

School of Trades & Technology

Administration

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School Statement

The School of Trades & Technology provides career training in the fields of Industrial and Nautical Trades, and Applied Technology. Industrial Trades programs prepare students for provincial and national certification such as the Red Seal Interprovincial Journeyman Ticket, while graduates from Nautical courses are eligible for licensing by Transport Canada. All Engineering Technology programs are accredited through the Canadian Technology Accreditation Board and may lead to a Certified Technician (C.Tech) or Applied Science Technologist (AScT) certification. Our unique Engineering Bridge programs enables graduates to enter Year 3 of engineering programs at various provincial universities.

While the School's programs are designed to build on students' previous experiences, the curriculum system also promotes accessibility from pre-college levels. Students enter a program in the career field of their choice at a level commensurate with their background. Interlocking career ladders with multiple exit points provide the flexibility to enter the workforce at various levels and return for further education when appropriate.

All programs are supported by Industry Program Advisory Committees in order to ensure the utmost relevance of curriculum and outcomes.

Mission, Vision and Values

Firmly rooted in thousands of years of nautical, trades and engineering knowledge, the School of Trades & Technology is committed to continuously attest to and expand on its status as one of the premier trades and technical education centres in British Columbia. We strive to endow career practitioners with the skills necessary to succeed in their field of expertise and be respected in a global marketplace. As a technology transfer hub and a centre of industrial excellence we aim to provide regional industry with the facilities and the expertise needed to excel in a competitive world.

In the School of Trades & Technology, faculty, staff and students work together to achieve professional excellence. Mutual respect, personal integrity and authenticity, as well as a commitment to quality and performance form the corner posts of our success. Whether student or staff, we work in teams where a joint effort is required and excel as individuals when needed.

Co-operative Education

Co-operative Education ("co-op") is an optional component of all Engineering Technology programs. Co-op has been demonstrated to be a valuable enhancement to classroom instruction as it provides industry work experience that is relevant to future employment goals. We strongly encourage all prospective students to consider the co-op option when applying to the Technology programs.

Awards

The School offers an extensive array of awards with support from the community and local industry. Award recipients are recognized at a ceremony each spring.

Standards of Academic Progress

The School of Trades & Technology fosters an environment that enables students to actively participate in the learning process and become designers of their careers and professional lives. Successful careers ultimately are a result of a student's informed decisions with respect to program content, personal abilities and interests, expectations and employment opportunities. In return, the School in conjunction with the college's support services is responsible for providing advising, career counselling and program information in a timely manner.

The School of Trades & Technology monitors the performance of all registered students. Working within the principles and guidelines of Camosun College and supplemented by departmental regulations, the School reserves the right to remove students from a course or program due to unsatisfactory academic performance. An appeal procedure is available through the college process.

The Camosun College *Academic Progress Policy* applies to all students. Please click [here](#) for more information.

Student Responsibilities

The student is ultimately responsible for his/her learning and meeting the requirements for successful completion of the course and/or program. All students are encouraged to communicate issues concerning the course and program with their instructor and Chair/Program Leader, respectively. Students are expected to attend and actively participate in all scheduled classes.

All Programs

A student who cannot complete the program without exceeding one of the above guidelines is required to withdraw from the program and is referred to the appropriate college support services. The student may then register in other college programs provided that the appropriate prerequisites are satisfied. When required to withdraw from the program, the student becomes eligible for re-entry to the program after two program intake cycles.

Trades-Related Programs

Plumbing and Electrical Foundation Programs (*formerly ELT or Pre-employment programs*) require a grade of 80% to pass each module.

All other Foundation, Trades Training and Upgrading programs require an overall grade of 70% ("COM") to pass.

All Apprenticeship programs require an overall grade of 70% ("COM") to pass the technical training portion.

A grade of 95% or higher in any program will receive a With Distinction ("DST") grade.

All programs have a mandatory attendance requirement. A student who misses three days in an apprenticeship class will be required to withdraw from the course. In exceptional cases, the Chair may recommend an exemption to the policy. The final decision on withdrawal from a program rests with the Dean. Program content and lengths are under constant review and are subject to changes as directed by the Industry Training Authority of BC.

Technology-Related Programs

Students who fail to achieve a "C" in a program course will not be allowed to register to re-take that course ahead of students taking it for the first time. If a student receives a "D" in a required course prerequisite or an "F" in any required course, the student may repeat the course only once.

Engineering Bridge Programs

Camosun College offers the Engineering Bridge programs in partnership with the University of British Columbia (UBC) at their Vancouver (UBC V) and Okanagan (UBC O) campuses, and the University of Victoria (UVic). The Bridge programs are intended to provide direct access to the third year of Engineering at UBC in Civil, Mining or Mechanical Engineering or to UVic in Electrical, Computer and Mechanical Engineering, and Computer Science. Software Engineering Bridge graduates may expect to enter the second academic term of the second year at UVic. For more information, click [here](#).

These programs are not covered by the college's policies on admission, academic progress and promotion. Students must take the full program of studies and are not normally permitted to take these programs on a part-time basis for direct university admission. Normally, students must complete all courses and submit proof of a "C" to continue their studies at the university. Students are encouraged to contact the Program Assistant for detailed information at 250-370-4404.

Continuing Education

The School of Trades & Technology offers entry-level and upgrading training to members of the public and through contract training with organizations and industry. Program areas include:

- AutoCAD & Computer Aided Design
- Building Services/Custodial
- Carpentry
- Computer and Network Technologies
- Electrical
- Electronics
- Food Service and Kitchen Industry
- Horticulture
- Manufacturing
- Marine Safety
- Mechanical Trades
- Nautical
- Occupational Safety Training
- Plumbing & Pipe Trades
- Welding
- Woodworking

For information on Continuing Education programs or to explore training for your organization or company, please contact the Trades & Technology Continuing Education office at **250-370-4563** or email ttce@camosun.bc.ca.

Trades & Technology Programs & Credentials

TRADES PROGRAMS

Foundation Programs

(Formerly Entry-Level Trades Training (ELTT) or Pre-employment)

Automotive Service Technician

- Certificate in Automotive Service Technician Foundation

Carpentry

- Certificate in Carpentry Foundation

Electrical

- Certificate in Electrical Foundation

Fine Furniture – Joinery

- Certificate in Fine Furniture
- Certificate in Joinery Foundation

Heavy Duty/Commercial Transport Mechanic

- Certificate in Heavy Duty Mechanic Foundation
- Certificate in Commercial Transport Mechanic Foundation

Horticulture Technician

- Certificate in Horticulture Technician

Plumbing & Pipe Trades

- Certificate in Plumbing and Pipe Trades Foundation

Plumbing, Refrigeration & Pipe Trades

- Certificate in Plumbing, Refrigeration and Pipe Trades Foundation

Professional Cook Foundation

- Certificate in Professional Cook Foundation, Level 1

Certificate in Professional Cook Foundation, Level 2

Sheet Metal Technician

- Certificate in Sheet Metal Foundation
- Certificate in Aircraft Structural Technician Foundation

Welding

- Certificate in Welding, Level C*
- * The Industry Training Authority (ITA) has converted this to an Apprenticeship model.

Other Trades Programs

Welding

- Welding Testing
- Welding Upgrading
- Certificate in Welding, Level B
- Certificate in Welding, Level A

Apprenticeship Programs

- Automotive Service Technician**
- Carpenter**
- Domestic/Commercial Gasfitter*
- Domestic/Residential Certified Geothermal Technician*
- Domestic/Residential Certified Heating Technician*
- Electrician**
- Joiner**
- Metal Fabricator**
- Plumber**
- Professional Cook**
- Refrigeration & Air Conditioning Mechanic**
- Residential Building Maintenance Worker*
- Residential Construction Framing Technician*
- Sheet Metal Worker**
- Sprinkler Fitter**
- Steam/Pipefitter**
- Welder**

All programs receive the BC Certificate of Apprenticeship.

All programs upon completion of the final level receive a Certificate in Apprenticeship Technical Training.

* These programs receive the BC Certificate of Qualification.

** These programs receive the BC Certificate of Qualification with the Interprovincial "Red Seal" Endorsement.

TECHNOLOGY PROGRAMS

Civil Engineering Programs

Civil Engineering Technology Access

- *Certificate in Civil Engineering Technology Access*

Civil Engineering Technology

- *Diploma in Civil Engineering Technology*
- *Diploma in Civil Engineering Technology, Co-operative Education Designation*
- *Diploma in Civil Engineering Technology, Internship Designation*

Computer Systems Programs

Computer Systems Technician

- *Certificate in Computer Systems Technician*
- *Certificate in Computer Systems Technician, Internship Designation*

Computer Systems Technology

- *Diploma in Computer Systems Technology*
- *Diploma in Computer Systems Technology, Co-operative Education Designation*
- *Diploma in Computer Systems Technology, Internship Designation*

Electronics & Computer Engineering Programs

Electronics and Computer Engineering Technology Access

- *Certificate in Electronics and Computer Engineering Technology Access*

Electronics and Computer Engineering Technology – Renewable Energy

- *Diploma in Electronics and Computer Engineering Technology – Renewable Energy*
- *Diploma in Electronics and Computer Engineering Technology – Renewable Energy, Co-operative Education Designation*
- *Diploma in Electronics and Computer Engineering Technology – Renewable Energy, Internship Designation*

Network and Electronics Technician

- *Certificate in Network and Electronics Technician*
- *Certificate in Network and Electronics Technician, Internship Designation*

Mechanical Engineering Programs

Engineering Graphics Technician

- *Certificate in Engineering Graphics Technician*

Mechanical Engineering Technology Access

- *Certificate in Mechanical Engineering Technology Access*

Mechanical Engineering Technology

- *Diploma in Mechanical Engineering Technology*
- *Diploma in Mechanical Engineering Technology, Co-operative Education Designation*
- *Diploma in Mechanical Engineering Technology, Internship Designation*

Engineering Bridge Programs

Civil Engineering Bridge

- *Advanced Diploma in Civil Engineering Bridge*

Computer Engineering Bridge

- *Advanced Diploma in Computer Engineering Bridge*

Computer Science Bridge

- *Advanced Diploma in Computer Science Bridge*

Electrical Engineering Bridge

- *Advanced Diploma in Electrical Engineering Bridge*

Mechanical Engineering Bridge

- *Advanced Diploma in Mechanical Engineering Bridge*

Mining Engineering Bridge

- *Advanced Diploma in Mining Engineering Bridge*

Software Engineering Bridge

- *Advanced Diploma in Software Engineering Bridge*
- *Advanced Diploma in Software Engineering Bridge, Internship Designation*

Other Programs

AutoCAD Graphics, Computer-aided Design

- *Certificate in AutoCAD Graphics, Computer-aided Design*

NAUTICAL TRAINING

Watchkeeping Mate

Watchkeeping Mate, Near Coastal

Chief Mate, 150 Ton Domestic

Master, 150 Ton Domestic

Master, 500 Ton Domestic

Master, 500 Ton Near Coastal

Master, 3000 Ton Domestic

Master, 3000 Ton Near Coastal

Chief Mate

Chief Mate, Near Coastal

Master, 60 Ton Limited

Fishing Master, Class 4

Fishing Master, Class 3

Trades Programs

All admission requirements for entry into Trades programs are as stated in this calendar, but students should be aware that many employers require completion of grade 12 for entry to employment.

Applicants who do not have the necessary admission requirements will need to write assessment or competency tests.

The Worker's Compensation Board (WCB) limits its coverage to students who are injured during the practicum component of their college programs only. WCB will no longer provide accident insurance for students who are injured while participating in classroom/lab/shop instruction. Students are advised to check with their program Chair to ascertain if their practicum is covered by WCB. The only exception will be apprentices who will still be fully covered by WCB while participating in classroom/lab/shop instruction.

Because MSP may only pay part of the medical costs incurred for student accidents which occur during classroom/lab/shop instruction, Camosun College has purchased, as part of every student's tuition fees, private accident insurance which will compensate for the lack of WCB coverage.

CSA-approved safety footwear must be worn in most program shops. The exception to this rule is Electrical, Cook Training, Nautical and Horticulture (depending on the activity).

Foundation Programs (Formerly ELTT and Pre-employment)

The intent of this collection of programs is to provide skills and knowledge necessary for initial entry into specified occupations and trades. Having identified an appropriate specialty (e.g., Plumbing, Refrigeration & Pipe Trades) the student enters the first of two competency based learning levels and progresses through to complete the following levels:

- Common Core/Occupational Core*
- Specialty Core*

* This is not applicable to all Foundation programs (e.g., Automotive Service Technician, Carpentry, Sheet Metal Technician and Heavy Duty/Commercial Transport)

Graduates of the Foundation program obtain training consistent with provincial standards for those occupational cores and specialties completed but will not acquire the skills and knowledge necessary to become fully qualified. Credit for completing these courses may be applied to apprenticeships affiliated with these specialties.

Notes:

1. *Students should be in good physical health and have good hand-eye coordination and manual dexterity.*
2. *Prospective students should call 250-370-3846 for information on attending a free Information Session.*
3. *Some employers may require additional high school level courses (e.g., English 12, Principles of Math 12, Physics 11).*
4. *Program content and duration are under constant review by the College and the Industry Training Authority; consequently, there could be changes at any time.*

Automotive Service Technician

This 30-week program is designed to prepare the student for entry into the Automotive Mechanical Repair trade, and provides accreditation towards Automotive Service Technician Level 1. The main focus is on Automotive Service Technician requirements but basic internal combustion engine theory and systems are also addressed. Upon completion, students will have the option to write the Industry Training Authority Automotive Service Technician 1 Certificate of Qualification.

Length: 30 weeks

Location: Interurban Campus

Starting: September and March

Program Code(s): AUTOSTF

Admission Requirement(s):

- Submit proof of "C" in English 11, or ENGL 058; or assessment; and,
- Submit proof of "C" in Apprenticeship and Workplace Math 11, or MATH 038; or assessment.

Note: *If a student does not have one of these preferred math requirements, the college will accept a "C" in Foundations of Math 11, or Pre-calculus 11, or Applications of Math 11, or Principles of Math 11, or MATH 073, or MATH 137.*

OR

- Successful completion of the Trades Assessment Test.

Program Participation Requirement(s):

- Students should be in good physical health and have good hand-eye coordination and manual dexterity; and,
- Students must obtain 70% weighted as per program outline.

Program Completion Requirement(s):

- Students must obtain 80% ("COM") in each module to obtain a Certificate in Automotive Mechanical Repair Foundation.

Upon completion, students will have competence in:

- Workplace safety;
- Employability skills;
- Tools and equipment;
- General automotive maintenance;
- General automotive practices;
- Brakes systems;
- Steering systems;
- Suspension systems; and,
- Basic electrical systems.

A key part of the program is two weeks work experience in which the student has the opportunity to experience the real world of the automotive repair trade.

Carpentry

This program provides skills and knowledge necessary for initial entry into the Carpentry trade. The program is delivered in these components: site layout, footings & foundations, and wood frame construction. Current best practices for environmental sustainability are emphasized.

Graduates of the program obtain training consistent with provincial standards for those occupational cores and specialties completed but will not acquire the skills and knowledge necessary to become fully qualified. Credit for completing this program may be applied to apprenticeships affiliated with these specialties.

The program prepares students for a career in the construction industry by developing skills equivalent to that of a first-year apprentice. To attain this objective, hands-on practical experience is emphasized. The practical projects will usually be done on site either at the college or in cooperation with local industry.

Students will be exposed to the same conditions as encountered on the job and must be prepared to work outdoors regardless of the weather. Students may occasionally have to work longer than normal college hours depending on the project. Students should be in good physical health and have good hand-eye coordination and manual dexterity.

This full-time program is comprised of two, three-month courses. Students can enter the program at the beginning of either course.

Length: 25 weeks

Location: Interurban Campus

Starting: January, April, July, October

Program Code(s): CARPF

Admission Requirement(s):

- Submit proof of "C" in English 11, or ENGL 058; or assessment; and,
- Submit proof of "C" in Apprenticeship and Workplace Math 11, or MATH 038; or assessment.

Note: *If a student does not have one of these preferred math requirements, the college will accept a "C" in Foundations of Math 11, or Pre-calculus 11, or Applications of Math 11, or Principles of Math 11, or MATH 073, or MATH 137.*

OR

- Successful completion of the Trades Assessment Test.

Program Completion Requirement(s):

- A minimum grade of 70% ("COM") overall is required to obtain a Certificate in Carpentry Foundation.

