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## Science and Technology Programs

# Integrated Engineering Technologist Diploma

**Location Offered:**

Nanaimo

**Credential:**

Diploma

**Program Length:**

28 Months

## The Program

The Integrated Engineering Diploma emphasizes practical knowledge in civil, mechanical, electrical, and structural engineering; 2D and 3D computer aided design and manufacturing; sustainable design within engineering; and project economics and management. Graduates of this program find employment with a wide range of employers including engineering consulting firms, fabrication facilities, heavy industry, and municipal engineering departments.

## Program Outline

<b>Year 1</b>	<b>Credits</b>
CSCI 160 - (Computer Science I)	4
ENGL 115 - (University Writing and Research)	3
ENGR 107 - (Preparation for Co-op Education Employment)	1
ENGR 112 - (Engineering Design I)	3
MATH 121 - (Calculus I)	3
PHYS 121 - (Physics for the Physical Sciences I)	4
ENGL 204 - (Business and Technical Writing)	3
MATH 122 - (Calculus II)	3
ENGR 121 - (Engineering Design II)	3
MATH 141 - (Matrix Algebra for Engineers)	3
PHYS 122 - (Physics for the Physical Sciences II)	4
<b>Total Year 1 Credits</b>	<b>34</b>

<b>Year 2</b>	<b>Credits</b>
ENGR 108* - (Co-operative Work Placement I)	9
ENGR 131** - (Introduction to Surveying and Geographic Information Systems)	1
ENGR 132** - (Codes, Contracts, and Regulations for Technologists)	1
ENGR 210 - (Computer Aided Drawing (CAD) I)	4
ENGR 211 - (Applied Statistics and Modeling Tools for Technologists)	4
ENGR 212 - (Engineering Design III)	3
ENGR 213 - (Applied Hydraulics I)	4
ENGR 214 - (Statics and Dynamics I)	4
ENGR 220 - (Computer Aided Drawing (CAD) II)	4
ENGR 224 - (Structural Design I)	4
ENGR 227 - (Civil Design I)	4
ENGR 228 - (Sustainable Principles, Tools, and Processes I)	2
ENGR 229 - (Applied Electronics I)	4
<b>Total Year 2 Credits</b>	<b>48</b>

*\*ENGR 108, Co-Operative Work Placement I, is required for graduation. Students are able to take additional co-op terms if they have completed ENGR 108.*

*\*\*ENGR 131 and 132 are week-long, intensive courses (30 hrs) taken prior to the start of Year 2.*

<b>Year 3</b>	<b>Credits</b>
ENGR 231* - (Welding and Non-Destructive Testing)	1
ENGR 232* - (Project Management for Technologists)	1
ENGR 244 - (Computer Aided Manufacturing and Design)	3
ENGR 246 - (Entrepreneurship and Finance for Technologists)	2
ENGR 247 - (Civil Design II)	4
ENGR 248 - (Sustainable Principles, Tools, and Processes II)	2
ENGR 249 - (Process Control Systems I)	4
ENGR 299 - (Capstone Design Project)	4
<b>Total Year 3 Credits</b>	<b>21</b>
<b>Total Program Credits</b>	<b>103</b>

*\*ENGR 231 and 232 are week-long, intensive courses (30 hrs) taken prior to the start of Year 3.*

## **Admission Requirements**

- English 12 with a minimum grade of "C+"
- Physics 12 with a minimum grade of "C+"
- Chemistry 12 with a minimum grade of "C+"
- Pre-Calculus 12 with a minimum grade of "B"

### **Notes on Admission**

- Students who meet or exceed the minimum admission requirements may not necessarily be admitted into the program.
- Admission based on GPA rankings
- Outstanding candidates missing either Chemistry 12 or Physics 12 are encouraged to apply and will be reviewed on a case-by-case basis.
- Recommended: Calculus 12 (if available); Programming 12 (if available)
- Students wishing to transfer will be considered on a case-by-case basis.

## **Additional Requirements for Transfer Students**

Ordinarily, transfer (both internal and external) students will be considered for admission into the second-year of the Integrated Engineering Technologist Diploma program on a case-by-case basis. All students wishing to transfer, must have completed the equivalent of the first-year curriculum with a minimum grade of a "C" in all courses. Students completing the Common First-Year Engineering Curriculum offered at most post-secondary institutions in British Columbia with a minimum grade of a "C" in all its courses are eligible for 2nd year admission into the Integrated Engineering Technologist Diploma program.

Note that all transfer students into Year 2 must be able to start their studies with ENGR 131 and ENGR 132. ENGR 131 and ENGR 132 are both offered in August of each year.

## **Notes on Progression - Integrated Engineering Technologist Diploma**

All students entering Year 2 must have completed the equivalent of Year 1 with a minimum grade of a "C" in all courses, and be able to start their studies with ENGR 131 and ENGR 132. ENGR 131 and ENGR 132 are both offered in August of each year.

Students who fail to achieve this standard will not be able to continue into Year 2 of the Integrated Engineering Technologist Diploma until this standard is achieved.

## **Start Date and Application Deadline**

The program starts in September and applications for admission are accepted on the first business day in October to March 31. Applications received after March 31 are considered late and will be processed as space permits. Students may transfer into Year 2 of the program, provided they have achieved second-year standing, and space permits.

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