

# Chemical Biology

**Can** we unravel the origins of life?

**Is** it possible to redesign enzymes to perform any desired reaction?

**Can** we ever beat photosynthesis?

**How** can we improve biological molecules and metabolic pathways?

**Can** we redesign the genetic code?

Chemistry, the central science, is the study of elements and compounds, their properties and the ways they react to form new substances. Chemical biology—at the interface of chemistry and biology—is a rapidly growing interdisciplinary area in science.

Through the synthesis and use of small molecules, probes, or chemically modified biological macromolecules, chemistry helps answer questions of biological importance.

**This specialization provides an orientation towards biological processes at the molecular level.**



## What will I study?

- Advanced Biochemistry
- Advanced Organic Chemistry
- Advanced Topics in Chemical Biology
- Bio-Organic Chemistry and Chemical Biology
- Cell Biology
- Genetics and Molecular Biology
- Molecular Structure Determination from Spectroscopic Data

## What can I do with my degree?

This specialization suits students who want to pursue careers in:

- Biotechnology
- Drug synthesis
- Government or private research laboratories
- Medical marketing
- Medical research
- Toxicology

An undergraduate Chemistry degree—with a specialization in Chemical Biology—allows you to pursue graduate studies. This includes our Master of Science programs in Materials Science or Applied Bioscience.

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## Want more information?

Faculty of Science  
2000 Simcoe Street North  
Oshawa, Ontario L1G 0C5  
Canada

905.721.3190  
[connect@ontariotechu.ca](mailto:connect@ontariotechu.ca)  
[ontariotechu.ca/programs](https://ontariotechu.ca/programs)

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