Upon completion, students will be able to:

- Describe the carpentry trade;
- Demonstrate good work habits; and,
- Explain LEED, "Built Green," and the rationale behind "green" buildings.

Use Safe Work Practices

- Describe shop and site safety practices;
- Describe personal safety practices;
- Identify precautions when working with hazardous materials;
- Describe general safety rules for using hand tools;
- Demonstrate basic body mechanics when lifting or moving objects; and,
- Extinguish small fires.

Interpret Drawings and Specifications

- Read residential drawings;
- Sketch and draw simple details;
- Interpret specific information from the BC Building Code, including Part 10 – Water and Energy Efficiency; and,
- Estimate material quantities and identify construction details.

Identify Materials

- Describe wood characteristics;
- Select framing and finishing lumber;
- Select panel products;
- Select fasteners, adhesives and caulking compounds;
- Select finish and framing hardware; and,
- Differentiate environmentally sustainable materials.

Use Hand Tools

- Describe measuring and layout tools;
- Use and maintain cutting tools;
- Use and maintain edge-cutting tools;
- Use and maintain drilling and boring tools;

- Describe the use and maintenance of fastening tools;
- Describe the use and maintenance of miscellaneous tools; and,
- Use hand tools to construct a wood project.

Use Portable Power Tools

- Use and maintain portable power tools;
- Use and maintain power-actuated tools; and,
- Use and maintain chain saws.

Use Shop Equipment

- Use and maintain a table saw;
- Use and maintain a radial arm saw; and,
- Use and maintain miscellaneous shop equipment.

Use Survey Instruments

- Use optical levels.

Use Site Layout

- Layout building locations;
- Use concrete formwork;
- Build footings and wall forms; and,
- Describe and demonstrate the use of environmentally sustainable framing materials and methods.

Frame Residential Wood-Frame Housing

- Describe types of wood frame construction;
- Build foundations and floors;
- Build walls and partitions;
- Build gable roofs with ceiling joists;
- Build straight stairs;
- Build hip roofs; and,
- Describe and demonstrate the use of environmentally sustainable framing materials and methods.

Electrical

The Electrical Foundation program is a competency based, self-paced program in which students are able to learn at a comfortable pace. New students are admitted throughout the year.

The knowledge, skills and attitudes that will enable students to become a valuable and safe apprentice have been developed with the assistance and support of the electrical industry. The curriculum is organized into competencies under the major categories of Common Core, Occupational Core and Electrical Specialty.

To complete each competency, students read information contained in learning guides, practice skills in a lab or shop environment, receive one-on-one instructor assistance as needed, then are evaluated with a written test, and for some competencies complete a project or demonstration to program standards.

Length: 25 weeks**Location:** Interurban Campus**Starting:** Monthly (as space permits)**Program Code(s):** ELECTRICF**Admission Requirement(s):**

- Submit proof of "C" in English 12, or EFP 12; or ENGL 092 and ENGL 094; or ENGL 092 and ENGL 096; or ENGL 103 and ENGL 104; or ENGL 103 and ENGL 106; or ENGL 140; or ELD 092 and ELD 094; or ELD 097; or assessment; and,
- Submit proof of "C" in Apprenticeship and Workplace Math 11, or MATH 057; or assessment.

Note: *If a student does not have one of these preferred math requirements, the college will accept a "C" in Foundations of Math 11, or Pre-calculus 11, or Applications of Math 11, or Principles of Math 11, or MATH 073, or MATH 137.*

Program Participation Requirement(s):

- Students must obtain 80% ("COM") to pass each module.

Program Completion Requirement(s):

- Students must obtain 80% ("COM") in each module to obtain a Certificate in Electrical Foundation.

Upon completion students will be able to:

- Safely and effectively utilize meters, tools and equipment prevalent in the electrical trade;
- Install, troubleshoot and maintain electrical conductors, components and equipment in accordance with established standards, practices and codes;
- Calculate electrical circuit quantities;
- Use a logical thinking process for problem-solving and decision making;
- Take responsibility for decisions and action;
- Communicate clearly and appropriately in written and spoken English and visual form;
- Interact with others within groups or teams in ways that contribute to the effective working relationships and achievements of goals; and,
- Creatively adapt to new challenges and technologies by applying and/or updating knowledge, skills and attitudes.

Level 1 Common Core

- Describe effective learning techniques;
- Describe safe work practices;
- Solve mathematical problems;
- Apply trade science concepts;
- Process technical information;
- Use hand tools and measuring tools;
- Use power tools;
- Lift loads;

- Erect ladders and scaffolds;
- Assemble basic electrical circuits;
- Use common fastenings and fittings; and,
- Describe industrial organizations.

Level 2 Occupational Core

- Describe safe work practices for the electrical trade;
- Describe the electrical trade;
- Interpret electrical schematics and diagrams;
- Apply the principles of electromagnetism;
- Apply electrical energy and power concepts;
- Use basic electrical measuring instruments;
- Analyze series, parallel and combination circuits;
- Select conductors for specific applications;
- Use electrical hand tools;
- Install selected circuit devices; and,
- Connect AC single phase motors and controls.

Level 3 Electrical Specialty

- Apply safe and acceptable work habits;
- Apply the Canadian Electrical Code;
- Use specialized hand tools;
- Use specialized power tools;
- Identify cables, fixtures and fittings;
- Install cables, fixtures and fittings;
- Describe DC principles of electricity;
- Analyze three wire circuits;
- Connect and operate single phase transformers;
- Connect and operate AC motor controls;
- Connect and operate lighting circuits; and,
- Industrial power electronics.

Fine Furniture – Joinery

Graduates of this program will have knowledge and skills necessary for initial entry into the cabinet making and millwork trades, as well as the furniture design, construction and finishing/refinishing industries.

Students can pursue a full Apprenticeship in Joinery through the Industry Training Authority (ITA) after completion of the first 32 weeks. Students who complete the whole program will be eligible to receive both a Certificate in Joinery Foundation, and a Certificate in Fine Furniture.

Classroom work and practical shop projects emphasize the skills required for success in a small scale shop or self-employment situation.

Length: 10 months

Location: Interurban Campus

Starting: September

Program Code(s): FFURNJ

Admission Requirement(s):

- Successful completion of an assessment test* in applied mathematics, English and 3-D visualization; and,
- Submission of a portfolio (samples, slides or photographs of craft work indicating design and hand skills).

* To schedule an assessment, contact the Assessment Centre at 250-370-3597.

Program Completion Requirement(s):

- Students must successfully complete ("COM") weeks 1 - 32 to be eligible to obtain a Certificate in Joinery Foundation.
- Students must successfully complete ("COM") weeks 1 - 40 to be eligible to obtain a Certificate in Fine Furniture.

Courses

FURN 152 Fine Furniture 1
 FURN 154 Fine Furniture 2
 FURN 156 Fine Furniture 3

September to December

In the first sixteen-week term, through a series of theoretical lectures and demonstrations and shop-based practical projects, students will develop basic skills and acquire practical competency with hand and power tools used in the furniture trade, with an emphasis on safety. In addition, students will learn about wood products and materials, basic joinery, fastening methods, selection and use of adhesives and abrasive materials. Students will also be introduced to commercial practices and the processes of design.

January to April

In the second sixteen-week term students develop skills with more advanced techniques including veneering, laminating, lathe turning, carving, and shaping curves. Students will progress through more advanced joinery techniques, as well as finishing topcoat materials and application techniques, and the use of non-wood products in furniture making. Students will also expand their knowledge of commercial practices, design principles and receive more information on furniture history.

May and June

In the final eight-week term, students refine their presentation techniques and become more adept at the commercial practices inherent in the furniture trade. Students also learn basic techniques of upholstery, furniture restoration and repair. As a final project, students design and construct a piece of furniture, which is evaluated by a panel of experts and included in a public exhibition.

Heavy Duty/Commercial Transport Mechanic

Camosun College's Heavy Duty/Commercial Transport Mechanic Foundations program provides students with skills and theory necessary for initial entry into the Heavy Duty Mechanic trade, or the Commercial Transport trade. Graduates will receive two certificates: one in Heavy Duty and one in Commercial Transport.

This program trains students to become proficient in the service and maintenance of on-highway commercial vehicles such as trucks, buses or fleet vehicles. Special emphasis is placed on electrical systems, hydraulic systems, air and hydraulic brakes, power trains and engine systems. The Heavy Duty section covers off-highway equipment such as excavators, dozers and loaders.

Length: 10 months (40 weeks)

Location: Interurban Campus

Starting: September

Program Code(s): HDMECHF

Specialization Code(s):

HEAVY Heavy Duty

COMTR Commercial Transport

Admission Requirement(s):

- Submit proof of "C" in English 11, or English 12, or EFP 12, or ENGL 058; or assessment; and,
- Submit proof of "C" in Apprenticeship and Workplace Math 11, or MATH 038; or assessment.

Note: If a student does not have one of these preferred math requirements, the college will accept a "C" in Foundations of Math 11, or Pre-calculus 11, or Principles of Math 11, or Applications of Math 11, or MATH 073, or MATH 137.

OR

- Successful completion of the Trades Assessment Test.

Program Completion Requirement(s):

- A minimum grade of (70%) mark overall is required to obtain a Certificate in Heavy Duty Mechanic Foundation and a Certificate in Commercial Transport Mechanic Foundation.

Upon completion students will be able to:

Orientation

- Use safe and acceptable work practices;
- Use basic shop tools;
- Use forklifts, jacks, cranes and blocking;
- Identify and use pipe, tubing, hoses and fittings;
- Identify and use bolts, nuts, screws and helicoils;

- Identify bearings and seals;
- Perform fluid and lubricant services; and,
- Perform basic welding repairs with gas welding, arc welding and wire feed welding equipment.

Trucks and Buses

- Service clutches and torque converters;
- Service manual transmission including twin countershafts;
- Service automatic transmissions and powershifts;
- Service drive lines;
- Service differentials (all styles);
- Service hydraulic brakes;
- Service air brakes (qualify for the practical portion of your air ticket);
- Service wheels and tires;
- Service rear suspension;
- Service steering;
- Service 5th wheels; and,
- Service air controls and starters.

Track and Rubber Tired Machines

- Service hydraulics;
- Service wheel machine final drives;
- Service undercarriages;
- Service steering clutches and brakes; and,
- Service winches.

Electrical

- Identify circuits and systems;
- Service batteries;
- Service starters; and,
- Service alternators.

Engine Support Systems

- Service fuel, oil, water, exhaust and air systems; and,
- Perform engine tune up procedures.

Work Experience (3 weeks)

Horticulture Technician

This program provides students with a wide range of employment opportunities in the horticulture industry in areas such as landscaping, landscape maintenance, parks, golf courses, retail garden outlets, ground crops industry, greenhouses, silviculture, nurseries, wholesale warehousing, transportation, etc.

The Basic Grounds Maintenance Course, which occupies approximately half of the program, is designed to provide basic skills and knowledge related to practical gardening in the nursery industry.

The second part of the program is designed to provide advanced skills and knowledge in botany, nursery, green house management, and landscape design, and leads to a Certificate in Horticulture Technician.

The Certificate in Horticulture Technician includes Licensing Certification in Pesticide Applicator (BC), Pesticide Dispenser (BC) and Occupational First Aid, and is considered for credit merit to several related horticulture technology programs offered at other British Columbia colleges.

Students can also gain credits for levels one and two of the Horticulture Technician apprenticeship by writing the relevant ITA exams. The course also credits students with 500 hours of apprenticeship time.

Length: 10 months

Location: Royal Roads University

Starting: July

Program Code(s): HORTTECN

Admission Requirement(s):

- Submit proof of "C" in English 10, or ENGL 058; or assessment; and,
- Submit proof of "C+" in Apprenticeship and Workplace Math 10; or "C" in MATH 038; or assessment.

Note: *If a student does not have one of these preferred math requirements, the college will accept a "C" in Foundations of Math and Pre-calculus 10, or Principles of Math 10, or Applications of Math 10, or MATH 053.*

OR

- Successful completion of the Trades Assessment Test.

AND

- Submission of a portfolio as follows:
 - Submit a short letter expressing your reasons for applying and goals for the course;
 - Present a booklet containing six photographs (mounted prints, no more than two per page); of a small garden scene, larger landscape, plants, horticultural workplace and/ or any other creative setting which interests you, with written captions explaining choice of photo; and,
 - Complete a survey sheet, provided by the college (or consult our [website](#)).

Note: *Students must be physically fit, be able to perform routine gardening duties and be prepared to work outdoors in all weather conditions. Students are advised to consult the Horticulture Department if there are any concerns.*

Program Participation Requirement(s):

- Students must successfully complete all Academic Term 1 courses with a "COM" grade or higher in order to progress to Academic Term 2.

Program Completion Requirement(s):

- Students must successfully complete all Academic Term 1 and Academic Term 2 courses and the work experience requirement* with a "COM" grade or higher in order to obtain a Certificate in Horticulture Technician.

* *Two work experience components are included. Students employed in horticulture at program's end may request to have their work experience credited for the final work experience component.*

Academic Term 1 (July to November)

HORT 103	Introduction to Horticulture
HORT 104	Plant Identification 1
HORT 105	Botany for Horticulture
HORT 106	Soils and Growing Media
HORT 107	Landscape Design & Maintenance 1
HORT 108	Pests and Pesticide Applicators
HORT 109	Plant Propagation
HORT 110	Turf Grass Maintenance
HORT 140	Work Experience 1

Academic Term 2 (December to April)

HORT 121	Diseases and Dispensers
HORT 122	Greenhouses and Environments
HORT 123	Equipment Maintenance
HORT 124	Plant Identification 2
HORT 126	Irrigation & Drainage
HORT 127	Landscape Design & Maintenance 2
HORT 128	Arboriculture
HORT 129	Plant Propagation 2
HORT 131	Business Practices in Horticulture
HORT 132	Horticulture Therapy
HORT 133	Water Gardening
HORT 134	Organic Vegetable Gardening
HORT 135	Retail & Wholesale Production
HORT 141	Work Experience 2

Plumbing and Pipe Trades

(This program is presently under review and may change.)

The Plumbing and Pipe Trades Foundation program provides students with the skills and theory necessary to enter the following designated pipe trades at a starting or initial entry level:

- Plumbing
- Pipefitting/Steamfitting
- Sprinkler Fitting
- Gas Fitting
- Refrigeration

The program prepares the graduate for work in the construction industry. The program will also benefit those students seeking employment with employers in other piping trade related fields such as, the irrigation industry, municipal services, solar systems installation, or plumbing wholesale suppliers.

The Plumbing/Pipe Trades Foundation program is a full-time competency-based program. Students will have scheduled mandatory lectures and demonstration, after which they can work and learn at their own pace. Students with good work ethics, time management skills, and prior learning may be able to accelerate their completion.

A student who successfully completes the program and is able to obtain an apprenticeship may be eligible for credits for Year 1 schooling of an apprentice. The main focus is on Year 1 apprentice competencies that are common to all of the piping trades. To achieve these competencies students will complete many hands-on projects exposing them to the different pipe trades specialties.

Length: 25 weeks

Location: Interurban Campus

Starting: Bi-monthly

Program Code(s): PLUMBF

Admission Requirement(s):

- Submit proof of "C" in English 11, or ENGL 058; or assessment; and,
- Submit proof of "C" in Apprenticeship and Workplace Math 11, or MATH 038; or assessment.

Note: *If a student does not have one of these preferred math requirements, the college will accept a "C" in Foundations of Math 11, or Pre-calculus 11, or Applications of Math 11, or Principles of Math 11, or MATH 073, or MATH 137.*

OR

- Successful completion of Trades Assessment Test.

Program Participation Requirement(s):

- Students should be in good physical health and have good hand-eye coordination and manual dexterity; and,
- Students must obtain an overall grade of 80% ("COM") to pass each module.

Program Completion Requirement(s):

- Students must obtain 80% ("COM") in each module to obtain a Certificate in Plumbing and Pipe Trades Foundation.

Upon completion students will be able to:

Level 1 Common Core

- Use safe work practices;
- Solve mathematical problems;
- Apply science concepts;
- Sketch and read drawings;
- Process technical information;
- Use basic measuring, layout and hand tools;
- Use power tools;
- Lift loads;
- Erect ladders and scaffolds;
- Oxy-acetylene cut and weld;
- Assemble and test electrical circuits;
- Use fastenings and fittings;
- Prepare for employment; and,
- Develop employability skills.

Level 2 Occupational Core

- Use safe work practices;
- Describe the piping trades;
- Read and interpret drawings and specifications;
- Solve related mathematical problems;
- Use piping hand tools;
- Use specialized power tools;
- Use piping shop equipment;
- Oxy-acetylene weld; and,
- Construct piping projects.

