employer and submit a work term report within four weeks of returning to classes. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC1520 - Co-op Work Term
This work term for most students represents their first professional work experience in a service/production environment and as such represents their first opportunity to evaluate their choice of pursuing a career in the Environmental Engineering Technology field. Students are expected to learn, develop, and demonstrate the high standards of behaviour and performance normally expected in the work environment. Students will be evaluated by their employer and submit a work term report to the Co-op Office. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current college calendar.

WC1700 - Work Term I
For most students, this work term represents their first experience in a computing systems engineering environment and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semester 5 in the Computing Systems Engineering Technology (Co-op) Program. Students are expected to learn, develop and demonstrate the high standards of behavior and performance normally expected in the work environment. Students will be evaluated by their employer and submit a major reflective work term assignment(s) to the Co-op Office. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC1701 - Work Term II
The second work term provides students possessing significant knowledge from the Computing Systems Engineering Technology (Co-op) program with the opportunity to contribute to an employer's operation. This work term follows the successful completion of Semester 7. Students are expected to further develop and expand their knowledge and work-related skills and should be able to accept increased responsibility and challenge in the workplace. In addition, students are expected to demonstrate an ability to deal with increasingly complex concepts and problems. Students should conscientiously assess the various opportunities relative to their individual interests. A major reflective assignment is also to be prepared by the student demonstrating competence in both technical content and communication skills and submitted to the Co-op Office. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC1830 - Work Term
For most students, this work term represents their first experience in a chemical processing engineering environment and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semester 5 in the Chemical Process Engineering Technology (Co-op) Program. Students are expected to learn, develop and demonstrate the high standards of behavior and performance normally expected in the work environment. Students will be evaluated by their employer and submit a work term report to the Co-op Office. This work term must be program relevant, a minimum of 10/11 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC1850 - Co-op Work Term
For most students, this 12 week co-op work term represents their first experience in an Agricultural Industry environment and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semesters 1 & 2 in the Agriculture Technician 2 Year (Co-op) Program. Students are expected to learn, develop and demonstrate the high standards of behavior and performance normally expected in the work environment. Students will be evaluated by their employer and submit a technical work term report to the co-op office on or before the last day of the semester. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC1900 - Work Term I
For most learners, this work term represents their first experience in a mechanical engineering environment and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semester 5 in the Mechanical Engineering Technology (Manufacturing) (Co-op) program. Learners are expected to learn, develop and demonstrate the high standards of behaviour and performance normally expected in the work environment. Learners will be evaluated by their employer and submit a work term report to the Co-op Office. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC1901 - Work Term II
The second work term provides learners possessing significant knowledge from the Mechanical Engineering Technology (Manufacturing) (Co-op) program with the opportunity to contribute to an employer's operation. This work term follows the successful completion of Semester 7. Learners are expected to further develop and expand the knowledge and work-related skills and should be able to accept increased responsibility and challenge in the workplace. In addition, learners are expected to demonstrate and ability to deal with increasingly complex concepts and problems. Learners should conscientiously assess the various opportunities relative to their individual interests. A substantive work report is also to be prepared by the learner demonstrating competence in both technical content and communication skills and submitted to the Co-op Office. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WC2151 - Work Term II
This is the second work term exposure. The student is expected to further develop and expand her/his knowledge and work-related skills and should be able to accept increased responsibility and challenges. In addition, the student is expected to demonstrate an ability to deal with increasingly complex technical concepts and problems. The student should conscientiously assess the various opportunities relative to their individual interests and career aspirations.

