

# Bachelor of Engineering

## Biomedical Engineering



### ABOUT THE PROGRAM

Biomedical Engineering students at the University of Guelph combine their knowledge of life sciences with engineering principles to the design, development, and application of electronic and biomedical devices to improve human health. You will study biomedical engineering to help meet the growing need for the application of mechanics, materials and physiology to develop devices such as prosthetics and implants and for investigative instruments and technologies. You will also learn skills that can lead to industrial process design and quality control in the healthcare sector. While gaining the background necessary to excel in the biomedical industry, you have the option to specialize your degree through elective courses in the areas of pharmaceuticals, electronic instrumentation and electrical devices or human factors.

### 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 throughout the co-op experience. Students will complete a comprehensive course preparing them for the co-op employment process, and will receive guidance from a knowledgeable team of staff dedicated to their development and success.

### COURSE SEQUENCING

In the Biomedical 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	



## SAMPLE JOBS

Below are some examples of past Biomedical Engineering co-op positions.

### **Manufacturing & Quality Engineer**

In this cross-functional position, you will facilitate design control requirements, conduct risk analysis, and implement continuous improvement activities. This includes implementing quality management software, developing and reviewing final inspection forms, and monitoring the overall performance and metrics of the facility.

### **Device Manufacturing Assistant**

You will assist with the design, development and optimization of chemical and biological processes for the production of cardiology and radiology medical devices. This includes working with government bodies to obtain regulatory approval for the devices being developed.

### **Engineering Assistant**

In this role, you will provide engineering support and technical assistance to a senior Biomedical Engineer. This involves performing product testing, design verification, preparing technical reports, and documenting all results.

Additional Sample Jobs: Process Development Engineer, Research Assistant, Orthopedic Researcher, Medical Imaging Technician, Student Industrial Engineer, and more.

## SAMPLE EMPLOYERS\*

- Baylis Medical
- Laborie Medical Technologies
- McNeil Consumer Healthcare
- University Health Network

\*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

Students receive compensation from their employer for co-op work terms. The rate of pay will vary depending on a number of factors including the industry, the student's program of study, and work term level. For your reference, a **Co-operative Education Salary Guide** is available on our website, which provides hourly rates (averages and ranges) for each degree program.

## SKILLS & KNOWLEDGE ACQUIRED

- Participation in design groups develops effective problem solving, communication and teamwork skills
- Fundamental knowledge of engineering concepts, as well as physical, mathematical and biological sciences
- Strong laboratory techniques and computing skills
- Strong independent research skills developed through the design process, management and financial feasibility analysis