Level 3 Plumbing and Pipe Trades Specialty

- Apply safe and acceptable work habits;
- Solve related science problems;
- Select common plumbing materials;
- Install valves, fittings, hangers, support and sleeving;
- Install and test hot water (hydronic) heating systems;
- Install and test a drainage, waste and venting system;
- Install and test a potable water supply system;
- Install standard plumbing fixtures; and,
- Maintain plumbing systems and components.

Plumbing, Refrigeration & Pipe Trades

The Plumbing, Refrigeration, & Pipe Trades Foundation program is a pre-apprenticeship program that provides students with the skills and theory necessary to enter the following designated pipe trades at a starting or initial entry level:

- Plumber
- Pipe Fitter/Steam Fitter
- Sprinkler Fitter
- Gas Fitter
- Refrigeration and Air Conditioning Mechanic
- Geothermal Technician
- Heating Technician

The program prepares the graduate for work on installation, repair and service of systems in the residential, commercial and industrial industries. The program will also benefit those students seeking employment in wastewater treatment, well pump installation, heating, geothermal, irrigation, municipal services, and wholesale supply.

A student who successfully completes the program and is able to obtain an apprenticeship will be eligible for credit toward their Year 1 training. The main focus is on Year 1 apprentice competencies for all of the piping trades. To achieve these competencies students will complete many hands-on projects exposing them to the different pipe trades specialties.

Length: 36 weeks

Location: Interurban Campus

Starting: Tri-monthly, continuous intake
Also lockstep Jan. 24

Program Code(s): PRPTF

Admission Requirement(s):

- Submit proof of "C" in English 11, or ENGL 058; or assessment; and,
- Submit proof of "C" in Apprenticeship and Workplace Math 11, or MATH 038; or assessment.

Note: *If a student does not have one of these preferred math requirements, the college will accept a "C" in Foundations of Math 11, or Pre-calculus 11, or Applications of Math 11, or Principles of Math 11, or MATH 073, or MATH 137.*

OR

- Successful completion of Trades Assessment Test.

Program Participation Requirement(s):

- Students should be in good physical health and have good hand-eye coordination and manual dexterity; and,
- Students must obtain an overall grade of 80% ("COM") to pass each module.

Program Completion Requirement(s):

- Students must obtain 80% ("COM") in each module to obtain a Certificate in Plumbing, Refrigeration & Pipe Trades Foundation.

Upon completion students will be able to:

Common Core

- Use safe work practices;
- Use tools and equipment;
- Organize work;
- Prepare and assemble piping components;
- Assemble and test electrical circuits;
- Prepare for employment; and,
- Demonstrate employability skills.

Speciality Core

- Install sanitary and storm drainage systems;
- Install water service and distribution;
- Install standard plumbing fixtures;
- Install HVAC systems;
- Install refrigeration systems;
- Describe and install other specialized piping systems; and
- Install pumping systems

Professional Cook

Professional Cook Level 1

The Professional Cook Level 1 Foundation program is a 28-week Industry Training Authority (ITA) certified program that will provide learners with a solid foundation of culinary skills. While working in a supervised environment, students perform basic cooking and food preparation tasks utilizing knife skills, correct terminology and a variety of cooking methods. Students will be able to follow recipes, weigh and measure food accurately, and have an understanding of the major techniques and principles used in cooking, baking, and other aspects of food preparation in a limited number of areas of the kitchen, such as breakfast/short order, sandwiches and salads, vegetables and starches, or the preparation of soups and basic sauces.

The food service industry is one of the nation's biggest employers, and opportunities for graduates of Professional Cook programs are numerous and diverse. Students who successfully complete the program are eligible to receive a Camosun College Certificate in Professional Cook Level 1 Foundation, and a credit of 600 hours towards their apprenticeship. Those that can demonstrate an additional 400 hours of industry practical experience are also eligible to receive Industry Training Authority (ITA) Certificate of Qualification PC1.

Students who successfully complete the Professional Cook Level 1 Foundation program have the opportunity to continue on to the Professional Cook Level 2 Foundation program. Subsequently, they can complete the training in the Professional Cook Level 3 Apprenticeship program. Upon graduating from Professional Cook Level 1 and/or 2 Foundation programs past graduates have found excellent positions in fine dining in some of the most famous hotels and restaurants locally, nationally or internationally, as well as positions requiring planning and costing, elaborate buffets, and large-function catering.

Length: 28 weeks
Location: Interurban Campus
Starting: September, January, April
Program Code: PRCOF1

Note: Students who require information on the Red Seal program need to contact the apprenticeship office at 250-370-4030.

Admission Requirement(s):

- Candidates must submit proof (e.g., resume) of at least three (3) months of work experience related to the food service industry, together with a letter of reference from their employer to Enrolment Services;
- Submit documented completion of FOODSAFE Level 1 to Enrolment Services.

AND

- Submit proof of "C" in English 10, or ENGL 050, or ENGL 057; or assessment; and,
- Submit proof of "C+" in Apprenticeship and Workplace Math 10; or "C" in MATH 037; or assessment.

Note: If a student does not have one of these preferred math requirements, the college will accept a "C" in Foundations of Math and Pre-calculus 10, or Principles of Math 10, or Applications of Math 11, or MATH 053.

OR

- Completed GED with a minimum average standard score of 500 and a minimum standard score of 500 for both Math and English.

OR

- Assessment.*

* *The Dean of Trades and Technology or designate may ascertain upon assessment that a student can enter the program without meeting the defined admission requirements. The Dean or designate will provide a student with written permission for the student to present to the Enrolment Services office. Students should contact the Apprenticeship Office at 250-370-4030 for more information.*

Professional Cook Level 2

The Professional Cook Level 2 Foundation program is a 14-week Industry Training Authority (ITA) certified program that builds on the culinary skills learned in the Professional Cook Level 1 Foundation program. While working under some supervision, students will perform a variety of cooking and food preparation tasks using multiple cooking methods. In addition to using the major techniques and principles used in cooking, baking, and other aspects of food preparation, students will gain a preliminary understanding of food costing, menu planning and purchasing processes.

The food service industry is one of the nation's biggest employers, and opportunities for graduates of Professional Cook programs are numerous and diverse. Graduates from our program can seek work in restaurants, lodges, clubs, institutions, catering companies, resorts, family restaurants, hospitals, logging camps, cruise ships, school's bistros or hotels.

Students who successfully complete the program are eligible to receive a Camosun College Certificate in Professional Cook Level 2 Foundation, and a credit of 240 hours towards their apprenticeship. Those that can demonstrate an additional 760 hours in industry practical experience are eligible to receive an Industry Training Authority (ITA) Certificate of Qualification PC2.

Students who successfully complete the Professional Cook Level 2 Foundation program have the opportunity to continue on to the Professional Cook Level 3 Apprenticeship program. Upon graduating from the Professional Cook Level 2 and/or Professional Cook Apprentice Level 3 programs, past graduates have found excellent positions in fine dining in some of the most famous hotels and restaurants locally, nationally or internationally, as well as positions requiring planning and costing, elaborate buffets, and large-function catering.

Length: 14 weeks

Location: Interurban Campus

Starting: September, January, April

Program Code: PRCOF2

Admission Requirement(s):

- Submit ITA Certificate of Qualification PC1 or equivalent. (For equivalency questions, students should contact the Apprenticeship Office at 250-370-4030.)

Program Participation Requirement(s):

- Attend an orientation scheduled by Camosun College approximately one month prior to the program start date.
- Submit a Medical Assessment form to Enrolment Services two weeks prior to class start confirming they are in "good general health".*

* *The work environment in which a Professional Cook student/graduate will be employed requires demanding lifting and moving techniques, working beside hot ovens and grills and extensive hand washing may not be suited for some students with a significant health challenge(s). Students may wish to consult with a Department Chair for more information.*

Program Completion Requirement(s):

- To qualify for the certificate, students must successfully complete the program content with a minimum of grade of 70% or higher.

Professional Cook Level 3

Students who wish to complete their Level 3 technical training at Camosun and obtain their Red Seal Qualification (Cook) should contact the Camosun College apprenticeship office at **250-370-4030** for more information.

Sheet Metal Technician

This 25-week program will provide students with an opportunity to earn a Certificate in Sheet Metal Foundation and Aircraft Structural Technician Foundation. The first block (approximately eight weeks) equipment and processes are common to all sheet metal trades. The second block (approximately nine weeks) focuses on skills and processes specific to the construction and manufacturing industries. The final block (approximately eight weeks) focuses on skills and processes used in precision sheet metal manufacturing and aircraft sheet metal manufacturing.

Length: 25 weeks

Location: Interurban Campus

Starting: September

Program Code(s): SHTECNF

Specialization Code(s):

AIRCRC Aircraft Structural

SHEET Sheet Metal

Admission Requirement(s):

- Submit proof of "C" in English 11, or ENGL 058; or assessment; and,
- Submit proof of "C" in Apprenticeship and Workplace Math 11, or MATH 038; or assessment.

Note: *If a student does not have one of these preferred math requirements, the college will accept a "C" in Foundations of Math 11, or Pre-calculus 11, or Applications of Math 11, or Principles of Math 11, or MATH 073, or MATH 137.*

OR

- Successful completion of the Trades Assessment Test.

Program Participation Requirement(s):

- Students should be in good physical health and have good hand-eye coordination and manual dexterity.

Program Completion Requirement(s):

- A minimum grade of 70% ("COM") overall to obtain a Certificate in Sheet Metal Foundation and a Certificate in Aircraft Structural Technician Foundation.

Upon completion student will be able to:

Common Core (8 weeks)

- Describe the Sheet Metal trade;
- Use safe and acceptable work practices;
- Select and identify sheet metals;
- Use mathematics for sheet metal fabrication;
- Use measuring, layout and hand tools;
- Perform basic drafting and procedures;
- Read basic orthographic drawings;
- Use standard sheet metal shop equipment; and,
- Construct metal projects and install fasteners.

Sheet Metal Specialty (9 weeks)

- Form seams and edges;
- Solder sheet metal;
- Use layout and pattern development procedures;
- Perform basic architectural sheet metal procedures;
- Use shop work procedures;
- Perform field installation procedures; and,
- Perform basic welds on sheet metal using gas, arc and wire welding equipment.

Precision/Aircraft Structural Specialty (8 weeks)

- Use safe and acceptable work practices;
- Use basic tools and equipment of the aircraft sheet metal manufacturing industry;
- Read technical drawings and process technical information;
- Apply mathematics and physics principles;
- Manufacture parts;
- Perform sheet metal fabrication and assembly;
- Describe corrosion control procedures;
- Describe sealing and sealants; and,
- Describe and use specialized fasteners and processes of the aircraft sheet metal manufacturing industry.

Welding C

This is a modular program designed to prepare the graduate for employment as a welder. Upon successful completion, the graduates will receive a Welder's Log Book issued by the college. Subjects covered include Introduction and Safety; Oxy-Fuel Gas Cutting; Oxy-Fuel Gas Welding and Brazing; Shielded Metal Arc Welding I; Arc Air Gouging; Gas Metal Arc Welding; Flux Cored Arc Welding; Materials Handling; Blue Print Reading I; Welding Metallurgy. Graduates will be able to progress into Welding B after meeting employment requirements and obtaining Level C Registered Welder Qualification.

Length: Self-paced training, generally 28 weeks

Location: Interurban Campus

Starting: Monthly (as space permits)

Program Code(s): WELDCF

Admission Requirement(s):

- Submit proof of "C" in English 10, or ENGL 050, or ENGL 058; or assessment; and,
- Submit proof of "C+" in Apprenticeship and Workplace Math 10; or "C" in MATH 038; or assessment.

Note: *If a student does not have one of these preferred math requirements, the college will accept a "C" in Foundations of Math and Pre-calculus 10, or Principles of Math 10, or Applications of MATH 11, or MATH 053.*

OR

- Successful completion of the Trades Assessment Test.

Program Participation Requirement(s):

- Students should be in good physical health and have good hand-eye coordination and manual dexterity.

Modules

P1	Introduction/Program Orientation
P2	Oxy-Fuel Gas Cutting
P3	Gas Welding & Braze Welding
P4	Shielded Metal Arc 1
P5	Carbon Arc Gouging
P6	Gas Metal Arc/Flux Core Arc
RK1	Material Handling
RK2	Blueprint Reading 1
RK3	Welding Metallurgy
RK2B	Math Supplement

Program Completion Requirement(s):

- Satisfactory completion of all modules is required to obtain a Camosun College certificate, and module entries in the Welder's Log Book.

Other Trades Programs

Welding Testing

Camosun College's Welding department is a licensed testing agency for the Boiler and Pressure Vessel Safety Branch and the Canadian Welding Bureau, providing testing and certification to these and other codes and procedures.

Length: Varies. In consultation with the instructor

Location: Interurban Campus

Starting: Daily (as space permits)

Program Code(s): WELDUPGRADE

Specialization Code(s):

ADV Advanced

TEST Testing

Admission Requirement(s):

- Assessment by Welding Program Leader or Welding instructor.

Welding Upgrading

This program is designed for welders who require practice in a specific welding procedure that leads to a weld test and certification under a CWB or ASME code.

Length: Varies. In consultation with the instructor

Location: Interurban Campus

Starting: Daily (as space permits)

Program Code(s): WELDUPGRADE

Admission Requirement(s):

- Assessment by Welding Program Leader or Welding instructor.

Welding B

This modular program is designed for graduates of the Welding C program who require advanced training to obtain the registered Welding B qualification.

Length: Self-paced (16 weeks)

Location: Interurban Campus

Starting: (as space permits)

Program Code(s): WELDB

Admission Requirement(s):

- Successful completion of Welding C program; and,
- Registered "C" Level Stamp in Log Book.

Modules

P7 Shielded Metal ARC 2

P8 Gas Metal Arc 2

P9 Flux Core Arc 2

P10 Gas Tungsten Arc 1

RK4 Quality Control/Inspection

RK5 Code Standards/ Specifications

RK6 Blueprint Reading 2

RK7 Welding Metallurgy 2

Program Completion Requirement(s):

- Satisfactory completion of all modules is required to obtain a Camosun College certificate, and module entries in the Welder's Log Book.

Welding A

This modular program is designed for graduates of the Welding B program who require advanced training to obtain the registered Welding A qualification.

Length: Self-paced (8 weeks)

Location: Interurban Campus

Starting: Monthly (as space permits)

Program Code(s): WELDA

Admission Requirement(s):

- Successful completion of Welding B program; and,
- Registered B Level Stamp in Log Book.

Modules

P11 Shielded Metal Arc 3

P12 Gas Tungsten Arc 2

RK8 Welding Metallurgy 3

RK9 Blueprint Reading 3

Program Completion Requirement(s):

- Satisfactory completion of all modules is required to obtain a Camosun College certificate, and module entries in the Welder's Log Book.

Apprenticeship Programs

Apprenticeship is a type of paid learning or internship for a trade that consists of on-the-job-training combined with in-school post-secondary education/training. An apprentice spends 80 to 90% learning on the job and up to 10 to 20% of their time learning in the classroom. Apprenticeship is a two-way agreement between the employer and the employee to provide appropriate opportunities to learn the trade.

The Industry Training Authority (ITA) will register all agreements. The apprentice will be provided with an ITA Individual ID number (formerly the Trades Worker ID [TWID] number). Any questions regarding credit for time in the trade or challenging a trade or level must be directed to ITA Customer Service (1-866-660-6011).

Apprentices are responsible for registering with a training provider such as Camosun College for their technical training. See the list below of apprenticeship training provided by Camosun College.

In terms of educational requirements, it is recommended that all students planning to become an apprentice in a skilled trade complete a Grade 12 education that includes appropriate English and math courses. However, in some trades a Grade 10 education is still an acceptable minimum standard. Potential apprentices in some trades may be required to write an entrance examination. Individual employers may also have their own requirements in terms of education.

A common route used to start an apprenticeship within a specific trade has a person taking a Foundation (entry-level) trades training program at a college. This program will give the individual the skills and knowledge required to begin work in an industry at an entry-level position. This employment could lead to an apprenticeship with all its advantages including earning wages while learning a trade.

Although Foundation Training may not be compulsory, joint training committees and many employers recognize it as a prerequisite to employment and/or apprenticeship.

Graduates of Foundation (ELT) programs will be credited with the first level of technical training required in the trade they are registered. In most trades this will be equivalent to first year.