The work term provides a unique learning experience in a real workplace setting. Work terms must be program-relevant, 12-16 weeks in duration, and be a normal work week in terms of at least 35 hours, remunerated (paid), and evaluated. Participation in the work term is determined through a competitive process. During the on-the-job experience, students develop their employability and technical skills, further enhancing their personal growth.
Prerequisite(s): GPA 2.0, WC1155, CP3417, EP2415, CM2200, CP1295, CP2280, CP1946, PD2310

WC3151 - Work Term III
This is the final work term. The students should have sufficient academic grounding and work experience to contribute in a positive manner to the management and problem-solving processes needed and practiced in the work environment. The student should become better acquainted with her/his discipline of study, should observe and appreciate the attitudes, responsibilities, and ethics normally expected of information technology professionals, and should exercise greater independence and responsibility in her/his assigned work functions.

The work term provides a unique learning experience in a real workplace setting. The work terms must be program-relevant, 12-16 weeks in duration, and be a normal work week in terms of at least 35 hours, remunerated (paid), and evaluated. Participation in the work term is determined through a competitive process. During the on-the-job experience, the student develops her/his employability and technical skills, further enhancing her/his personal growth.
Prerequisite(s): GPA 2.0, WC2151, CP4471, CP2561, CP4282, CP2315, CP4485

WD1290 - SMAW for NDT
This course provides training to students enrolled in the Non-Destructive Testing Technician program in Shielded Metal Arc Welding. Students will be introduced to SMAW as it relates to weld faults, causes for weld faults and means of prevention. Learners will also perform basic SMAW welds.

WD1440 - SMAW Fundamentals
This introductory course deals with welding technology and processes as applied to the metal fabricating industry using Shielded Metal Arc Welding (SMAW) processes. Safety practices are emphasized in all aspects of welding

applications in the shop. Applications include welding preparations, welding basic joints, and cutting processes, safety and health in the welding industry; basic welding technology.

WD1450 - SMAW Processes
This course is a continuation of SMAW Fundamentals (WD1440) and deals with the fundamentals of welding processes as they relate to Shielded Metal Arc Welding (SMAW) welding, gouging, and cutting. It also introduces the learner to the fundamentals of causes of welding faults, the repair procedures associated with these faults and mechanisms to improve the strength of welds after the welding process has taken place.
Prerequisite(s): WD1440

WD2300 - Welding Failure Analysis
In properly performing a failure analysis, the learners will keep an open mind while examining and analyzing the evidence to foster a clear, unbiased perspective of the failure. Analyzing failures is a critical process in determining the physical root causes of problems. The process is complex, draws upon many different technical disciplines, and uses a variety of observation, inspection, and laboratory techniques.
Prerequisite(s): CF1101

WD2450 - Welding Metallurgy
This course explores some of the procedural and metallurgical concerns and microstructures that may affect the weldability and integrity of welded connections in carbon manganese steels, low alloy steels, stainless steels, cast iron and nonferrous metals.
Prerequisite(s): CF1101
Co-requisite(s): WD2650

WD2620 - Wire Feed Arc Welding
This course introduces the learner to the more common industrial semi automatic arc welding processes, the process controls, limitations, and typical industrial applications. Welding processes include GMAW, FCAW, SAW, EGW and ESW. The learner will be required to demonstrate knowledge of and proficiency with the most common of the welding processes noted.
Prerequisite(s): WD1450

WD2650 - GTAW Processes
This course is designed to introduce the learner with the theory and practice of Gas Tungsten Arch Welding (GTAW). The GTAW course includes the selection and set-up of equipment and accessories and their application to aluminum, steel and stainless steel Processes covered include manual and automated processes.
Prerequisite(s): WD1450

WD2680 - Welding Standards & Codes
This course introduces the learner to welding standards and codes related to the fabrication and inspection of pressure vessels, tanks, structures, and structural steels. Applicable codes such as ASME, Section VIII-1, and Section IX and CSA Standards W47.1, W59, W178.1, and W178.2 are discussed in detail. Other similar codes and standards such as ABS, Lloyds, AWS, and DNV will also be discussed and compared with ASME and CSA.
Prerequisite(s): WD1440; EG1310

