

employability.

FACULTY Engineering
PROGRAM Computer Engineering

► Overview

Computer Engineering applies algorithmic and digital design principles to design, build and test computer software or hardware components used for information processing, communication and storage – typically embedded in larger engineered systems and in distributed, networked environments.

Application areas include communication, automation and robotics, power and energy, health care, business, security, entertainment and many others.

► Program Objective

This program is designed to develop professionals with experience in all aspects of computers. It gives students the benefit of leading-edge technology in classrooms and labs, providing them with a solid foundation that can be applied very successfully within a business environment.

► Program Content

The curriculum is designed to teach those fundamental physical and engineering sciences which form the basis of the work of computer engineers. It consists of prescribed core courses complemented by six technical elective courses, two technical breadth elective courses and five complementary studies elective courses.

Through a choice of electives, students specialize in the following broad domains:

- Systems for communications, control or power
- Digital hardware design and embedded computation
- Software systems and software engineering

In the final year, students also choose and present a design project.

► Key Benefits to Employers

Students in the Waterloo Computer Engineering program are bright and highly motivated and bring perspectives from previous work terms. They bring knowledge from a wide range of courses in both computer hardware and software.

Valuable skills and attributes include:

- Strong mathematical skills
- Knowledge of algorithmic and digital design principles
- Communication skills
- Knowledge of computer software
- Ability to learn new programming languages easily
- Business understanding
- Analytical skills

The Business Advantage

► Employment Examples

Computer Engineering students have a broad and deep knowledge base that equips them for computer-related roles throughout the business environment.

Job titles include:

- Computer Analyst
- IT Help Support
- Programmer
- Internet Developer
- Application Support
- Hardware Designer
- Hardware Verification
- Database Programmer
- Quality Assurance Intern
- Embedded Systems Developer
- Systems Engineering Analyst
- RF Tester
- Junior Graphic Designer
- Web Developer
- Technical Analyst
- JAVA/C++ Developer
- Hardware and Software Developer
- Helpdesk Team Member
- Software Test Analyst
- Support Analyst
- LAN Analyst
- Management Information Analyst
- Technical Writer

Engineering – Computer Engineering (Stream 4)*			
Work/Study Sequence			
	Fall (Sept.-Dec.)	Winter (Jan.-April)	Spring/Summer (May-Aug.)
Year One	Courses	Work Term I	Courses
Year Two	Work Term II	Courses	Work Term III
Year Three	Courses	Work Term IV	Courses
Year Four	Work Term V	Courses	Courses
Year Five	Work Term VI	Courses	

Engineering – Computer Engineering (Stream 8)*			
Work/Study Sequence			
	Fall (Sept.-Dec.)	Winter (Jan.-April)	Spring/Summer (May-Aug.)
Year One	Courses	Courses	Work Term I
Year Two	Courses	Work Term II	Courses
Year Three	Work Term III	Courses	Work Term IV
Year Four	Courses	Work Term V	Courses
Year Five	Work Term VI	Courses	

* Stream 4 is available each year, Stream 8 is available in years when enrolment in the program increases.

“Waterloo is an incredible school with an innovative and entrepreneurial spirit and an unstoppable passion for excellence that’s infused in its students and alumni. At Side Effects, we’re using that passion to drive the development of world-class software that allows our customers to bring their imagination to life.”

– PAUL SALVINI, Chief Technology Officer and Vice President, Side Effects Software Inc.

Waterloo Co-op Student Salary Information

Our annual earnings information tables provide a helpful summary of what other organizations have paid UW Co-op students during their work terms. You can find the latest information on our website: www.cecs.uwaterloo.ca/employers/salary.php

To find out more about how the Waterloo Co-op Program can work for you, please contact us.

1-877-WAT-COOP | coop@uwaterloo.ca | www.coop.uwaterloo.ca