

Process Operations Engineering Technology

The Process Operations Engineering Technology program is designed to train graduates to operate and optimize modern industrial plants and processes. Typically, the graduates will work as process operators, process technologists and supervisors in pulp and paper, mineral processing, and petroleum related industries. They will graduate with the knowledge and skills needed to optimize manufacturing processes, improve product quality, and reduce costs.

ACCREDITATION:

This program is accredited by the Canadian Technology Accreditation Board 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.

OBJECTIVES

Upon completion the graduates will:

1. Understand the process industries, focusing on pulp & paper, mineral processing, and petroleum refining,
2. Evaluate and apply chemistries underlying industrial processes,
3. Be able to apply the principles of process control and process optimization,
4. Demonstrate technical competence in environmental protection, balanced by an appreciation of market forces and cost control,
5. Work and communicate as members of a team with other professionals, as well as supervise the work of technical and non-technical persons,
6. Think and work independently.

CURRICULUM

General education consisting of English (written and oral), Mathematics, Physics, Chemistry, Electrotechnology, Computers and Engineering Graphics.

The training program has a strong focus on Process Optimization, Quality Management, and Environmental Abatements. This core curriculum is supported by courses which bring together technological concepts and competencies from the fields of process control, automation, chemical and environmental engineering, mechanical systems, and information technology.

EMPLOYMENT OPPORTUNITIES

Career opportunities for graduates of this program exist with pulp and paper companies, mineral processing plants, oil & gas refining, petrochemical plants, and specialty chemical companies. Previous graduates have been successful in obtaining employment with Corner Brook Pulp & Paper, Voisey's Bay Nickel Co. (Hydromet plant), Iron Ore Company of Canada, and Syncrude, as well as with mineral processing operators.

Graduates with two years of appropriate work experience may receive the designation of Professional Technologist (P. Tech).

DIPLOMA

- Three years
- September start
- Corner Brook Campus

COURSES

CODE TITLE Hrs/wk
Semester 1 and 2 - Refer to Engineering Technology (First Year)

Semester 3 (Technical Intercession I)		Cr	Le	La
ES1300	Manufacturing Processes I	4	3	3
MA1670	Statistics	4	4	1
SP2450	OHS Management Systems	4	4	0

The Course and Lab hours per week are based on a 15 week semester. In intercession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 4		Cr	Le	La
CI1400	Industrial Controls I	3	2	2
FM2320	Fluid Mechanics	4	3	2
MA2100	Mathematics	5	5	0
MT2400	Mineral Processing I	2	2	0
PE2430	Plant Electrical Systems	3	2	3
TD2100	Thermodynamics I	3	3	1
EC1710	Engineering Economics and Supervision	3	3	0

Semester 5		Cr	Le	La
CH2720	Analytical Chemistry for Pulp & Paper Making	3	2	2
CI1210	Instrumentation Controls and Automation	3	2	2
EN2220	Solid Waste Management	4	3	2
ES1301	Manufacturing Processes II	4	3	3
PE2800	Industrial Mechanical Systems	4	3	2
SI2300	Materials Science	4	3	1
TD3110	Thermodynamics II	3	2	2

Semester 6 (Technical Intercession II)		Cr	Le	La
ES2300	Manufacturing Processes III	4	3	3
ES2301	Manufacturing Processes IV	4	3	3

The Course and Lab hours per week are based on a 15 week semester. In intercession, the Course and Lab hours will be adjusted to reflect the shorter semester length. Refer to course outline.

Semester 7		Cr	Le	La
CI1401	Industrial Controls II	4	3	2
CI2520	Process Control Operations	4	3	3
EN2601	Environmental Abatements II (Water)	4	3	2
ES3300	Manufacturing Processes V	4	4	0
MT2410	Mineral Processing II	4	4	0
PR2680	Technological Thesis	3	0	3
SP2300	Quality Assurance	3	3	0

Semester 8		Cr	Le	La
EN2600	Environmental Abatements I (Air)	3	3	0
CI2610	Process Optimization	3	2	3
CR1340	Computer Networking Operations	3	2	2
PR2681	Technical Thesis	3	2	3
PS2340	Organizational Behaviour	4	4	0
SP2301	Quality Control	3	3	1
MT2650	Hydrometallurgical Refining	4	3	2