WD3120 - Cost Analysis Project
The purpose of this course is to introduce the learner to the concepts involved in the design, costing and management of a welded assembly. Through completing the course the learner will set the specifications, develop drawings, plan timelines, prepare project costing, develop inspection and test plan. The learner will submit a document package that represents a proposal for the design and construction/fabrication of the welded assembly. The learner will present the completed proposal to an audience of their classmates and program instructors.
Prerequisite(s): All courses in previous academic semesters and a minimum cumulative GPA of 2.0

WF1200 - Oxy-Fuel Cutting for Industry
This course requires the student to perform practical activities using of automatic cutting equipment and manual cutting equipment. The course will perform practical exercises to accurately cut irregular shapes such as straight line cuts, bevel cuts, and structural shapes for pipe, angle iron and beams in various thicknesses of steel.

Prerequisite(s): WD1602

WF1300 - Capstone I Welder - Metal Fabricator
The capstone project enables the student completing Year 1 of the Welder Metal- Fabricator (Fitter) program to demonstrate the application of skills and comprehension developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams to plan for, prepare, document, complete and reflect on the project.
Prerequisite(s): AM1101, CM2161, WD1602

WF2100 - SMAW for Industry I
This course requires the use of Shielded Metal Arc Welding (SMAW) equipment. The SMAW Equipment will be used to weld open corner, tee joints and single bevel tee joint configurations in various positions. The student will be able to identify and repair various weld faults that have occurred.
Prerequisite(s): WD1620

WF2110 - SMAW for Industry II
This course requires the use of Shielded Metal Arc Welding equipment. This equipment is used in conjunction with F3 and F4 category electrodes to weld in vertical and overhead positions for open groove butt joint configurations. The student will be able to identify and repair various weld faults that have occurred.
Prerequisite(s): WF2100

WF2200 - FCAW for Industry
This course requires the use of Flux Core Arc Welding equipment. This equipment will be used to weld corner, and tee joint configurations in various positions. The student will be able to identify and repair various weld faults that have occurred.
Prerequisite(s): WD1892

WF2210 - GTAW for Industry
This course requires the use of Gas Tungsten Arc Welding equipment. This equipment will be used to weld steel plates, using hi-tensile mild steel electrodes in a 1F and 2F positions. Joint configurations include fillet welds on tee and corners in addition square butt, open root positions. The student will identify and repair various weld faults that have occurred.
Prerequisite(s): WD1641

WF2215 - Pipe Welding for Industry
This course requires the use of pipe welding equipment and processes. This equipment will be used to weld steel pipe using F3 and F4 electrodes in a 1G and 2G pipe joint positions. The student will be able to identify and repair various weld faults that have occurred. This course will enable the student to develop proficiency in various procedures of pipe welding and fitting, as well as expose the student to cutting, beveling, preparation, and fit-up of pipe prior to the welding process.
Prerequisite(s): WD1801

WF2300 - Capstone II Welder - Metal Fabricator
The capstone project enables the student completing Year 2 (two) of the Welder Metal- Fabricator (Fitter) program to demonstrate the application of skills and comprehension developed throughout the program. Students taking this course will work with minimal supervision on a project, under the guidance of a faculty member. The student can work independently or in teams to plan for, prepare, document, complete and reflect on the project.
Prerequisite(s): WF1300

WI1005 - Blueprint Reading & Sketching
In this course, students will be introduced to blueprint reading and sketching. Reading of construction and engineered drawings is a core skill for technicians in the wind energy sector. Students will work with various types of technical drawings and specification packages, estimating materials and timelines from drawing packages. In addition, students will create simple sketches using standard drawing implements.
Co-requisite(s): AM1101

WI1010 - Wind Energy Electrical Basics
In this course, students will be introduced to the basic principles required to solve alternating current (AC) and direct current (DC) circuits. The relationships among voltage, impedance, and current are analyzed and reinforced with theory and practical lab activities.

WI1015 - Wind Energy Mechanical Systems I
In this course, students will learn basic mechanical theory and standard work practices with mechanical systems. Use of hand tools, tool inspection, fastener selection and application, and lubrication techniques will be explored.