For most trades, the apprentice must complete up to four years of training. Each year consists of an average of 1800 hours of service including the time spent in technical training classes. Formal class time is four to ten weeks in each year, depending on the chosen trade. This training is usually done in a technical training school such as Camosun College.

When all the conditions of the apprenticeship agreement have been fulfilled, apprentices are issued a "Certificate of Apprenticeship" by the Industry Training Authority. In addition to the Industry Training Authority's (ITA) certification, students will be eligible to receive a certificate from Camosun College to recognize the completion of each level of technical training in a trade.

Apprentices may be required to write the BC Certificate of Qualification exam or the Inter-Provincial Examination (Red Seal exam) before being issued their Certificate of Qualification.

Apprenticeship program lengths and content are mandated by the ITA. See the Industry Training Authority [website](#) for additional information.

Length:

Automotive Service Technician*	6-7 weeks
Carpenter	6 weeks
Domestic/Commercial Gasfitter	6 weeks
Domestic/Residential Certified Geothermal Technician	6-8 weeks
Domestic/Residential Certified Heating Technician	6-8 weeks
Electrician	10 weeks
Joiner	6 weeks
Metal Fabricator	5 weeks
Plumber	6-8 weeks
Professional Cook*	6 weeks
Refrigeration & Air Conditioning Mechanic	6-8 weeks
Residential Building Maintenance Worker	8 weeks
Residential Construction Framing Technician	6-8 weeks
Sheet Metal Worker	6 weeks
Sprinkler Fitter	6 weeks
Steam/Pipefitter	6-8 weeks
Welder	6 weeks

Location: Interurban Campus**Program Code(s):** APPRENTICE

* These programs are using a progressive credential model. Please visit the Industry Training Authority [website](#) for current information on these programs.

TECHNOLOGY PROGRAMS

Civil Engineering Programs

Civil Engineering Technology Access

The Civil Engineering Technology Access program is designed to allow students lacking the prerequisites for the Civil Engineering Technology program to pursue the necessary upgrading courses in Math, English and Physics. Additional courses in graphics and computing will allow students to earn credits for the Civil Engineering Technology program. These courses will also help the student decide whether to pursue a career in Civil Engineering. Upon completion of the program students will have acquired:

- A seat reserved for them in the next intake to the Civil Engineering Technology program;
- skills in computers related to Engineering;
- basic skills in technical drawing; and,
- a Certificate in Civil Engineering Technology Access.

Length: Six months**Location:** Interurban Campus**Starting:** Quarter 1**Program Code(s):** CIVILACC**Admission Requirement(s):**

- Submit proof of "C" in English 10, or ENGL 050; or assessment; and,
- Submit proof of "B" in Principles of Math 10, or Foundations of Math & Pre-calculus 10, or MATH 053; or assessment.

Program Completion Requirement(s):

- Students must achieve an overall cumulative GPA of at least 2.0 in order to qualify for the Certificate in Civil Engineering Technology Access.

Pre-Quarter Courses		Credits
ENGR 190	Orientation	0.5
Total Credits		0.5

Academic Term 1 (Quarter 1)		Credits
CIVL 121	Graphics and Computing 1	2.0
ENGL 130	English for Careers	3.0
MATH 172	Basic Technical Math 1	4.0
PHYS 150	Technical Physics 1	3.0
Total Credits		12.0

Academic Term 2 (Quarter 2)		Credits
CIVL 122	Graphics and Computing 2	4.0
LRNS 102	Learning & Problem-Solving Skills	1.0
MATH 173	Basic Technical Math 2	5.0
PHYS 151	Technical Physics 2	3.0
Total Credits		13.0

Civil Engineering Technology

The Civil Engineering Technologist may find employment with an Engineering Consultant, Contractor, Soils & Materials Testing Laboratory, Project Management Consultant, Municipality or Provincial Government Ministry. As part of the engineering team, the graduate technologist may be involved in all phases of a variety of projects including the design and construction of structures, highways, airports, dams, subways, subdivisions and water and sewage treatment plants. Graduates have also found employment in surveying and with construction firms as project managers or construction supervisors and as resident inspectors for projects.

This two-year, full-time or three-year, part-time, nationally accredited diploma program will stress the use of microcomputers in the solution of civil engineering problems. Students are introduced to computer-aided-design and drafting techniques and computer-based design systems for urban planning, structures, highways, water and water/waste management and all aspects of project management. Surveying on state-of-the-art equipment is also included.

Co-operative education or internship are optional components of this program. To obtain a Co-operative Education designation, students combine classroom study with three (3) terms of co-op work experience. An Internship designation requires at least one (1) work term be completed satisfactorily. Alternating between full-time studies and full-time employment, students gain hands-on experience, marketable skills and contacts for future employment opportunities.

Graduates may apply for membership in the Applied Science Technologists and Technicians of BC (ASTTBC) and obtain certification as Engineering Technologists. Graduates of this program with a GPA of at least 5.0 may apply to the Advanced Diploma in Civil Engineering Bridge program, which bridges into Year 3 of university to allow graduates to pursue an accredited Bachelor of Engineering degree.

Length:

- Full time: 1 year, 9 months
- Full-time co-op: 2 years, 6 months
- Full-time internship: Between 1 year, 9 months to 2 years, 6 months
- Part time: 2 years, 9 months
- Part-time co-op: 3 years, 6 months
- Part-time internship: Between 2 years, 9 months to 3 years, 6 months

Location: Interurban Campus**Starting:** Quarter 1**Program Code(s):**

CIVIL1 Year 1

CIVIL2 Year 2

Admission Requirement(s):

- Submit proof of "C" in English 12, or EFP 12; or ENGL 092 and ENGL 094; or ENGL 092 and ENGL 096; or ENGL 103 and ENGL 104; or ENGL 103 and ENGL 106; or ENGL 130*; or ENGL 140; or ELD 092 and ELD 094; or ELD 097; or assessment;
- Submit proof of "C+" in Principles of Math 12, or Pre-calculus 12, or MATH 093, or MATH 107; or "C" in Calculus 12, or MATH 105, or MATH 115, or MATH 173*; or assessment; and,
- Submit proof of "C" in Physics 11, or PHYS 101, or PHYS 151*.

* These courses are part of the Civil Engineering Technology Access program.

Eligibility for Co-op Work Experience:

- To be eligible to participate in the co-op option, students must complete all Year 1 courses and obtain a GPA of 3.0, plus complete the Workplace Education Prep workshop series (COOP WEP), and be enrolled in a minimum of eight credits in the term preceding the work term;

- To maintain eligibility for the subsequent work terms, students must maintain a GPA of 3.0 and complete the prior work terms successfully.

Eligibility for Internship Work Experience:

- To be eligible to participate in the internship option, students must complete all Year 1 courses and obtain a GPA of 3.0, plus complete the Workplace Education Prep workshop series (COOP WEP), and be enrolled in a minimum of eight credits in the term preceding the work term.

Program Completion Requirement(s):

- To qualify for the Diploma in Civil Engineering Technology, students must successfully complete all program courses and achieve an overall cumulative GPA of at least 2.0.
- To qualify for the Diploma in Civil Engineering Technology, Co-operative Education Designation, three (3) co-op work terms must be completed satisfactorily.
- To qualify for the Diploma in Civil Engineering Technology, Internship Designation, one (1) work term must be completed satisfactorily.

Full-time Schedule

Yr	Q1	Q2	Q3	Q4
1	Academic Term 1	Academic Term 2	Academic Term 3	
2	Academic Term 4	Academic Term 5	Academic Term 6	

Full-time Co-op/Internship Option

Yr	Q1	Q2	Q3	Q4
1	Academic Term 1	Academic Term 2	Academic Term 3	Work Term* 1
2	Academic Term 4	Work Term 2	Academic Term 6	Work Term 3
3	Work Term cont'd	Academic Term 5		

* Upon approval, full-time students may participate in a first work term following Academic Term 3.

Full-time Schedule

Year 1

Pre-Quarter Courses	Credits
ENGR 190 Orientation	0.5
Total Credits	0.5

Academic Term 1 (Quarter 1)	Credits
CIVL 131 Graphical Communications 1	2.0
CIVL 151 Surveying 1	3.0
CIVL 192 Statics	1.5
ENGL 170 Technical & Professional Communications 1	3.0
MATH 185 Technical Math 1	3.0
PHYS 191 Physics 1 Civil/Mechanical	3.0
Total Credits	15.5

Academic Term 2 (Quarter 2)	Credits
CIVL 132 Graphical Communications 2	3.0
CIVL 152 Surveying 2	2.0
CIVL 193 Strength of Materials 1	3.0
ENGL 180 Technical & Professional Communications 2	1.5
MATH 187 Technical Math 2	3.0
PHYS 192 Physics 2 Civil/Mechanical	3.0
Total Credits	15.5

Academic Term 3 (Quarter 3)	Credits
CIVL 133 Graphical Communications 3	1.5
CIVL 146 Highway Design	2.0
CIVL 153 Surveying 3	1.5
CIVL 162 Soils 1	2.0
CIVL 194 Strength of Materials 2	2.0
ENGR 177 Fluid Dynamics 1	2.0
MATH 189 Technical Math 3	3.0
Total Credits	14.0

Year 2

Academic Term 4 (Quarter 1)	Credits
CIVL 255 Urban Services	4.0
CIVL 264 Soils 2	3.0
CIVL 276 Hydrology	1.5
CIVL 279 Fluid Dynamics 2	2.0
CIVL 280 Environmental Engineering	1.0
CIVL 293 Structural Design 1	3.0
Total Credits	14.5

Academic Term 5 (Quarter 2)	Credits
CIVL 247 Highway Design Project	2.0
CIVL 257 Urban Planning	5.0
CIVL 268 Construction Materials	3.0
CIVL 283 Sewage Treatment	2.0
CIVL 297 Structural Design 2	2.0
ENGR 253A* Technical Report 1	1.5
Total Credits	13.5

Academic Term 6 (Quarter 3)	Credits
CIVL 240 Managing Construction Projects	2.0
CIVL 258 Infrastructure Rehabilitation	1.5
CIVL 265 Soils 3	2.0
CIVL 282 Water Treatment	1.5
CIVL 298 Structural Design Project	4.0
ENGR 253B* Technical Report 2	1.5
ENGR 278 Engineering Economics	1.0
Total Credits	15.5

* Co-op students will take ENGR 253A in Academic Term 6 and ENGR 253B in Academic Term 5.

Full-time Co-op/Internship Option

COOP WEP Workplace Education Prep	0.0
CIVL 101 Co-operative Work Experience 1	5.0
OR	
CIVL 102 Co-operative Work Experience 1	10.0
CIVL 201 Co-operative Work Experience 2	10.0
OR	
CIVL 202 Co-operative Work Experience 2	5.0
CIVL 203 Co-operative Work Experience 3	5.0
OR	
CIVL 233 Co-operative Work Experience 3	10.0
Total Credits	5.0 - 15.0

Part-time Schedule

Yr	Q1	Q2	Q3	Q4
1	Academic Term 1	Academic Term 2	Academic Term 3	
2	Academic Term 4	Academic Term 5	Academic Term 6	
3	Academic Term 7	Academic Term 8	Academic Term 9	

Part-time Co-op/internship Option

Yr	Q1	Q2	Q3	Q4
1	Academic Term 1	Academic Term 2	Academic Term 3	
2	Academic Term 4	Academic Term 5	Academic Term 6	Work Term 1*
3	Academic Term 7	Work Term 2	Academic Term 9	Work Term 3
4	Work Term cont'd	Academic Term 8		

* Upon approval, part-time students may participate in a first work term following Academic Term 6.

Part-time Schedule

Year 1

Pre-Quarter Courses	Credits
ENGR 190 Orientation	0.5
Total Credits	0.5

Academic Term 1 (Quarter 1)	Credits
CIVL 151 Surveying 1	3.0
CIVL 192 Statics	1.5
MATH 185 Technical Mathematics 1	3.0
PHYS 191 Physics 1 (Civil/Mechanical)	3.0
Total Credits	10.5

Academic Term 2 (Quarter 2)	Credits
CIVL 152 Surveying 2	2.0
CIVL 193 Strength of Materials 1	3.0
MATH 187 Technical Mathematics 2	3.0
PHYS 192 Physics 2 (Civil/Mechanical)	3.0
Total Credits	11.0

Academic Term 3 (Quarter 3)	Credits
CIVL 153 Surveying 3	1.5
CIVL 162 Soils 1	2.0
ENGR 177 Fluid Dynamics 1	2.0
MATH 189 Technical Mathematics 3	3.0
Total Credits	8.5

Year 2

Academic Term 4 (Quarter 1)	Credits
CIVL 131 Graphical Communications 1	2.0
CIVL 264 Soils 2	3.0
CIVL 279 Fluid Dynamics 2	2.0
ENGL 170 Technical & Professional Communications 1	3.0
Total Credits	10.0

Academic Term 5 (Quarter 2)		Credits
CIVL 132	Graphical Communications 2	3.0
CIVL 268	Construction Materials	3.0
CIVL 283	Sewage Treatment	2.0
ENGL 180	Technical & Professional Communications 2	1.5
Total Credits		9.5

Academic Term 6 (Quarter 3)		Credits
CIVL 133	Graphical Communications 3	1.5
CIVL 146	Highway Design	2.0
CIVL 194	Strength of Materials 2	2.0
CIVL 240	Managing Construction Projects	2.0
CIVL 258	Infrastructure Rehabilitation	1.5
ENGR 278	Engineering Economics	1.0
Total Credits		10.0

Year 3

Academic Term 7 (Quarter 1)		Credits
CIVL 255	Urban Services	4.0
CIVL 276	Hydrology	1.5
CIVL 280	Environmental Engineering	1.0
CIVL 293	Structural Design 1	3.0
Total Credits		9.5

Academic Term 8 (Quarter 2)		Credits
CIVL 247	Highway Design Project	2.0
CIVL 257	Urban Planning	5.0
CIVL 297	Structural Design 2	2.0
ENGR 253A*	Technical Report 1	1.5
Total Credits		10.5

Academic Term 9 (Quarter 3)		Credits
CIVL 265	Soils 3	2.0
CIVL 282	Water Treatment	1.5
CIVL 298	Structural Design Project	4.0
ENGR 253B*	Technical Report 2	1.5
Total Credits		9.0

* Co-op students will take ENGR 253A in Academic Term 9 and ENGR 253B in Academic Term 8.

Part-time Co-op/Internship Option

COOP WEP	Workplace Education Prep	0.0
CIVL 101	Co-operative Work Experience 1	5.0
OR		
CIVL 102	Co-operative Work Experience 1	10.0
CIVL 201	Co-operative Work Experience 2	10.0
OR		
CIVL 202	Co-operative Work Experience 2	5.0
CIVL 203	Co-operative Work Experience 3	5.0
OR		
CIVL 233	Co-operative Work Experience 3	10.0
Total Credits		5.0 - 15.0

Computer Systems Programs

Computer Systems Technology

Computer Systems Technician Certificate

The Computer Systems Technician program is a nine-month certificate program that is Year 1 of the Diploma in Computer Systems Technology.

A Computer Systems Technician graduate will work as an entry-level employee in the computer systems and information technology fields. Employment opportunities include help desk support, sales, technical support, web applications, and junior programmer. A Computer Systems Technician will find employment as a programmer for database-driven dynamic websites using skills such as Java, PHP, Oracle, and other technologies.

Internship is an optional component of this program. An Internship designation requires at least one (1) work term be completed satisfactorily.

Computer Systems Technology Diploma

A Computer Systems Technologist is a professional in the field of computing. Graduates of the Computer Systems Technology program will have the ability to provide a computer solution to a problem. The principles taught include problem definition, analysis, design, selection and implementation, decision-making and continued maintenance, diagnosis and improvement of the resulting hardware and software solution. The Computer Systems Technologist will be self-sufficient in a small system environment and be effective in a large enterprise.

Although certain software and hardware is used to illustrate or allow practice with concepts being taught, it is not the intention of the program to train the students in specific products. Rather, the objective is that the graduates will easily be able to apply their knowledge to any environment, using whatever technology, package, language or computer system is appropriate.

Many varied employment opportunities exist for graduates. Many situations require a specialist to get the best from a computer system. Most organizations such as government agencies, wholesale or retail sales of goods or services, administrative offices, scientific or engineering enterprises, and forestry companies have or will have need for the skills of computing professionals.

Over the length of the program, courses are offered to provide the fundamental principles and skills for the technologist. The applied computing project, done in the final term, combines the program's principles and techniques to produce a finished product.

