

# ENGINEERING CERTIFICATE

View on YouTube (<https://www.youtube.com/watch?v=ssCVDTIFLBM>)

Engineers play an integral part in the future of human experience by combining imagination with knowledge. Our program immerses you in extensive laboratory time, experiential learning opportunities, various group projects, and community-based learning. When suitable, projects are done in collaboration with community organizations and companies.

In British Columbia all colleges and universities have agreed upon a Common First-Year Engineering Curriculum (CFYEC). Completed in one year from September to June, our Engineering program covers the entire CFYEC curriculum. Upon completing the first year of an engineering degree at CMTN you can then transfer into the second year at the institution and program of your choice.

## Apply to CMTN

Visit Apply to CMTN (<https://www.coastmountaincollege.ca/admissions/apply-to-cmtn/>) for an Admissions Checklist and to apply online.

Our Educational Advisors (<https://www.coastmountaincollege.ca/student-services/student-support/educational-advising/>) are here to help if you have any questions or need guidance along the way.

## Dates and locations

| Intake    | Location   |
|-----------|--|
| Fall 2023 | Terrace  |
| Fall 2023 | Prince Rupert - Spring Courses must be taken at Terrace Campus |
| Fall 2023 | Smithers - Spring Courses must be taken at Terrace Campus      |
| Fall 2024 | Terrace, Prince Rupert and Smithers                            |

| Code          | Title                             | Credits |
|---------------|-----------------------------------|---------|
| <b>Fall</b>   |                                   |         |
| CHEM 111      | Fundamentals of Chemistry I       | 3       |
| ENGL 101      | Introduction to Composition       | 3       |
| MATH 101      | Calculus I: Differential Calculus | 3       |
| MATH 235      | Linear Algebra                    | 3       |
| PHYS 121      | Advanced Physics I                | 3       |
| <b>Winter</b> |                                   |         |
| CHEM 122      | Principles of Chemistry II        | 3       |
| ENGL 151      | Technical Writing I               | 3       |
| CPSC 123      | Computer Programming              | 3       |
| MATH 102      | Calculus II: Integral Calculus    | 3       |
| PHYS 122      | Advanced Physics II               | 3       |
| PHYS 135      | Engineering Mechanics - Dynamics  | 3       |
| <b>Spring</b> |                                   |         |

|                      |                                       |           |
|----------------------|---------------------------------------|-----------|
| ENGR 121             | Engineering Design and Drafting       | 2         |
| ENGR 122             | Engineering Design and Sustainability | 2         |
| <b>Total Credits</b> |                                       | <b>37</b> |

- English 12 with a minimum grade of C.
- Pre-Calculus 12 with a minimum grade of C+.
- Physics 12 with a minimum grade of C+; Outstanding candidates missing Physics 12 or equivalent are encouraged to apply and will be reviewed on a case-by-case basis.
- Chemistry 12 with a minimum grade of C+; Outstanding candidates missing Chemistry 12 or equivalent are encouraged to apply and will be reviewed on a case-by-case basis.
- Recommended: Calculus 12 (if available); Programming 12 (if available).

## Recommended characteristics of students

- Has a good imagination and looks forward to using it together with knowledge to improve the world we live in.
- Is curious about the way things work and is excited about helping to discover new knowledge.
- Is interested in mathematics and sciences.
- Is concerned with the environmental impact of human beings and wants to find sustainable solutions for a healthy environment.

| Fees                                  | Domestic          | International      |
|---------------------------------------|-------------------|--------------------|
| Full Time:                            | 37 Credits        | 37 Credits         |
| Tuition                               | \$3,880.93        | \$16,493.86        |
| Mandatory fees                        | \$296.00          | \$372.24           |
| Lab fees (16 credits)                 | \$280.00          | \$280.00           |
| Student Union Fees                    | \$163.92          | \$163.92           |
| Extended Health and Dental Insurance* | \$285.00          | \$602.04           |
| <b>Total Tuition:</b>                 | <b>\$4,905.85</b> | <b>\$17,912.06</b> |
| Books & supplies                      | \$2,000.00        | \$2,000.00         |
| <b>Total:</b>                         | <b>\$6,905.85</b> | <b>\$19,912.06</b> |

Fees are effective August 1, 2024 for the 2024/25 academic year.

\*Tuition and fees may vary depending on the courses taken.

The Coast Mountain Students Union (CMSU) is pleased to offer Extended Health and Dental Insurance to all qualifying members. The plan is mandatory for all students enrolled in 6 or more credits or a trades program of 26 weeks or longer. Some students, including those studying overseas and those with existing extended health coverage, are eligible to opt out. Visit <https://cmsu.studenthealthbc.ca/> to learn more about the plan or request to opt out. You will also receive a detailed introductory email no later than 6 weeks after your semester starts. For any inquiries about the plan, please contact the Students' Union Organiser: Golnoosh Namazi, [organiser@mycmsu.ca](mailto:organiser@mycmsu.ca)



Basic Health insurance is mandatory for all international students. Health insurance costs will be charged every term until students provide proof of MSP.

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### Career opportunities

This is a broad field offering exciting and engaging careers. Career opportunities include:

- Advanced Materials Manufacturing
- Biomedical Engineering Chemical and Biological Engineering
- Chemical Engineering
- Civil Engineering
- Clean Energy Engineering
- Computer Engineering
- Dependable Software Systems
- Electrical Engineering
- Engineering Physics
- Environmental Engineering
- Environmental Engineering (joint program with UNBC)
- Geological Engineering
- High Performance Buildings
- Integrated Engineering
- Integrated Water Management
- Materials Engineering
- Manufacturing Engineering
- Mechanical Engineering
- Mechatronics Design
- Mining Engineering
- Naval Architecture and Marine Engineering
- Robotics
- Sustainable Process Engineering
- Urban Systems

