

# Environmental Technology (Co-op)

The Environmental Industry is one of the fastest growing sectors of the economy. The industry needs a supply of skilled technical people to meet the challenges of the 21<sup>st</sup> century by reducing environmental pollution and maintaining the well being of ecosystems. Students of this Environmental Technology Program will receive multidisciplinary training in chemical, biological, and engineering science focused on dealing with environmental pollution and sustainable development.

The college offers a three-year Co-operative Education diploma program in Environmental Technology. The co-operative education component affords graduates the opportunity to combine practical work experience with academic learning.

## OBJECTIVES

1. To train students in the environmental field at a technical level.
2. To provide knowledge and skills related to all aspects of environmental technology.
3. To provide knowledge and experience in working with specialized equipment and techniques used in the field.

## EMPLOYMENT OPPORTUNITIES

The graduates of the program may obtain employment in government or private industry. Employment would include such work as providing technical support to professional pollution control specialists, providing technical assistance with impact assessment studies to firms and/or consultants, and assisting government and industry in promoting their environmental education programs.

## PROGRAM TRANSFERABILITY

Many graduates have gone on to pursue studies with advanced standing at a number of Canadian universities. Students who have graduated from the Environmental Technology program can apply for entry with advanced standing at a number of Bachelor of Environmental Science, Environmental Studies and post-diploma programs in Canada. Please refer to the NL Department of Education's transfer guide ([www.cna.nl.ca/transfer](http://www.cna.nl.ca/transfer)), or contact your intended university or college.

## ACCREDITATION

To ensure the benefits of a consistently high standard of education, College of the North Atlantic's Environmental Technology program is nationally accredited by the Canadian Technology Accreditation Board (CTAB), and the Canadian Association for Cooperative Education (CAFCE).

## ENTRANCE REQUIREMENTS

Eligibility for admission to the 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 or 3202
- ii. Mathematics (4 credits) chosen from:

Advanced: 2205, 3205 (50% minimum in each course)  
OR

- Academic: 2204 (50% minimum), 3204 (60% minimum)
- 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 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, Forest Resources Technician, Natural Resources Technician or Northern Natural Resources Technician program complete BL1020 and BL1021. In addition, it is recommended that students who intend to enroll in the Environmental Technology program complete CH1030 and CH1031.

### 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 1104A, 1104B, 1104C, 2104A, 2104B, 2104C, 3104A, 3104B, 3104C

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 Status

Applicants who do not meet the entrance requirements, 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 Clause.

## SPECIAL REQUIREMENTS

Because of the extensive field and laboratory exposure incorporated in this program, students will be required to obtain specialized clothing and equipment, including a lab coat, safety glasses, graphics calculator, navigation compass, quality safety boots, rainwear, and other clothing appropriate for outdoor work.

## CERTIFICATIONS

In addition to the formal semester courses listed in the program of studies, students in the Environmental Technology Co-op program are required to obtain certification in the following areas over the three-year period of studies:

Restricted Operators Certificate (Marine) DSC Endorsement  
WHMIS

Transportation of Dangerous Good (TDG)

Pleasure Craft Operators Card

Small Boat Safety

Standard First Aid & CPR/AED

Back Injury Prevention

Power Line Hazards

**NOTE: Students should be aware that additional fees and expenses apply for some of these certifications and for field trips, tours and On-the-Job Training.**

**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).**

## DIPLOMA

- Three years
- September start
- Corner Brook Campus

## COURSES

CODE	TITLE	Hrs/wk		
		Cr	Le	La
<b>Semester 1</b>				
BL1100	Biology	4	3	2
CM1400	Technical Report Writing I	3	3	0
MA1100	Mathematics	5	4	2
MC1080	Introduction to Computers	2	2	0
CH1120	Chemistry	4	3	2
EN1520	Environmental Sampling Techniques	3	2	2
EN2120	Environmental Citizenship	3	3	0

\*Admission into the appropriate Mathematics course will be decided by the grade in high school math.

### EITHER

Students who received at least 70% in level III Math 3200 or a pass in Math 3201 can be exempted from MA1100

### OR

Students who received a combined average of 70% in 2204 and 3204, or a pass in both of 2205 and 3205 can be exempted from MA1100.

**Students must apply for the exemption.**

CODE	TITLE	Cr Le La		
		Cr	Le	La
<b>Semester 2</b>				
MA1140	Applied Mathematics	5	4	2
BL1130	Microbiology	4	3	3
CH1121	Chemistry	4	3	2
EN2320	Occupational Health & Safety	3	2	2
CM1401	Technical Report Writing II	3	3	0
EG1100	Engineering Graphics	3	2	3

CODE	TITLE	Cr Le La		
		Cr	Le	La
<b>Semester 3 (Intersession I)</b>				
GE1300	Soil Fundamentals	3	2	3
EN2300	Environmental Law & Policy	3	3	0
SU1150	Field Navigation	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.

CODE	TITLE	Cr Le La		
		Cr	Le	La
<b>Semester 4</b>				
EN3200	Environmental Impact Assessment	3	3	0
EY2110	Basic Ecology	4	3	2
PH1100	Physics	4	3	2
EN2500	Water Resources	4	3	2
CH2700	Environmental Chemistry I (Analytical)	4	3	3
MA1670	Statistics	4	4	1

CODE	TITLE	Cr Le La		
		Cr	Le	La
<b>Semester 5</b>				
CH3700	Environmental Chemistry III	4	3	2
EN1600	Environmental Site Assessment I	3	2	2
EN1540	Air Pollution	4	3	2
EN2220	Solid Waste Management	4	3	2
SU1550	Remote Sensing	3	2	3
PH1101	Physics	4	3	2

CODE	TITLE	Cr Le La		
		Cr	Le	La
<b>Semester 6</b>				
WC1520	Co-op Work Term I	5	0	0

CODE	TITLE	Cr Le La		
		Cr	Le	La
<b>Semester 7</b>				
SU3210	Geographic Information Systems	2	1	3
EN1601	Environmental Site Assessment II	4	3	2
EN2540	Waste Water Management & Treatment	4	3	2
EN3300	Environmental Auditing	4	3	2
PR2550	Technical Thesis I	2	1	2
EN1530	Water Quality	4	3	2

CODE	TITLE	Cr Le La		
		Cr	Le	La
<b>Semester 8</b>				
WC1521	Co-op Work Term II	5	0	0

CODE	TITLE	Cr Le La		
		Cr	Le	La
<b>Semester 9 (Intersession II)</b>				
SU1400	Surveying	3	2	3
PR2551	Technical Thesis II	3	2	5
EN2700	Project Management	3	3	0