Co-operative education or internship are optional components of this program. To obtain a Co-operative Education designation, students combine classroom study with three (3) terms of co-op work experience. An Internship designation requires at least one (1) work term be completed satisfactorily. Alternating between full-time studies and full-time employment, students gain hands-on experience, marketable skills and contacts for future employment opportunities. Part-time students may be eligible for co-op or internship, but must apply in their Year 1.

Length:

Technician Certificate:
Full time: 9 months
Internship: 12 months

Technology Diploma:
Full time: 1 year, 9 months
Full-time co-op: 2 years, 3 months
Full-time internship: 2 years

Location: Interurban Campus

Starting: Quarter 1

Program Code(s):

CST1 Year 1 (Certificate)

CST2 Year 2 (Diploma)

Admission Requirement(s):

- Submit proof of "C" in English 12, or EFP 12; or ENGL 092 and ENGL 094; or ENGL 092 and ENGL 096; or ENGL 103 and ENGL 104; or ENGL 103 and ENGL 106; or ENGL 130; or ENGL 140; or ELD 092 and ELD 094; or ELD 097; and,
- Submit proof of "C+" in Principles in Math 11, or Pre-calculus 11, or MATH 073, or MATH 137; or "C" in Principles of Math 12, or Applications of Math 12, or Foundations of Math 12, or MATH 093, or MATH 172; or assessment.

Eligibility for Co-op Work Experience:

- To be eligible to participate in the co-op option, students must complete all Year 1 courses and obtain a GPA of 3.0, plus complete the Workplace Education Prep workshop series (COOP WEP), and be fully enrolled in the term preceding the work term;
- To maintain eligibility for the subsequent work terms, students must maintain a GPA of 3.0 and complete the prior work terms successfully.

Eligibility for Internship Work Experience:

- To be eligible to participate in the internship option, students must complete all Year 1 courses and obtain a GPA of 3.0, plus complete the Workplace Education Prep workshop series (COOP WEP), and be fully enrolled in the term preceding the work term.

Program Completion Requirement(s):

- To qualify for the Certificate in Computer Systems Technician, students must successfully complete all program courses and achieve an overall cumulative GPA of at least 3.0.
- To qualify for the Certificate in Computer Systems Technician, Internship Designation, one (1) work term must be completed satisfactorily.
- To qualify for the Diploma in Computer Systems Technology, students must successfully complete all program courses and achieve an overall cumulative GPA of at least 3.0.
- To qualify for the Diploma in Computer Systems Technology, Co-operative Education Designation, three (3) co-op work terms must be completed satisfactorily.
- To qualify for the Diploma in Computer Systems Technology, Internship Designation, one (1) work term must be completed satisfactorily.

Full-time Schedule

Yr	Q1	Q2	Q3	Q4
1	Academic Term 1	Academic Term 2	Academic Term 3	
2	Academic Term 4	Academic Term 5	Academic Term 6	

Full-time Co-op/Internship Option 1

Yr	Q1	Q2	Q3	Q4
1	Academic Term 1	Academic Term 2	Academic Term 3	Work Term
2	Academic Term 4	Academic Term 5	Work Term	
3	Academic Term 6*			

* Academic Term 6 begins three (3) weeks before Quarter 1 starts.

Full-time Schedule

Year 1

Academic Term 1 (Quarter 1)	Credits
COMP 112 Intro to Computer Systems	3.0
COMP 140 Human Computer Interaction	3.0
COMP 176 Operating Systems	3.0
ENGL 170 Technical & Professional Communications 1	3.0
MATH 163 Math for Computing	4.0
Total Credits	16.0

Academic Term 2 (Quarter 2)	Credits
BUS 143 eBusiness for Technologists	3.0
COMP 132 Programming Using Java	3.0
COMP 155 Database Concepts	3.0
COMP 170 Computer/Network Operations	3.0
COMP 183 Intro to Computer Architecture	3.0
Total Credits	15.0

Academic Term 3 (Quarter 3)	Credits
COMP 139 Applied Computer Programming	3.0
COMP 157 Windows-based Applications	3.0
COMP 173 Computer Network Programming	3.0
COMP 199 Applied Project - Year One	2.0
COMP 235 Software Engineering	3.0
Total Credits	14.0

Year 2

Academic Term 4 (Quarter 1)	Credits
COMP 230 Systems Analysis and Design	3.0
COMP 241 .NET Web Applications	3.0
COMP 270 Computer Operations	3.0
COMP 272 Intro to Data Communications	3.0
COMP 288 Embedded Systems Applications	3.0
COMP 297 Applied Project - Preparation	1.0
Total Credits	16

Academic Term 5 (Quarter 2)	Credits
COMP 240 Developing Web Services	3.0
COMP 259 Advanced Database Concepts	3.0
COMP 298 Applied Project - Analysis	3.0

Students must take two of the following four courses. Note that only two of the following four courses will be offered in Academic Term 5 at one time:

COMP 244 Special Topics in Computing	3.0
COMP 249 Database Administration	3.0
COMP 266 Database Application	3.0
COMP 289 Concurrent Programming	3.0
Total Credits	15.0

Academic Term 6 (Quarter 1 or 3)	Credits
COMP 275 Systems Design and Security	3.0
COMP 299 Applied Project - Implementation	8.0
ENGL 273 Technical & Professional Communications 3	1.5
Total Credits	12.5

Full-time Co-op/Internship Option

COOP WEP Workplace Education Prep	0.0
COMP 101 Co-operative Work Experience 1	5.0
OR	
COMP 102 Co-operative Work Experience 1	10.0
COMP 201 Co-operative Work Experience 2	10.0
OR	
COMP 202 Co-operative Work Experience 2	5.0
OR	
COMP 203 Co-operative Work Experience 3	5.0
Total Credits	5.0 - 15.0

Electronics Engineering Programs

All programs are subject to the Standards of Academic Progress Policy for technology-related programs.

Electronics and Computer Engineering Technology Access

This certificate program is an integral part of the Integrated Electronics program. This program prepares the student for access to the:

- Network and Electronics Technician program; or the
- Electronics and Computer Engineering Technology – Renewable Energy program.

Along with upgrading in Math, Physics and English, students will obtain skills in computers and computer-aided design (CAD), and will obtain a better understanding of digital and analog electronics and develop skills in the use of test equipment.

Graduates not pursuing further education in the Network and Electronics Technician, Electronics Engineering Technology – Renewable Energy or Computer Engineering Technology – Renewable Energy programs, may seek employment at an entry level position in such areas as electronics assembly, schematic capture, and printed circuit board production and repair.

Length: Six months

Location: Interurban Campus

Starting: Quarter 1

Program Code(s): ELECACC

Admission Requirement(s):

- Submit proof of "C" in English 10, or ENGL 050; or assessment; and,
- Submit proof of "B" in Principles of Math 10, or Foundations of Math & Pre-calculus 10, or MATH 053; or assessment.

Program Completion Requirement(s):

- Students must complete all program courses and achieve an overall GPA of at least 2.0 in order to qualify for a Certificate in Electronics and Computer Engineering Technology Access.

Pre-Quarter Courses	Credits
ELEX 080 Electronics Orientation	0.5
Total Credits	0.5
Academic Term 1 (Quarter 1)	Credits
ELEX 126 Introduction to Electronics 1	1.5
ELEX 130 Computers/CAD for Electronics	1.5
ENGL 130 English for Careers	3.0
MATH 172 Basic Technical Math 1	4.0
PHYS 150 Technical Physics 1	3.0
Total Credits	13.0

Academic Term 2 (Quarter 2)		Credits
ELEX 127	Introduction to Electronics 2	4.0
ENGL 170	Technical & Professional Communications 1	3.0
LRNS 102	Learning & Problem Solving Skills	1.0
MATH 173	Basic Technical Math 2	5.0
PHYS 151	Technical Physics 2	3.0
Total Credits		16.0

Electronics & Computer Engineering Technology – Renewable Energy

Electronics has had a huge impact on our society over the last sixty years ever since the development of the first transistor. Early transistor radios used 4 transistors, whereas a modern cell phone uses in excess of 40 million, in a package that fits in the palm of your hand thanks to nanotechnology. Advances in electronic devices continue with ever-smaller components, opening up opportunities for new products and markets in the future. From helping disabled people to see or move, to capturing the energy from the wind or sun, electronics systems are at the heart of these new advances.

At Camosun College, we believe graduates of our program should have a broad knowledge of both electronics and computer engineering systems to enable them to embrace high technology in all its forms, and to support local industry in maintaining current products and systems and creating the products and systems of the future.

Nowadays, software and programming are inseparable from hardware. As a result, we have a number of specialized programming courses in the program. And, as renewable energies are becoming more important, students of our program will leave with an introductory knowledge of this new and expanding area. Students will also take courses in the control and drive of electrical motors and will directly apply electronics technology to the renewable energies area.

Co-operative education or internship are optional components of this program. To obtain a Co-operative Education designation, students combine classroom study with three (3) terms of co-op work experience. An Internship designation requires at least one (1) work term be completed satisfactorily. Alternating between full-time studies and full-time employment, students gain hands-on experience, marketable skills and contacts for future employment opportunities.

Graduates of this program with a cumulative GPA of at least 5.0 ("B") may apply for entrance into the Engineering Bridge program, which prepares Engineering Technology graduates to enter Year 3 of Electrical or Computer Engineering at the University of Victoria.

Graduates are prepared for employment in areas such as:

- Computer-aided design (CAD);
- Analog and digital circuitry design;
- Micro-electronics fabrication and testing (hardware and software);
- Instrumentation and data acquisition;
- Micro-controller system design;
- Data gathering, processing and monitoring of RE systems;
- Communications systems design and installation;
- Electronic control systems, robotics;
- Design and testing of microelectronics systems;
- Technical and sales support;
- Solar-powered devices; and,
- Design of renewable energy solutions.

Length:

Full time: 2 years, 3 months

Full-time co-op: 2 years, 9 months

Full-time internship: 2 years, 3 months

Location: Interurban Campus

Starting: Quarter 1

Program Code(s):

ELECR1 Year 1

ELECR2 Year 2

Admission Requirement(s):

- Submit proof of "C" in English 12, or EFP 12; or ENGL 092 and ENGL 094; or ENGL 092 and ENGL 096; or ENGL 103 and ENGL 104; or ENGL 103 and ENGL 106; or ENGL 130; or ENGL 140; or ELD 092 and ELD 094; or ELD 097; or assessment; and
- Submit proof of "C+" in Principles of Math 12, or Pre-calculus 12, or MATH 093, or MATH 107; or "C" in Calculus 12, or MATH 105, or MATH 115, or MATH 173; or assessment; and,
- Submit proof of "C" in Physics 11, or PHYS 101, or PHYS 151.

Eligibility for Co-op Work Experience:

- To be eligible to participate in the co-op option, students must complete all Year 1 courses, obtain a GPA of 3.0, complete the Workplace Education Prep workshop series (COOP WEP), and be fully enrolled in the term preceding the work term;
- To maintain eligibility for the subsequent work terms, students must maintain a GPA of 3.0 and complete the prior work terms successfully.

Eligibility for Internship Work Experience:

- To be eligible to participate in the internship option, students must complete all Year 1 courses, obtain a GPA of 3.0, complete the Workplace Education Prep workshop series (COOP WEP), and be fully enrolled in the term preceding the work term.

Program Completion Requirement(s):

- Students must complete all program courses and achieve an overall GPA of at least 2.0 to qualify for a diploma.

Full-time Schedule

Yr	Q1	Q2	Q3	Q4
1	Academic Term 1	Academic Term 2	Academic Term 3	
2	Academic Term 4	Academic Term 5	Academic Term 6	
3	Academic Term 7			

Full-time Co-op/Internship Option

Yr	Q1	Q2	Q3	Q4
1	Academic Term 1	Academic Term 2	Academic Term 3	Work Term*
2	Academic Term 4	Academic Term 5	Work Term	
3	Academic Term 6	Work Term	Academic Term 7	

* Upon approval, students may participate in a first work term following Academic Term 3.

Year 1

Pre-Quarter Courses		Credits
ELEX 080	Electronics Orientation	0.5
ELEX 124	High Reliability Soldering	0.5
Total Credits		1.0

Academic Term 1 (Quarter 1)		Credits
ELEX 130	Computers/CAD for Electronics	1.5
ELEX 142	Introductory Circuit Analysis	4.0
MATH 174A	Math for Electronics 3	3.0
PHYS 154	Technical Physics 3	4.0
Total Credits		12.5

Academic Term 2 (Quarter 2)		Credits
ELEX 131	Engineering Applications in C	3.0
ELEX 143	Electronic Devices 1	3.0
ELEX 161	Digital Techniques 1	3.0
ENGL 170	Technical & Professional Communications 1	3.0
MATH 174B	Math for Electronics 4	2.0
Total Credits		14.0

Academic Term 3 (Quarter 3)		Credits
COOP WEP*	Workplace Education Prep	0.0
ELEX 121	Renewable Energy Systems	3.0
ELEX 162	Digital Techniques 2	3.0
ELEX 167	Embedded Systems 1	3.0
MATH 175	Math for Electronics 5	4.0
Total Credits		13.0

* Co-op students only.

Post Quarter 3 Courses		Credits
ELEX 122	Shop Skills for Electronics	0.5
Total Credits		0.5

Year 2**Academic Term 4 (Quarter 1) Credits**

ELEX 231	Engineering Interfacing in C++	3.0
ELEX 240	Electronic Devices 2	4.0
ELEX 250	Communications Systems 1	3.0
ELEX 267	Embedded Systems 2	3.0

Total Credits 13.0**Academic Term 5 (Quarter 2) Credits**

ELEX 244	Electronic Devices 3	3.0
ELEX 251	Communications Systems 2	3.0
ELEX 283	Data Acquisition Systems	4.0
ELEX 284	System Dynamics	3.0

Total Credits 13.0**Academic Term 6* (Quarter 3) Credits**

ELEX 235	Computer Engineering	3.0
ELEX 252	Communications Systems 3	3.0
ELEX 268	Embedded Systems 3	4.0
ELEX 285	Digital Signal Processing	3.0

Total Credits 13.0**Academic Term 7* (Quarter 1) Credits**

ELEX 241	Fundamentals of Control	3.0
ELEX 242	Power Electronics	3.0
ELEX 290	Applied Research Project	6.0
ENGL 273	Technical & Professional Communications 3	1.5

Total Credits 13.5

* Co-op/Internship students take a different sequence of courses in Academic Terms 6 and 7. See below for details.

Full-time Co-op/Internship Option

COOP WEP	Workplace Education Prep	0.0
ELEX 101	Co-operative Work Experience 1	5.0
ELEX 102	Co-operative Work Experience 1	10.0

OR

ELEX 201	Co-operative Work Experience 2	10.0
ELEX 202	Co-operative Work Experience 2	5.0

OR

ELEX 203	Co-operative Work Experience 3	5.0
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Total Credits 5.0 - 15.0**Academic Term 6 Credits**

ELEX 235	Computer Engineering	3.0
ELEX 241	Fundamentals of Control	3.0
ELEX 242	Power Electronics	3.0
ELEX 268	Embedded Systems 3	4.0

Total Credits 13.0**Academic Term 7 Credits**

ELEX 252	Communications Systems 3	3.0
ELEX 285	Digital Signal Processing	3.0
ELEX 290	Applied Research Project	6.0
ENGL 273	Technical & Professional Communications 3	1.5

Total Credits 13.5**Network and Electronics Technician**

This certificate program has a practical career-oriented approach with emphasis on installation, repair and maintenance of computers, computer networks and electronic systems.

Industrial employers seek graduates of programs that have obtained industry or vendor certification. At Camosun College, we teach the Cisco Networking Academy® Program. Cisco is the largest manufacturer of computer network equipment in the world and the Networking Academy is recognized by industry.

This certificate program:

- provides students with a thorough background in all aspects of computers from troubleshooting hardware to maintaining and installing operating systems;
- gives students the background needed to write the "A+" certification examinations;
- covers the essentials of networking that will prepare students to write the Cisco Certified Network Associate (CCNA) examination; and,
- meets the competencies listed in the blueprint of the International Electronics Technician Common Core.

Internship is an optional component of this program. An Internship designation requires at least one (1) work term be completed satisfactorily.

Our program is delivered on a quarter system with 11 teaching weeks, one exam week and a one week break. Students spend about 25 hours a week in the program with half the time spent in a lab environment. Students are given access to the labs from 7:00am to 11:00pm, allowing students plenty of time to master the subject matter. Our six labs contain some of the most modern instrumentation found in any North American college.