WI1020 - Intro to Wind Turbine Systems
This course introduces students to the basics of wind energy. Students will learn the history of wind power, different types of turbine designs used in industry, components of turbine systems, turbine aerodynamics, and site selection. The differences between small-scale wind market and utility and large wind projects are outlined.

WI1025 - Wind Turbine Work Practices I
In this course, students are introduced to industry best practices in safety and planning for field work, to ensure the health and safety of all workers. Students will use risk assessment tools while completing simple tasks and use the development of job safety analysis for complex tasks. Students will learn to apply workforce planning concepts as they participate in a workplace tasks. Occupational Health and Safety (OHS) legislation is explored, and incident investigation techniques are introduced.

WI1205 - Wind Energy Electrical Equipment
In this course, students are introduced to electrical equipment used in wind generators and how these are connected to the distribution grid. Students will become familiar with electrical generation and distribution equipment and AC/DC machines, including testing and maintenance of the systems.
Prerequisite(s): WI1010

WI1210 - Wind Turbine Hydraulics
In this course, students will be introduced to fluid power technology relating to hydraulic systems. Students will learn the theory of hydraulics, types of fluids, conductors and seals, reservoirs, hydraulic actuators, control valves and pumps. Focus will be on the fundamentals of hydraulic system components, while skills are reinforced through laboratory work.

WI1215 - Wind Energy Mechanical Systems II
This course introduces students to the basic theory and standard work practices for mechanical systems. Students will learn the use of hand tools, tool inspection, lubrication techniques, as well as fastener selection and application.

Prerequisite(s): WI1015

WI1220 - Wind Turbine Work Practices II
This course is a continuation of Wind Turbine Work Practices I, and students will apply industry best practices for safety and field work, to ensure the continued health and safety of workers. Students will use risk assessment tools to complete work tasks, as well as the development of job safety analysis. In addition, they will apply workface planning concepts as they participate in a variety of workplace tasks.
Prerequisite(s): WI1025

WI1305 - Wind Turbine Controls
This course will introduce students to the basic theory and operation of industrial control systems used in wind turbines. These include networking principles, protocols, and common hardware types. Students will practice common troubleshooting and diagnostic techniques.
Prerequisite(s): WI1205

WI1310 - Rotor System Inspection and Repair
In this course, students will develop skill sets necessary to perform inspections and repairs on a variety of blade materials used in wind turbine rotor systems. Students will practice non-destructive testing (NDT) on blades, complete minor repairs using polymer and fiber sheet materials, as well as chemical curing as it applies to wind turbine rotors.
Prerequisite(s): WI1025, WI1220

WI1315 - Wind Turbine On-the-job Training
On-the-job training provides students with an opportunity to relate what they have learned in the classroom and lab, to a work environment. Students are expected to assume duties of an entry-level technician, with appropriate supervision. The exposure and interaction with the various trades and professions within the wind energy sector, will provide students with experienced to enhance their overall learning.
Prerequisite(s): Completion of all Semester 1 and 2 courses
Co-requisite(s): WI1305, WI1310

WM1110 - Introduction to Gender Studies
This course considers gender, gender studies, and feminisms as areas of exploration from historical, contemporary, transnational, and interdisciplinary perspectives. The aim of this course is to provide a critical framework for thinking about questions regarding gender and related forms of social difference. This course is transferable to MUN Introduction to Gender Studies 1000.

WT1150 - Co-op Work Term
For most students, this work term represents their first experience in a welding and fabrication engineering environment and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semester 2 in the Welding Engineering Technician (Co-op) program. Students are expected to learn, develop, and demonstrate the high standards of behavior and performance normally expected in the work environment. Students will be evaluated by their employer and submit a work term report to the Co-op Office. This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College calendar

WT1185 - Work Term
The work term is a required portion of the program. The work term provides a unique learning experience in a real workplace setting. Work terms must be program-relevant, and 15 weeks in duration. Participation in the work term is determined through a competitive process and successful completion of all courses prior to the work term is mandatory for work term eligibility.

