

# Bachelor of Engineering

## Mechanical Engineering



### ABOUT THE PROGRAM

Mechanical Engineering at the University of Guelph offers a unique knowledge combination in the most fundamental of engineering disciplines. You will focus on design, multi-disciplinary teamwork and communication to become a specialist who incorporates engineering into opportunities in the fields of sustainable energy, mechatronics, manufacturing system design and biomechanics. The program is built around concepts of sustainability and sustainable design to equip students to tackle these issues in the workplace. You will be able to apply mathematical, scientific and engineering principles to a wide variety of fields and find employment across the private and public sectors.

### 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 Mechanical 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 Mechanical Engineering co-op positions.

### Operations Engineering Co-op Student

You may identify and resolve system design issues that prevent the organization from achieving peak performance, such as finding the optimal level of inventory while considering cost, service level, and productivity. You will also monitor production performance, log issues, and engage in lean and continuous improvement activities.

### Product Design Engineering Co-op Student

You will assist in the product development process. This may include supporting your team in the design of new products such as machines, components, tools, fixtures and equipment, or improving current products through design revisions. You may conduct calculations and analysis, prepare cost and timing reports, and create design specifications.

### Engineering Assistant

You will help senior engineer(s) achieve their objectives through a variety of tasks and projects such as report writing, proposal preparation, studies and analysis, project management, etc. You may have the opportunity to work with other staff, clients, and vendors and participate in departmental meetings. Your role may involve a combination of shop floor and in-office work, depending upon the environment.

**Additional Sample Jobs:** Quality Assurance Technician, Engineering Assistant, Project Coordinator, Automation Designer, Continuous Improvement Student, R&D Development Co-op Student, Maintenance Engineering Student, Process Engineering Co-op, and more.

## SAMPLE EMPLOYERS\*

- Tigercat Industries
- Linamar Corporation
- DENSO
- ATS Automation
- RWDI

\*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

- Ability to design, document, implement and manage large-scale projects
- Solid knowledge of machine design, digital, electrical and electromechanical systems, and systems analysis
- Strong independent research skills developed through the design process, management and financial feasibility analysis
- Advanced computer-aided design (CAD) skills

