

Bachelor of Engineering

Water Resources Engineering



ABOUT THE PROGRAM

Water is an invaluable resource. At the University of Guelph, our Water Resources Engineering students design solutions that balance the needs of ecosystems and society, both locally and globally. As a student you will learn approaches to manage our water and land resources to ensure adequate, clean water is available. You will apply engineering analysis and computer models to identify water resources problems and design engineering solutions. In the classroom, lab and field, you will work in a collaborative setting to identify and evaluate watershed management options to protect and restore our groundwater, rivers and lakes.

WHY CO-OP?

As a co-op student, you will gain relevant work experience, build professional networks, and develop essential interpersonal skills needed to succeed in the workplace, all while getting paid and earning your university degree. Guelph's co-op program is unique due to the exceptional level of support provided, including an in-class preparatory course, a personal connection with a Co-op Co-ordinator to assist you during the employment process, and access to senior student mentors.

COURSE SEQUENCING

In the Water Resources Engineering co-op program, you will participate in five co-op work terms in addition to eight academic semesters throughout your five years at the University of Guelph. This sequencing is viewable below:

| YEAR | FALL | WINTER | SUMMER |
|-------|----------|----------|--------|
| ONE | Academic | Academic | Off |
| TWO | Academic | Academic | Work |
| THREE | Academic | Work | Work |
| FOUR | Academic | Academic | Work |
| FIVE | Work | Academic | |



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SAMPLE JOBS

Below are some examples of past Water Resources co-op positions.

Field Monitoring Assistant

In this role, you will assist full-time field technicians with field work to support the water quality and subwatershed planning programs. Field work may include water quality sampling, E. coli sampling at conservation area beaches, flow surveys, calibrating and deploying multi-probe data sondes for continuous measurement of water quality parameters and canoe surveys for identification/mapping/sampling of aquatic plants. Applicants must have a valid driver's license.

Water Technologist

The Water Technologist is responsible for undertaking the detailed studies, modeling and design tasks associated with stormwater management works. This will involve coordinating with engineers, technical staff and/or team members to ensure that the projects needs are met in a timely and effective manner. You will also be completing various field assignments including the monitoring of surface water systems.

Water Resources Engineering Co-op Student

Specific duties will include analyzing water and sanitary servicing data with spreadsheet and modeling software. You will conduct preliminary and detailed design of treatment and pumping facilities, and perform hydraulic study analysis. Preparing cost estimates as well as writing proposals and reports will also be a part of the work term. The candidate should have a full driver's license.

SAMPLE EMPLOYERS*

- Stantec Consulting Ltd.
- Environment and Climate Change Canada
- Various Regional Municipalities and Conservation Authorities
- SUEZ Environmental

*This shows a sample of recent co-op employers, and will vary depending on employer recruitment needs. During a job search, students are encouraged to be actively engaged and are supported in establishing and maintaining their own personal contacts.

SALARY INFORMATION Average Weekly Salary Range: \$650 - \$800*

*Salary ranges are shown as rates before deductions. Statistics are based on jobs held by co-op students in 2017/2018. These ranges may fluctuate on an annual basis in response to economic conditions.

SKILLS & KNOWLEDGE ACQUIRED

- Knowledge of engineering sciences including hydrology, hydraulics and heat and mass transfer
- Experience writing formal reports including proposals, engineering design reports and technical laboratory reports
- Effective problem solving, communication and teamwork skills developed from participation in group design projects
- Solid understanding of a variety of modeling and design software
- Exposure to a variety of field, laboratory and office work in a variety of employment sectors