This work term follows the successful completion of the preceding academic term. For most students, it represents their first professional work experience in a business environment, and as such represents their first opportunity to evaluate their choice of pursuing a career in information technology. Students are expected to learn, develop, and demonstrate the high standards of behavior and performance normally expected in the work environment.

During the on-the-job experience, students develop their employability and technical skills, further enhancing their personal growth. Through the work term students will experience different business cultures (e.g., public, private, and not-for-profit sector, small and large organizations, etc.). They are learning from the new network of contacts and widening their perception of life and career choices.
Prerequisite(s): MA1521, CR1020, CP3125, CR1120, CM1401, CR1260, EP1130, CM2200, CR2231, CR2265, CR2130, CR2252, CR2950, CR2970, CR2270, minimum GPA of 2.0

WT1400 - Work Term
For most learners, this work term represents their first experience in a petroleum engineering environment and therefore presents them with their first opportunity to evaluate their career choice. This work term follows the successful completion of Semester 5 in the Petroleum Engineering Technology (Co-op) Program. Learners are expected to learn, develop and demonstrate the high standards of behavior and performance normally expected in the work environment. Learners will be evaluated by their employer and submit a work term report to the Co-op Office.

This work term must be program relevant, a minimum of 12 weeks in duration, a normal work week of at least 35 hours, remunerated (paid) and evaluated.
Prerequisite(s): Eligibility according to Co-op regulations in current College Calendar

WT1700 - Biomedical Practicum
This course provides comprehensive on-the-job training for Electronics Engineering Technology (Biomedical) learners in a setting within the health care engineering field. The duration of this particular section is seven weeks and will be scheduled upon the successful completion of the eighth semester. Learners will choose among a variety of differing work environments such as placement in a hospital biomedical engineering department or a private sector medical supply company. Learners' abilities will be assessed by the Employer and the College staff.

Prerequisite(s): Completion of all academic subjects and a cumulative GPA above 2.00; Certificate of completion of Government of NL PHIA course; Signed and witnessed Confidentiality Agreement; Current letter of conduct and vulnerable sector clearance

WT4300 - Work Term II
This is the second work term in the Bachelor of Applied Information Technology: Systems and Network Cybersecurity. This course will provide students with a greater exposure to the skill sets and industries required to be successful in their career. On this work term, the student is expected to further develop and expand their knowledge and accept increased responsibility and work-related challenges. In addition, the student is expected to demonstrate an ability to deal with increasingly complex technical concepts and problems. The student should conscientiously assess the various opportunities relative to their individual interests and career aspirations.

Placements are directly related to the student's program of study and provide learning experiences not available in the classroom setting. Work terms provide career-related experience, and workplace abilities that employer's value when hiring new employees. The placement will provide a unique learning experience in a real business setting.

The College will make every effort to find a suitable placement for students; however, ultimately it is the responsibility of a student to find a placement that satisfies the criteria of the program.

Placements could include positions at:

- For profit companies
- Government agencies
- Charitable organizations
- Not-for-profits
- Humanitarian organizations
- Sports organizations
- Clinical and medical settings where it is not the industry practice to pay students
- Start-ups and new entrepreneurial ventures

The work term opportunity follows the successful completion of Semester 9. Students are expected to learn, develop, and demonstrate the high standards of behavior and performance normally expected in the work environment.

Work terms must be program relevant, 15 weeks in duration and be a normal work week of at least 35 hours. Participation will be determined through a competitive process and successful completion of all courses, with a Grade Point Average of at least 2.00.

Students will compile a Work Term Logbook and write a Work term Reflective Report, both to be submitted before the end of the first week of the next semester.

Prerequisite(s): GPA 2.00, WT1185, CR4100, CR4120, CR4105, CR4111, CR4210, CP1855, MN1520, CR4215, CP4450, CR4200, CR4205, PD4400