Graduates may seek employment at an entry level in the network management, computer maintenance or industrial consumer repair fields. Alternatively, they may elect to enter one of the Technician specialty programs offered at other colleges across Canada and the United States that have common core electronics as a prerequisite.

Graduates are prepared for employment in areas such as:

- installation and maintenance of computer networking systems;
- installation, repair and maintenance of microprocessor based equipment;
- maintenance and repair of personal computers;
- computer-aided design (CAD);
- analog and digital circuit assembly, installation, repair and maintenance;
- consumer electronics; and,
- technical sales support.

For further information, please contact the program Chair at **250-370-4433**.

Length: Nine months**Location:** Interurban Campus**Starting:** Quarter 1**Program Code(s):** NELECTECN**Admission Requirement(s):**

- Submit proof of "C" in English 12, or EFP 12, or ENGL 092, or ENGL 103, or ENGL 130, or ENGL 140, or ELD 092, or ELD 097; or assessment; and,
- Submit proof of "C" in Principles of Math 11, or Pre-calculus 11, or Foundations of Math 11, or MATH 073, or MATH 137, or MATH 172; or assessment.

OR

- Successful completion of the Electronics and Computer Engineering Access portion of the Integrated Electronics program.

Eligibility for Internship Work Experience:

- To be eligible to participate in the internship option, students must complete all program courses, obtain a GPA of 3.0, complete the Workplace Education Prep workshop series (COOP WEP), and be fully enrolled in the term preceding the work term.

Program Completion Requirement(s):

- To qualify for the Certificate in Network and Electronics Technician, students must complete all program courses and obtain an overall cumulative GPA of at least 2.0.
- To qualify for the Certificate in Network and Electronics Technician Internship Designation, one (1) work term must be completed satisfactorily.

Pre-Quarter Courses		Credits
ELEX 080	Electronics Orientation	0.5
ELEX 122	Shop Skills for Electronics	0.5
ELEX 124	High Reliability Soldering	0.5
Total Credits		1.5

Academic Term 1 (Quarter 1)		Credits
ELEX 130	Computers/CAD for Electronics	1.5
ELEX 135	Networking 1	4.0
ELEX 141	Circuit Analysis	4.0
ELEX 164	Digital Logic	3.0
Total Credits		12.5

Academic Term 2 (Quarter 2)		Credits
ELEX 136	Networking 2	3.0
ELEX 138	Computer Repair/Maintenance 1	3.0
ELEX 144	Semiconductor Devices 1	4.0
ENGL 170	Technical & Professional Communications 1	3.0
Total Credits		13.0

Academic Term 3 (Quarter 3)		Credits
ELEX 137	Networking 3	2.0
ELEX 139	Computer Repair/Maintenance 2	3.0
ELEX 146	Applied Electronic Techniques	3.0
ELEX 159	Electronic Communications	3.0
ELEX 166	Microprocessor Systems	3.0
Total Credits		14.0

Internship Option

COOP WEP	Workplace Education Prep	0.0
ELEX 111	Internship	5.0
Total Credits		0.5

Mechanical Engineering Programs

Engineering Graphics Technician

This program is only offered alternate years. The next intake will be January 2013.

The Engineering Graphics Technician program produces graduates who have a foundation and working knowledge of graphics software applications used within engineering and architecture.

The program includes a special emphasis in 2D and 3D computer-aided design (CAD) and drafting, as well as design visualization, which includes still image rendering and engineering animation. The students are exposed to design and documentation standards used within several industry sectors, and provided with an introduction to typical engineering office software.

Technology-based firms and organizations require employees with expertise in technical information communication and graphics. Graduates who have gained these skills will be qualified to seek opportunities in a wide variety of industries, including but not limited to: engineering offices, architectural offices and high technology companies that require the use of technical publishing, 2D and 3D drafting and 3D visualization skills.

The Engineering Graphics Technician program consists of two 12-week terms that span a six-month period, followed by a 100-hour unpaid work term. When taken with the Mechanical Engineering Access programs, a graduate may return to complete the Mechanical Engineering Technology program.

It is highly recommended that applicants have previous computer experience.

Length: Seven months

Location: Interurban Campus

Starting: Quarter 2

Program Code(s): ENGRGRTECN

Admission Requirement(s):

- Submit proof of "C" in English 12, or EFP 12; or ENGL 092 and ENGL 094; or ENGL 092 and ENGL 096; or ENGL 103 and ENGL 104; or ENGL 103 and ENGL 106; or ENGL 130; or ENGL 140; or ELD 092 and ELD 094; or ELD 097; or assessment; and,
- Submit proof of "C" in Principles of Math 11, or Pre-calculus 11, or MATH 073, or MATH 137, or MATH 172; or assessment.

Program Completion Requirement(s):

- Students must complete all program courses and achieve an overall GPA of at least 2.0 to qualify for a Certificate in Engineering Graphics Technician.

Academic Term 1 (Quarter 2)		Credits
COMP 156	Computer Concepts	3.0
ENGL 170	Technical & Professional Communications 1	3.0
ENGR 151M	Engineering Drawing 1/2D CAD	3.0
ENGR 152	Technical Publishing Applications	3.0
ENGR 178	Commercial Practices 1	3.0
ENGR 190	Orientation	0.5
MECH 161A	Manufacturing Processes	0.5
Total Credits		16.0

Academic Term 2 (Quarter 3)		Credits
ENGR 154	Design Visualization	3.0
ENGR 188	Commercial Practices 2	3.0
ENGR 189	CAD Projects	5.0
ENGR 198	Technical Specifications	3.0
MECH 153	Mechanical Components & 3D CAD	4.0
Total Credits		18.0

Academic Term 3 (Quarter 4)		Credits
ENGR 199	Work Term	1.5
Total Credits		1.5

Mechanical Engineering Technology Access

This program assists students in completing the admission requirements to Camosun's Diploma in Mechanical Engineering Technology and the Certificate in Engineering Graphics Technician. While upgrading in math, physics and English, students will gain up-to-date skills applicable to mechanical systems and architectural design:

- Introduction to the use of a computer as a tool for problem-solving;
- Computer-aided-design (CAD) using up-to-date commercial software including 3D and design visualization;
- Design skills in engineering drawing preparation as related to CAD projects.

Students who successfully complete this program will have a seat reserved for them in the next intake to the Mechanical Engineering Technology program.

Length: Six months

Location: Interurban Campus

Starting: Quarter 1

Program Code(s): MECHACC

Admission Requirement(s):

- Submit proof of "C" in English 10, or ENGL 050; or assessment; and,
- Submit proof of "B" in Principles of Math 10, or Foundations of Math & Pre-calculus 10, or MATH 053; or assessment.

Program Completion Requirement(s):

- Students must complete all program courses and achieve an overall GPA of at least 2.0 in order to qualify for the Certificate in Mechanical Engineering Technology Access.

Pre-Quarter Course	Credits	
ENGR 190	Orientation	0.5
Total Credits		0.5

Academic Term 1 (Quarter 1)		Credits
ENGL 130	English for Careers	3.0
ENGR 151M	Engineering Drawing 1/2D CAD	3.0
ENGR 158	Applications in Computing	2.0
MATH 172	Basic Technical Math 1	4.0
PHYS 150	Technical Physics 1	3.0
Total Credits		15.0

Academic Term 2 (Quarter 2)		Credits
ENGL 170	Technical & Professional Communications 1	3.0
LRNS 102	Learning & Problem-Solving Skills	1.0
MATH 173	Basic Technical Math 2	5.0
MECH 153	Mechanical Components & 3D CAD	4.0
PHYS 151	Technical Physics 2	3.0
Total Credits		16.0

Mechanical Engineering Technology

This program is nationally accredited and is designed to produce graduates who have a broad knowledge in science and engineering as they apply to the design, development, manufacture, marketing, operation and maintenance of machines and mechanical devices.

Students balance practical hands-on experience in engineering laboratories and a CNC equipped machine shop with a solid grounding in English, math, physics and engineering concepts.

In the final academic quarter of the program, students work in teams to conceptualize, model, fabricate, assemble and document a mechanical project which is then publicly showcased and demonstrated. Past projects have included underwater vehicles, manufacturing equipment, renewable energy products, transportation devices and medical assistance products.

Graduates may be employed in a variety of industrial organizations involved in manufacturing, transportation, mining, communications, paper, construction, and also consulting engineering. They may be involved in product design, specifications preparation, cost estimates, testing, evaluating, manufacturing and technical sales. Some mechanical engineering technologists will find employment in specialized fields such as design drafting training, materials testing, automation and packaging, instrumentation design, research and development and implementation of CAD/CAM equipment in engineering departments.

This program will appeal to students who enjoy the Sciences and/or have a mechanical aptitude and want to learn how to develop and apply their skills to the development of technology for the betterment of society.

Co-operative education or internship are optional components of this program. To obtain a Co-operative Education designation, students combine classroom study with three (3) terms of co-op work experience. An Internship designation requires at least one (1) work term be completed satisfactorily. Alternating between full-time studies and full-time employment, students gain hands-on experience, marketable skills and contacts for future employment opportunities.

Bridge to Mechanical Engineering

Graduates of this program with a cumulative GPA of at least 5.0 ("B") may apply for entrance into the Advanced Diploma in Engineering Bridge program which prepares Engineering Technology graduates to enter Year 3 of Mechanical Engineering programs at the University of Victoria, the University of British Columbia and the University of British Columbia – Okanagan. Please refer to the Mechanical Engineering Bridge program later in this chapter.

Length:

Full time: 2 years
Full-time co-op: 2 years, 9 months
Full-time internship: 2 years

Location: Interurban Campus

Starting: Quarter 1

Program Code(s):

MECHENG1 Year 1

MECHENG2 Year 2

Admission Requirement(s):

- Submit proof "C" in English 12, or EFP 12; or ENGL 092 and ENGL 094; or ENGL 092 and ENGL 096; or ENGL 103 and ENGL 104; or ENGL 103 and ENGL 106; or ENGL 130; or ENGL 140; or ELD 092 and ELD 094; or ELD 097; or assessment; and,
- Submit proof of "C+" in Principles of Math 12, or Pre-calculus 12, or MATH 093, or MATH 107; or "C" in Calculus 12, or MATH 105, or MATH 115, or MATH 173*; or assessment; and,
- Submit proof of "C" in Physics 11, or PHYS 101, or PHYS 151*.

* These courses are part of the Mechanical Engineering Technology Access program.

Eligibility for Co-op Work Experience:

- To be eligible to participate in the Co-op option, students must complete all Year 1 courses, obtain a GPA of 3.0, complete the Workplace Education Prep workshop series (COOP WEP), and be fully enrolled in the term preceding the work term;
- To maintain eligibility for the subsequent work terms, students must maintain a GPA of 3.0 and complete the prior work terms successfully.

Eligibility for Internship Work Experience:

- To be eligible to participate in the internship option, students must complete all Year 1 courses, obtain a GPA of 3.0, complete the Workplace Education Prep workshop series (COOP WEP), and be fully enrolled in the term preceding the work term.

Program Completion Requirement(s):

- To qualify for the Diploma in Mechanical Engineering Technology, students must successfully complete all program courses and achieve an overall cumulative GPA of at least 2.0.
- To qualify for the Diploma in Mechanical Engineering Technology, Co-operative Education Designation, three (3) co-op work terms must be completed satisfactorily.
- To qualify for the Diploma in Mechanical Engineering Technology, Internship Designation, one (1) work term must be completed satisfactorily.

Full-time Schedule

Yr	Q1	Q2	Q3	Q4
1	Academic Term 1	Academic Term 2	Academic Term 3	
2	Academic Term 4	Academic Term 5	Academic Term 6*	Academic Term 7*

* Students may complete this program in 24 months by completing Academic Term 6 instead of a Work Term in Year 2, Quarter 3.

Full-time Co-op/Internship Option (3 month, 9 month or 12 month)

Yr	Q1	Q2	Q3	Q4
1	Academic Term 1	Academic Term 2	Academic Term 3	Work Term 1*
2	Academic Term 4	Academic Term 5	Work Term 1 or 2	Academic Term 7
3	Work Term 2 or 3		Academic Term 6	

* Upon approval, students may participate in a first work term following Academic Term 3.

Full-time Schedule

Year 1

Pre-Quarter Courses		Credits
ENGR 190	Orientation	0.5
MECH 161A	Manufacturing Processes 1	0.5
Total Credits		1.0
Academic Term 1 (Quarter 1)		Credits
ENGL 170	Technical & Professional Communications 1	3.0
ENGR 151M	Engineering Drawing 1/2D CAD	3.0
MATH 185	Technical Mathematics 1	3.0
MECH 161B	Manufacturing Processes 2	3.0
PHYS 191	Physics 1 (Civil/Mechanical)	3.0
Total Credits		15.0

Academic Term 2 (Quarter 2)		Credits
CHEM 160	Chemistry and Materials	3.0
MECH 153	Mechanical Components & 3D CAD	4.0
MECH 159	Mechanical Control Programming	2.0
MECH 173	Statics and Strength of Materials	5.0
PHYS 192	Physics 2 (Civil and Mechanical)	3.0
Total Credits		17.0

Academic Term 3 (Quarter 3)		Credits
ELEX 149	Electronics for Mechanical 1	3.0
ENGR 177	Fluid Dynamics 1	2.0
MATH 187	Technical Math 2	3.0
MECH 175	Dynamics	2.0
MECH 183	Computer-Aided-Manufacturing/CAM	3.0
Total Credits		13.0

Year 2

Academic Term 4 (Quarter 1)		Credits
ELEX 248	Electronics for Mechanical 2	2.0
MATH 189	Technical Math 3	3.0
MECH 255	Mechanics of Machines	3.0
MECH 261	Thermodynamics 1	2.0
MECH 286	Introduction to Control Systems	3.0
Total Credits		13.0

Academic Term 5 (Quarter 2)		Credits
MECH 187	Quality Assurance	2.0
MECH 252	Pneumatics and Hydraulics	3.0
MECH 257	Mechanics of Vibrations	3.0
MECH 271	Strength of Materials 2	3.0
MECH 275	Environmental Engineering	2.0
Total Credits		13.0

Academic Term 6 (Quarter 3)		Credits
MECH 262	Thermodynamics 2	4.0
MECH 266	Machine Design	4.0
MECH 273	Advanced Strength of Materials	3.0
MECH 277	Fluid Dynamics 2	2.0
MECH 299	Engineering and Society	1.0
Total Credits		14.0

Academic Term 7 (Quarter 4)		Credits
ENGL 273	Technical & Professional Communications 3	1.5
MECH 284	Robotics & Automation	3.0
MECH 295	Project Planning and Design	9.0
Total Credits		13.5

Full-time Co-op/Internship Option

COOP WEP	Workplace Education Prep	0.0
MECH 101	Co-operative Work Experience 1	5.0
OR		
MECH 102	Co-operative Work Experience 1	10.0
MECH 201	Co-operative Work Experience 2	10.0
OR		
MECH 202	Co-operative Work Experience 2	5.0
MECH 233	Co-operative Work Experience 3	5.0
Total Credits		5.0 - 15.0

Engineering Bridge Programs

Civil Engineering Bridge

The Civil Engineering Bridge program is offered by Camosun College with the full support and co-operation of the University of British Columbia (UBC) in Vancouver and Kelowna. This program is intended to provide access to Year 3 of Civil Engineering at UBC for graduate Civil Engineering Technologists. Successful students may then continue their studies toward a Bachelor of Applied Science.

The Civil Engineering Bridge is offered in Quarter 2 and 3 (January to June) for September entry into Year 3 of Engineering at UBC.

The Civil Engineering Bridge program is intended for graduates of Civil Engineering Technology programs with high academic standing.

Co-operative education work terms from the Diploma in Civil Engineering Technology program are transferable between institutions. For students who have completed co-op in their diploma, please contact the receiving institution for specific details, or see a Camosun College Co-operative Education representative for assistance.

This program is not governed by Camosun College's policies on admission and academic progress and promotion.

For further information contact the Program Assistant at **250-370-4404**, by email at enbridge@camosun.bc.ca, or visit our [website](#).

Length: Six months

Location: Interurban Campus

Starting: Quarter 2

Program Code(s): CIVLBRIDGE

Admission Requirement(s):

- A diploma in Civil Engineering Technology from a program with Canadian Technologies Accreditation*, and a minimum cumulative GPA of 5.0 ("B") on Camosun's nine point scale with no individual course marks below "C"; and,
- Submit two official transcripts (final or in-progress) from all secondary and post secondary institutions the applicant has attended.**

* Graduates of other closely related programs may be accepted upon evaluation of their program by the Coordinator of Engineering Bridge.

