

Faculty

The University of Alberta's Faculty of Engineering ranks in size among the top five percent of more than 400 engineering schools in North America, with about 4,000 undergraduate and 1,600 graduate students.

It offers 21 engineering programs as well as Canada's second-largest Engineering Co-op Program, with more than 1,400 paid student placements per year. All of our degree programs are fully accredited by the Canadian Engineering Accreditation Board.

CME Faculty Members awards and recognitions:

Medal for Distinction in Engineering Education from Engineers Canada

National Sciences & Engineering Research Council Industrial Research Chairs

Rutherford Awards for Excellence in Undergraduate Teaching

Canada Research Chairs, Canada Excellence Research Chair

Excellence in Education Awards from the Association of Professional Engineers and Geoscientists of Alberta

Provost's Awards for Early Achievement of Excellence in Undergraduate Teaching

Fellowships in Scientific Societies

Department

The Department of Chemical and Materials Engineering (CME) is part of the University of Alberta's Faculty of Engineering. Engineering has been taught at the U of A since it was founded in 1908. The first three graduates in Chemical Engineering graduated in 1928. In 1996, nine Materials faculty members joined the department, which resulted in the first Department of Chemical and Materials Engineering in Canada. To this day, the department continues to grow as one of the largest in North America.

CME is home to:

Institute for Oil Sands Innovation

Canadian Centre for Clean Coal/Carbon and Mineral Processing Technologies

Canadian Centre for Welding and Joining

The David and Joan Lynch School of Engineering Safety and Risk Management

Note: This information was accurate at the time of printing - 09/2017

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UNIVERSITY OF ALBERTA

CHEMICAL ENGINEERING





Co-op Program

In the co-op program, students complement their academic studies with five four-month work terms of paid work experience. The academic requirements are the same as in the traditional program. In order to complete the work experience component, co-op students complete the last six academic terms over a four-year period so a degree with the cooperative program designation requires five years.

Undergrad Research

As an engineering student at a research-intensive university like the U of A, you are at a distinct advantage. Engineering professors are not only dedicated teachers, they are world-leading researchers. Undergraduate engineering students have opportunities to take on research-based courses for credit.

Scholarships

Engineering students have access to more than \$1.5 million per year in scholarships for new and continuing studies including:

- Deans Research Awards
- NSERC Undergraduate Student Research Awards

Chemical Engineering

Chemical engineering is not chemistry – it is the bridge between chemistry and the real world outside the laboratory. Chemists study chemical reactions in a test tube. Chemical engineers find a way to scale up those reactions, so that products can be manufactured by the truckload in a safe, sustainable and economically viable manner. In addition to a traditional chemical engineering program, students may choose:

- **Biomedical Option:** While retaining the core of chemical engineering, students will take courses specializing in biomedical sciences
- **Computer Process Control Option:** In addition to required chemical engineering courses, students will specialize in the control of chemical processes
- **Oil Sands Elective Stream :** In addition to required chemical engineering courses, students will take courses that deal with the extraction and upgrading of the oil sands

Undergraduate Program*

Year 1

Natural and Mathematical Sciences
Computer Programming

Years 2 and 3

Process Analysis
Thermodynamics
Heat and Mass Transfer fluid mechanics
Reaction Engineering

Year 4

Process Control
Program/Complementary Electives
Engineering Safety and Risk
Management Capstone Design Project

*The sequence is indicative and will depend on the specific program.

Your Future

An undergraduate degree in chemical engineering prepares you for direct entry into the chemical engineering profession. Our graduates are equipped to compete with the best engineering graduates in the world for positions in industry and government, as well as in the top graduate schools anywhere.

Careers In Chemical Engineering

- Reducing the cost of pharmaceuticals in order to make them affordable
- Engineering microbes to produce fuels, pharmaceuticals, and valuable chemicals
- Developing technologies to reduce greenhouse gas emissions
- Designing processes to clean up oil sands tailings ponds
- Investigating fuel-cell technologies for use in zero-emission cars



inspiring - challenging - rewarding

experience - learn - innovate

follow - your - dream