** Camosun College diploma graduates are not required to submit Camosun College transcripts; however, an additional copy of secondary and other post-secondary transcripts is needed upon application.

Note: Civil Engineering Technology includes Municipal, Environmental and Structural.

Program Completion Requirement(s):

- Students must achieve a "C" in every course.

Note: A maximum of two transfer courses and/or PLAs are allowed in this program. Student requests for transfer credit may be made for courses taken at a post-secondary institution and not included in the student's Technology program. Transfer credits must be approved by both the Bridge program coordinator and the receiving university.

Bridge to UBC

To be accepted into Year 3 of Civil Engineering at the University of British Columbia, the student must have completed the Civil Engineering Bridge program with the following conditions:

- have achieved a "C" in nine of the eleven courses;
- have obtained a minimum overall grade of "C"; and,
- have no more than one failing grade in all the courses.

Program Content		Credits
CHEM 150	Engineering Chemistry	4.0
COMP 130	Computing for Engineers	3.0
ENGR 166	Geology for Civil Engineers	3.0
ENGR 262	Analytical Methods	3.0
ENGR 264	Engineering Mechanics	3.0
MATH 250A	Intermediate Calculus 1	3.0
MATH 250B	Intermediate Calculus 2	3.0
MATH 251	Matrix Algebra for Engineers	3.0
MATH 252	Applied Differential Equations	3.0
MATH 254	Probability and Statistics	3.0
PHYS 295	Physics (Engineering Bridge)	4.0
Total Credits		35.0

Computer Engineering Bridge

The Computer Engineering Bridge program is offered by Camosun College with the full support and co-operation of the University of Victoria (UVic). This program provides access to Year 3 of Engineering at UVic for graduate Computer and Electronics Engineering Technologists.

The program is offered on the college quarter system during Quarter 4 (July through September) and Quarter 1 (September through December) permitting immediate entry into Year 3 of Engineering at UVic (commencing in January). The Computer Engineering Bridge program is intended for graduates of Electronics or Computer Engineering Technology programs with high academic standing.

Co-operative education work terms from the Diploma in Computer Engineering Technology program are transferable between institutions. For students who have completed co-op in their diploma, please contact the receiving institution for details regarding transfer credit, or see a Camosun College Co-operative Education representative for assistance.

This program is not governed by Camosun College's policies on admission and academic progress and promotion.

For further information contact the Program Assistant at 250-370-4404, email engbridge@camosun.bc.ca or visit our [website](#).

Length: Six months

Location: Interurban Campus

Starting: Quarter 4

Program Code(s): COMPBRIDGE

Admission Requirement(s):

- A diploma in Computer Engineering Technology or Electronics Engineering Technology from a program with Canadian Technologies Accreditation*, and a minimum cumulative GPA of 5.0 ("B") on Camosun's nine-point scale with no individual course marks below "C"; and,
- Submit two official transcripts (final or in-progress) from all secondary and post secondary institutions the applicant has attended.**

* Graduates of other closely related programs may be accepted upon evaluation of their program by the Coordinator of Engineering Bridge.

** Camosun College diploma graduates are not required to submit Camosun College transcripts; however, an additional copy of secondary and other post-secondary transcripts is needed upon application.

Program Completion Requirement(s):

- Students must achieve a "C" in every course to obtain an Advanced Diploma in Computer Engineering Bridge.

Note: A maximum of two transfer courses and/or PLAs are allowed in this program. Student requests for transfer credit may be made for courses taken at a post-secondary institution and not included in the student's Technology program. Transfer credits must be approved by both the Bridge program coordinator and the receiving university.

Bridge to UVic

To be accepted into Year 3 of Computer Engineering at the University of Victoria, the student must have completed the Computer Engineering Bridge program with the following conditions:

- have achieved a "C" in 12 of the 14 courses;
- have obtained a minimum overall grade of "C"; and,
- have no more than one failing grade in all the courses.

Program Content		Credits
CHEM 150	Engineering Chemistry	4.0
COMP 139E	Data Structures & Applications	4.0
COMP 166	Programming 1 for Engineers	3.0
ELEX 214*	Electrical Properties of Materials	1.0
ELEX 216*	Signal and Systems Analysis	0.5
ENGR 150	Engineering Graphics	3.0
MATH 222	Discrete Mathematics	3.0
MATH 250A	Intermediate Calculus 1	3.0
MATH 250B	Intermediate Calculus 2	3.0
MATH 251	Matrix Algebra for Engineers	3.0
MATH 252	Applied Differential Equations	3.0
MATH 254	Probability and Statistics	3.0
MECH 210	Statics and Dynamics	2.0
PHYS 210	Electricity and Magnetism	4.0
Total Credits		39.5

* ELEX 214 and ELEX 216 are presented as two modules in sequence.

Computer Science Bridge

The Computer Science Bridge program is offered by Camosun College with the full support and co-operation of the University of Victoria (UVic). This program provides entry to Year 3 of Computer Science at UVic for graduates of Computer Systems Technology programs. Successful students may then continue their studies toward a Bachelor of Science degree in Computer Science.

This eight month program is offered over two semesters, transferring to UVic in September or January. The program is intended for graduates with high academic standing.

Co-operative education work terms are transferable between institutions. For students who have completed co-op in their diploma, please contact UVic for specific details or see a Camosun College Co-operative Education representative for assistance.

For further information contact the Program Assistant at 250-370-4404, email engbridge@camosun.bc.ca, or click [here](#) to find more information on our website.

Length: Eight months

Location: Interurban and Lansdowne

Starting: Quarter 2

Program Code(s): COMPSCIBRIDGE

Admission Requirement(s):

- A diploma in Computer Systems Technology* from a Canadian Institution with a minimum cumulative GPA of 5.0 ("B") on Camosun's nine-point scale;
- A grade of "C" in University Calculus 1 (MATH 100 or equivalent);
- No individual course marks below a "C"; and,
- Submission of two official transcripts (final or in-progress) from all secondary and post secondary institutions the applicant has attended.**

* Graduates of other closely related programs may be accepted upon evaluation of the program by the Coordinator of Engineering Bridge.

** Camosun College diploma graduates are not required to submit Camosun College transcripts; however, an additional copy of secondary and other post-secondary transcripts is needed upon application.

Program Completion Requirement(s):

- Students must achieve a "C" in every course to obtain an Advanced Diploma in Computer Science Bridge.

Note: A maximum of two transfer courses and/or PLAs are allowed in this program. Student requests for transfer credit may be made for courses taken at a post-secondary institution and not included in the student's Technology program. Transfer credits must be approved by both the Bridge program coordinator and the receiving university.

Bridge to UVic

To be accepted into the third year of Computer Science at the University of Victoria, the student must have completed the Computer Science Bridge program with the following conditions:

- have achieved a "C" in seven of the eight courses; and,
- have achieved a minimum overall grade of "C" or better.

Program Content	Credits
COMP 210* Data Structures and Algorithms	3.0
COMP 227* Combinatoric Structures	3.0
ENGL 150 English Composition	3.0
MATH 222 Discrete Mathematics	3.0
MATH 225* Elementary Differential Equations	3.0
MATH 235* Procedures in Maple	1.5
MATH 250A Intermediate Calculus 1	3.0
MATH 251 Matrix Algebra for Engineers	3.0
MATH 254 Probability and Statistics	3.0
Total Credits	25.5

* If there is a low student enrolment, Computer Science Bridge students may take COMP 210, COMP 227 and MATH 225 at UVic as visiting students. The equivalent courses are CSC 225 - Algorithms and Data Structures 1, MATH 222 - Discrete and Combinational Mathematics, and MATH 201 - Introduction to Differential Equations, respectively. Students would not be required to take MATH 235 if they take UVic's MATH 201 or Camosun's MATH 252 instead of MATH 225.

Electrical Engineering Bridge

The Electrical Engineering Bridge program is offered by Camosun College with the full support and co-operation of the University of Victoria (UVic). This program provides access to Year 3 of Engineering at UVic for graduate Computer, Electrical, or Electronics Engineering Technologists.

The program is offered on the college quarter system during Quarter 4 (July through September) and Quarter 1 (September through December) permitting immediate entry into Year 3 of Engineering at UVic (commencing in January). The Electrical Engineering Bridge program is intended for graduates of Computer, Electronics, or Electrical Engineering Technology programs with high academic standing.

Co-operative education work terms from the Diploma in Electrical Engineering Technology program are transferable between institutions.

For students who have completed co-op in their diploma, please contact the receiving institution for details regarding transfer credit or see a Camosun College Co-operative Education representative for assistance.

This program is not governed by Camosun College's policies on admission and academic progress and promotion.

For further information contact the Program Assistant at 250-370-4404, email engbridge@camosun.bc.ca or visit our [website](#).

Length: Six months

Location: Interurban Campus

Starting: Quarter 4

Program Code(s): ELELBRIDGE

Admission Requirement(s):

- A diploma in Computer, Electronics, or Electrical Engineering Technology from a program with Canadian Technologies Accreditation*, and a minimum cumulative GPA of 5.0 ("B") on Camosun's nine-point scale with no individual course marks below "C";
- Submission of two official transcripts (final or in-progress) from all secondary and post secondary institutions the applicant has attended.**

* Graduates of other closely related programs may be accepted upon evaluation of their program by the Coordinator of Engineering Bridge.

** Camosun College diploma graduates are not required to submit Camosun College transcripts; however, an additional copy of secondary and other post-secondary transcripts is needed upon application.

Program Completion Requirement(s):

- Students must achieve an overall cumulative GPA of at least 2.0 and receive a "C" in every course to qualify for an Advanced Diploma in Electrical Engineering Bridge.

Note: A maximum of two transfer courses and/or PLAs are allowed in this program. Student requests for transfer credit may be made for courses taken at a post-secondary institution and not included in the student's Technology program. Transfer credits must be approved by both the Bridge program coordinator and the receiving university.

Bridge to UVic

To be accepted into Year 3 of Electrical Engineering at the University of Victoria, the student must have completed the Electrical Engineering Bridge program with the following conditions:

- have achieved a "C" in 12 of the 14 courses;
- obtained a minimum overall grade of "C"; and,
- have no more than one failing grade in all the courses.

Program Content	Credits
CHEM 150 Engineering Chemistry	4.0
COMP 139E Data Structures & Applications	4.0
COMP 166 Programming 1 for Engineers	3.0
ELEX 214* Electrical Properties of Materials	1.0
ELEX 216* Signal and Systems Analysis	0.5
ENGR 150 Engineering Graphics	3.0
MATH 250A Intermediate Calculus 1	3.0
MATH 250B Intermediate Calculus 2	3.0
MATH 251 Matrix Algebra for Engineers	3.0
MATH 252 Applied Differential Equations	3.0
MATH 254 Probability and Statistics	3.0
MECH 210 Statics and Dynamics	2.0
MECH 212 Thermodynamics for Engineers	2.0
PHYS 210 Electricity and Magnetism	4.0
Total Credits	38.5

* ELEX 214 and ELEX 216 are presented as two modules in sequence.

Mechanical Engineering Bridge

The Mechanical Engineering Bridge program is offered by Camosun College with the full support and co-operation of the University of Victoria (UVic) and the University of British Columbia (UBC). This program provides access to Year 3 of Engineering for graduate Mechanical Engineering Technologists. Successful students may then continue their studies toward a Bachelor of Engineering at UVic or a Bachelor of Applied Science at UBC in Vancouver or Kelowna.

The program is offered twice a year on the college Quarter system. The Winter session, starting in Quarter 2 (January through March) and finishing in Quarter 3 (April through May), permits entry to UBC Kelowna and Vancouver campuses in September.

The Summer session, starting in Quarter 4 (July through September) and finishing in Quarter 1 (September through December), permits immediate entry to UVic and UBC Kelowna in January.

Co-operative education work terms from the Diploma in Mechanical Engineering Technology program are transferable between institutions. For students who have completed co-op in their diploma, please contact the receiving institution for details regarding transfer credit, or see a Camosun Co-operative Education representative.

This program is not governed by Camosun College's policies on admission and academic progress and promotion.

For further information contact the Program Assistant at 250-370-4404, email engbridge@camosun.bc.ca, or visit our [website](#).

Length: Six months

Location: Interurban Campus

Starting: Quarter 2, Quarter 4

Program Code(s): MECHBRIDGE

Admission Requirement(s):

- A diploma in Mechanical Engineering Technology from a program with Canadian Technologies Accreditation*, and a minimum cumulative GPA of 5.0 ("B") on Camosun's nine-point scale with no individual marks below a "C"; and,
- Submit two official transcripts (final or in-progress) from all secondary and post-secondary institutions the applicant has attended.**

* Graduates of other closely related programs may be accepted upon evaluation of their program by the Coordinator of Engineering Bridge.

** Camosun College diploma graduates are not required to submit Camosun College transcripts; however, an additional copy of secondary and other post-secondary transcripts is needed upon application.

Program Completion Requirement(s):

- Students must achieve a "C" in all program courses to qualify for an Advanced Diploma in Mechanical Engineering Bridge.

Note: A maximum of two transfer courses and/or PLAs are allowed in this program. Student requests for transfer credit may be made for courses taken at a post-secondary institution and not included in the student's Technology program. Transfer credits must be approved by both the Bridge program coordinator and the receiving university.

Bridge to UVic or UBC

To be accepted into Year 3 of Mechanical Engineering at the University of Victoria (UVic) or the University of British Columbia (UBC), the student must have completed the Mechanical Engineering Bridge program with the following conditions:

- have achieved a "C" in ten of the 12 courses;
- have obtained a minimum overall grade of "C"; and,
- have no more than one failing grade in all the courses.

Courses

CHEM 150	Engineering Chemistry	4.0
COMP 139E	Data Structures & Applications	4.0
COMP 166	Programming 1 for Engineers	3.0
ELEX 250E	Linear Circuits 1	4.0
ENGR 150	Engineering Graphics	3.0
ENGR 290	Materials and Thermodynamics	2.0
MATH 250A	Intermediate Calculus 1	3.0
MATH 250B	Intermediate Calculus 2	3.0
MATH 251	Matrix Algebra for Engineers	3.0
MATH 252	Applied Differential Equations	3.0
MATH 254	Probability and Statistics	3.0
PHYS 210	Electricity and Magnetism	4.0

Total Credits**39.0****Mining Engineering Bridge**

The Mining Engineering Bridge program is offered by Camosun College with the full support and co-operation of the University of British Columbia (UBC) in Vancouver. This program is intended to provide access to Year 3 of Mining Engineering at UBC for graduate Mining Technologists. Successful students may then continue their studies toward a Bachelor of Applied Science.

The Mining Engineering Bridge is offered in Quarter 2 and 3 (January to June) for September entry into Year 3 of Mining Engineering.

The Mining Engineering Bridge program is intended for graduates of Mining Engineering Technology programs with high academic standing.

Co-operative education work terms from the Mining Engineering Technology Diploma program are transferable between institutions. For students who have completed co-op in their diploma, please contact the receiving institution for specific details, or see a Camosun College Co-operative Education representative for assistance.

This program is not governed by Camosun College's policies on admission and academic progress and promotion.

For further information contact the Program Assistant at 250-370-4404, email engbridge@camosun.bc.ca, or visit our [website](#).

Length: Six months**Location:** Interurban Campus**Starting:** Quarter 2**Program Code(s):** MINEBRIDGE**Admission Requirement(s):**

- A diploma in Mining Engineering Technology from a program with Canadian Technologies Accreditation,* and a minimum cumulative GPA of 5.0 ("B") on Camosun's nine-point scale with no individual marks below a "C"; and,

- Submit two official transcripts (final or in-progress) from all secondary and post-secondary institutions the applicant has attended.**

* Graduates of other closely related programs may be accepted upon evaluation of their program by the Coordinator of Engineering Bridge.

** Camosun College diploma graduates are not required to submit Camosun College transcripts; however, an additional copy of secondary and other post-secondary transcripts is needed upon application.

Program Completion Requirement(s):

- Students must achieve a "C" in every course.

Note: A maximum of two transfer courses and/or PLAs are allowed in this program. Student requests for transfer credit may be made for courses taken at a post-secondary institution and not included in the student's Technology program. Transfer credits must be approved by both the Bridge program coordinator and the receiving university.

Bridge to UBC

To be accepted into Year 3 of Mining Engineering at the University of British Columbia, the student must have completed the Mining Engineering Bridge program with the following conditions:

- have achieved a "C" in nine of the 11 courses;
- have obtained a minimum overall grade of "C"; and,
- have no more than one failing grade in all the courses.

Academic Term 1 (Quarter 2)

		Credits
CHEM 150	Engineering Chemistry	4.0
COMP 130	Computing for Engineers	3.0
ENGR 166	Geology for Engineers	3.0
ENGR 262	Analytical Methods	3.0
ENGR 264	Engineering Mechanics	3.0
MATH 250A	Intermediate Calculus 1	3.0
MATH 250B	Intermediate Calculus 2	3.0
MATH 251	Matrix Algebra for Engineers	3.0
MATH 252	Applied Differential Equations	3.0
MATH 254	Probability and Statistics	3.0
PHYS 295	Physics (Engineering Bridge)	4.0

Total Credits**35.0**

Software Engineering Bridge

The Software Engineering Bridge program is offered by Camosun College by special arrangement with the University of Victoria (UVic). This program provides entry to the second academic term of the second year of Software Engineering at UVic for graduates of Computer Systems Technology programs. Successful students may then continue their studies toward a Bachelor of Software Engineering degree at UVic. The program is intended for graduates with high academic standing.

Co-operative Education work terms are transferable between institutions. For students who have completed Co-op in their diploma, please contact UVic for specific details or visit Co-operative Education for assistance. In addition, it may be possible to participate in co-operative education during this bridge program by doing an internship. See the program coordinator for more information.

This program is not governed by Camosun College's policies on admission and academic progress and promotion.

For further information contact the Program Assistant at 250-370-4404, by email at engbridge@camosun.bc.ca, or visit our [website](#).

Length: Six months

Location: Interurban Campus

Starting: Quarter 4

Program Code(s): SOFTBRIDGE

Admission Requirement(s):

- A diploma in Computer Systems Technology from a program with CIPS Accreditation* and a minimum cumulative GPA of 5.0 ("B") on Camosun's nine-point scale with no individual marks below a "C."
- Submit proof of a "C" in University Calculus 1 (MATH 100 or equivalent).
- Submit proof of "C" in Physics 11, or PHYS 101.
- Submit two official transcripts (final or in-progress) from all secondary and post-secondary institutions the applicant has attended.

* Graduates of other closely related programs may be accepted upon evaluation of their program by the Coordinator of Engineering Bridge.

** Camosun College diploma graduates do not need to submit Camosun transcripts, however one copy each of secondary and other post-secondary transcripts are required.

Eligibility for Internship Work Experience:

- To be eligible to participate in the internship option, students must complete all program courses, obtain a GPA of 3.0, complete the Workplace Education Prep workshop series (COOP WEP), and be fully enrolled in the term preceding the work term.

Program Completion Requirement(s):

- Students must achieve a "C" in all program courses to obtain an Advanced Diploma in Software Engineering Bridge.
- To qualify for the Advanced Diploma in Software Engineering Bridge, Internship Designation, one (1) work term must be completed satisfactorily.

Note: A maximum of two transfer courses and/or PLAs are allowed in this program. Student requests for transfer credit may be made for courses taken at a post-secondary institution and not included in the student's Technology program. Transfer credits must be approved by both the Bridge program coordinator and the receiving university.

Bridge to UVic

To be accepted into the second academic term of the second year of Software Engineering at the University of Victoria, the student must have completed the Software Engineering Bridge program with the following conditions:

- Have achieved a "C" in eight of the nine courses; and
- Have obtained a minimum overall grade of "C".

Program Content	Credits
CHEM 150 Engineering Chemistry	4.0
ELEX 284 System Dynamics	3.0
MATH 222 Discrete Mathematics	3.0
MATH 250A Intermediate Calculus 1	3.0
MATH 251 Matrix Algebra for Engineers	3.0
MATH 254 Probability and Statistics	3.0
MECH 210 Statics and Dynamics	2.0
PHYS 191 Physics 1 Civil/Mechanical	3.0
PLUS one of:	
BIOL 102 Non-Majors Biology (Diversity)	4.0
BIOL 103 Non-Majors General Biology	4.0
MECH 212 Thermodynamics for Engineers (recommended)	2.0
Total Credits	26.0 - 28.0

Internship Option

COOP WEP Workplace Education Prep	0.0
SENG 201 Internship Work Experience	3.0
Total Credits	3.0

Other Programs

AutoCAD Graphics Certificate

The AutoCAD Graphics certificate program develops practical, hands-on skills in the use and application of AutoCAD as a computer-aided design tool. The program's modular format is designed for the adult part-time learner and consists of three core courses enhanced by electives. Courses are offered during evenings and Saturdays and as a Summer Institute.

The AutoCAD Completion Project is self-paced and requires permission of the Program Coordinator for registration. Please call 250-370-4563 or email ttce@camosun.bc.ca for a 'Permission to Register' form.

A Camosun College Certificate in AutoCAD Graphics will be awarded to students who successfully complete the following core courses and at least one elective.

Length: 180 hours

Location: Interurban Campus

Starting: Level I and Level II courses are offered in Fall, Winter and Spring/Summer semesters. Elective courses are offered at least once a year.

Program Code(s): AUTOCAD

Admission Requirement(s):

Level 1:

- Windows File Management Skills, or TTCD 537V, or BSCM 504V.
- Basic manual drafting skills, or TTCD 636V.

Level 2:

- AutoCAD Level 1 (TTCD 512V).

Required Courses:

AutoCAD Level I (TTCD 512V)	36 hours
AutoCAD Level II (TTCD 542V)	36 hours
AutoCAD Completion Project (TTCD 545V)	self-directed, 60 - 90 hours
AND one (1) of:	
AutoCAD 3D (TTCD 548V)	36 hours
AutoDesk Inventor (TTCD 645V)	24 hours

NAUTICAL PROGRAMS

The Nautical Training program is primarily designed to prepare eligible students for examinations leading to a Certificate of Competency as Master or Mate, issued by Transport Canada Marine Safety. In addition, the department has received Transport Canada's approval to deliver and evaluate candidates for various courses. As this is primarily an upgrading program, applicants will already have had exposure to the commercial marine industry and are seeking advancement in that marine career. To determine eligibility to write examinations, including sea-time and medical examination requirements, candidates must contact the Examiner of Masters and Mates at Transport Canada Marine Safety. Offices are located in Vancouver, Prince Rupert, Nanaimo and Victoria (see the blue pages of the phone book).

The Nautical department at Camosun College offers up-to-date courses to fulfill the syllabus requirements for the following certificates of competency:

- Watchkeeping Mate
- Watchkeeping Mate, Near Coastal
- Chief Mate, 150 Ton Domestic
- Master, 150 Ton Domestic
- Master, 500 Ton Domestic
- Master, 500 Ton Near Coastal
- Master, 3000 Ton Domestic
- Master, 3000 Ton Near Coastal
- Chief Mate
- Chief Mate, Near Coastal
- Master, 60 Ton Limited
- Fishing Master, Class 4
- Fishing Master, Class 3

Students may register for a complete program or specific modules within a program. Course lengths vary within the program. Complete details can be accessed through our [website](#).

Length: Varies according to program

Location: Interurban Campus

Starting: Varies

Program Code(s): NAUTICAL

Admission Requirement(s):

- Assessment by Transport Canada, Marine Safety Examiner of Masters and Mates.

The following courses may also be available for individual registration:

- Communications 1 & 2
- Chartwork & Pilotage 1 & 2
- Navigation Safety 1 & 2
- Meteorology 1 & 2
- Ship Construction & Stability 1 - 5
- General Ship Knowledge 1 & 3
- Celestial Navigation 1 & 2
- Cargo 1 - 3
- Simulated Electronic Navigation, Level 1A
- Ship Management Level 3

See our [website](#) or call **250-370-4016** for current information on the listed certificates of competency.

The following Nautical courses are offered through our Continuing Education department. For more information, including up-to-date schedules, call **250-370-4563** or see our website.

- Marine Basic First Aid
- MED A1, A2, A3
- ROC-MC (Restricted Operator, Maritime Commercial)
- Simulated Electronic Navigation, Limited (SENL)
- Electronic Chart Display & Information System (ECDIS)
- Bridge Resource Management (BRM)
- Small Vessel Operator Proficiency (SVOP)
- Passenger Safety Management & Specialized Passenger Safety Management

Call **250-370-4563** or **250-370-4016** for more information.

Qualification Key

AScT	Applied Science Technologist
ATVD	Advanced Television Engineering Diploma
BA	Bachelor of Arts
BASc	Bachelor of Applied Science
BEd	Bachelor of Education
BEng	Bachelor of Engineering
BGS	Bachelor of General Science
BSc	Bachelor of Science
BSME	Bachelor of Science Mechanical Engineering
CCC	Certified Canadian Chef
CCE	Certified Cost Engineer
CD	Canadian Forces Decoration
CIV	Captain Intermediate Voyage
CLS	Canada Land Surveyor
CofA	Certificate of Apprenticeship
CofQ	BC Certificate of Qualification (Formerly TQ Trades Qualification)
CWI	Certified Welding Inspector
Dip. Ed.	Diploma in Education
Dip. Tech.	Diploma of Technology
DNS	Diploma Nautical Science
DPSM	Diploma in Public Sector Management
EdD	Doctor of Education
EIT	Engineer in Training
FMS	Fellow Member of Management Services
FNI	Fellow of the National Institute
FSRA	Field Safety Representative A
FSRB	Field Safety Representative B
ID	Instructor's Diploma
IP	Inter Provincial
ISP	Information Systems Professional (CIPS)
LEED AP	Leadership in Energy & Environmental Design Accredited Professional
MA	Master of Arts Degree
MASc	Master of Applied Science
MBA	Master of Business Administration
MEd	Master of Education
MC	Master Certificate
MM	Master Mariner
MNI	Member of the Nautical Institute
MSc	Master of Science
PEng	Professional Engineer
PhD	Doctor of Philosophy
POW 3	3rd Class Power Engineer
SMIEEE	Senior Member of Institute of Electrical & Electronics Engineers, Inc.
VIC	Vocational Instructors Certificate

School of Trades & Technology Faculty Listing

Architectural Trades

Chair: Cam Russell, BEd, CofQ, IP
Phone: 250-370-3804
Fax: 250-370-4429

Guenter, Ken, BA, MEd, CofA, CofQ, IP
Heagy, Robin, BA, MA, CofA, CofQ, IP, ID
Murray, Geoff, BA (Hons.), CofA, CofQ, IP, ID, LEED AP
Newburg, Grant, CofA, CofQ, IP, Dip. Ind. Ed
Newton, Tom, BSc, Dip. Ed, CofA, CofQ, IP
Russell, Cam, BEd, CofQ, IP
Smith, Derek, BEd, CofA, CofQ, IP
Swanwick, Mark, CofA, CofQ, IP, ID
Toronitz, Dale, BSc, Dip. Ed,
Arboriculture Cert.
van Akker, Albert, CofA, CofQ, IP, ID

Civil Engineering Technology

Chair: Peter Burrage
Phone: 250-370-4443
Fax: 250-370-4525

Bai, Bao-Qin, BSc, MSc, PhD, ID, PEng
Broom, Zoë, BASc (Hons.), MA, PEng
Burrage, Peter, BASc (Hons.), MEd, ID, PEng
Fell, Peter, Dip. Tech., BEng, PEng
Gibbs, Ross, Dip. Tech., BEng, BSc
(Computer Science), BSc (Math),
ID, MEng, PEng
Vliet, Larry, Dip. Tech.
Wilkinson, Gordon, BASc, MEng, PEng, CLS
(Geodesy)

Computer Science

Chair: Saryta Schaerer
Phone: 250-370-4451
Fax: 250-370-3898

Ayers, Tim, BComm, BSc
Baril, Suzanne, MA
Barker, Deryk, BEd (Hons.), MSc, Cert. Ed.
Downarowicz, Jadwiga, BSc, Cert. Ed.
Hadian, Shohreh, BSc, MSc, PID
Hartman, Ken, BSc
Hilman, Donald, Dip. Tech., BSc
Lang, Stephen, BSc
Leahy, Robert, BA, MSc
Pfeifer, Darrell, BSc
Reimer, Deid, BSc
Schaerer, Saryta, BA, BSc, MSc
Shpak, Dale, BSc, MEng., PhD, SMIEEE, PEng
Weston, Marla, BSc (Hons.), PhD

Professional Cook Training

Chair: Gilbert Noussitou
Phone: 250-370-3778
Fax: 250-370-3859

Dober, Clemens, CofA
Hood, Greg, ID, CofQ, CCC
Noussitou, Gilbert, CCC, CofA, ID, IP
Seed, Terrence, CCC, IP, CofA

Electrical Trades

Chair: Ken Holland
Phone: 250-370-3772
Fax: 250-370-3875

Bradley, Carmen, IP, CofA
Brady, Rodger, IP, CofA
Burchnall, Jim, IP, CofA, FSRA
Crowther, Doug, IP, CofA, ID
Daigle, Dan, IP, CofA, FSRA
Holland, Ken, IP, CofA, CofQ, MC, ID, FSRA
Iverson, Steve, ID, IP, CofA, FSRA
Kohorst, George, IP, CofA
Krawchuk, Jay, IP, MC, CofA, CofQ
Megenbir, Ron, IP, CofQ, FSRB
Richman, Mike, IP, CofA, FSRB, POW 3
Stuart, Al, IP, CofA, CofQ, ID
Warrender, Ian, IP, CofA, CofQ, ED,
AscT, BGS

Electronics & Computer Engineering Technology – Renewable Energy

Chair: Alan Duncan
Phone: 250-370-4433
Fax: 250-370-4424

Bouallouche, Amar, BSc, MSc, PhD, ID
Browning, Ian, BEng, MSc, MRes
Cameron, Ian, Dip. Tech., MA, ID
Cartier, Ward, Dip. Tech, BSc, MASE
Cumiskey, Jason, Dip. Tech., BSc
Curtis, Trevor, Dip. Tech., MA, ID
Duncan, Alan, BSc (Eng), ID
Dundas, Mel, Dip. Tech., ID
Gruno, Paul, Dip. Tech., ID
Mayes, Wayne, Dip. Tech., ID
Pimlott, Godfried, BSc, BEng
Shahni, Saeed, BSc (Eng)
Stretch, Lindsay, Dip. Tech (Mech),
Dep. Tech (Elex), BEng
Van de Vegte, Joyce, BASc, MASC,
BC Teacher's Cert.
Van Oort, James, Dip. Tech., BEng
Warren, Russ, Dip. Tech.
Yang, John, BSc, BEng, ID

Mechanical Engineering Technology

Chair: Ross Lyle
Phone: 250-370-4511
Fax: 250-370-4525

Bartlett, James, BSc, MSc
Hedge, Peter, FMS, Dip. Ed.
Heerah, Imtehaze, BEng, MASC
Lyle, Ross, Dip. Tech., BEng, PEng
Rook, Russ, BEng, MSc, EIT
Spaulding, Will, BSc, MSc, PEng
Stephen, Jeffrey, Dip. Tech, BEng,
Tarnai-Lokhorst, Kathy, BASc, PEng, MBA
Wakefield, Derek, BSc, PEng

Mechanical/Metal Trades

Chair: Ray Fischer
Phone: 250-370-3786
Fax: 250-370-4428

Alexander, Kevin, ID, CofQ, IP, Registered
"A" Welder Certificate, CWI
Bonin, Lou, ID, CofQ, IP, Registered "A"
Welder Certificate, CWI
Broad, Kyle, IP, CofQ, CofA, ID
Dishkin, Norm, IP, CofQ
Fischer, Ray, ID, IP, CofQ
Howard, Ron, Registered "A" Welder
Certificate
MacDonald, Ken, IP, CofQ
Ooievaar, Andre, IP, CofA, CofQ
Stratford, Jim, ID, IP, Registered "A" Level
Welder Certificate, CWI

Nautical

Program Leader: Capt. Ivan Oxford
Phone: 250-370-4016
Fax: 250-370-3898

Oxford, Capt. Ivan, MM, MNI, DNS, ID
Tyre, Capt. David
Worrall, Capt. Richard, CIV, DNS, MNI

Plumbing/Pipe Trades

Chair: Rod Lidstone
Phone: 250-370-3790
Fax: 250-370-4429

Black, Matt, IP, CofA, CofQ
Gordon, John, CofQ, IP, CofA, Gas-A
Lidstone, Rod, CofQ, ID, IP, CofA, Gas-A
McPherson, Jamie, IP, CofQ, CofA
Morris, Dennis, IP, CofA, CofQ
Paterson, Al, IP, CofQ, CofA
Vaux, Darren, IP, CofA, CofQ, Gas-A