BACHELOR OF
MULTIDISCIPLINARY DESIGN -
EXPERIENTIAL LEARNING

Overview
The University of Ottawa Bachelor of Multidisciplinary Design - Experiential Learning is a 3-year program in the Faculty of Engineering, emphasizing student choice, multidisciplinary learning, digital/data fluency, professional skills development and impact on a global scale. The program trains students seeking to combine engineering/technical skills with other fields of study. Learning in the classroom is reinforced through internships and other experiences gained outside the classroom. Students also develop leadership skills via an integrated mentorship model.

The program is intended for students who may not yet consider engineering as their educational path, thereby providing opportunities for a diverse set of students. Bridging programs help lower the barriers to entry, while the inclusive curriculum provides socially and environmentally relevant opportunities for students to grow. To develop students' understanding of pressing global requirements for engaged engineering practice, United Nations Sustainable Development Goals are integrated into learning activities, projects, and courses.

As industry seeks out technologically adept employees and multidisciplinary knowledge, the shorter and more flexible learning paths offered by the program provide students with a unique opportunity to develop skills attuned to current market demands and future societal needs. Students graduate with specific subsets of traditional engineering elements and an expansive multidisciplinary focus.

Program Requirements

Compulsory First-Year Courses:

- GNG 1103 Engineering Design 3 Units
- SED 1111 Personal development and communications skills 3 Units
- SED 1112 Teamwork and communication skills 3 Units
- SED 1113 Introduction to engineering and its impact on society 3 Units
- SED 1114 Introduction to sustainability 3 Units
- SED 1116 Data visualization and analytics 3 Units
- 3 course units from: 3 Units
  - ITI 1120 Introduction to Computing I
  - SED 1115 Embedded programming and scripting

Compulsory Second-Year Courses:

- GNG 2101 Introduction to Product Development and Management for Engineers and Computer Scientists 3 Units
- SED 2113 Leadership and communication 3 Units
- SED 2116 Ethics and Technology 3 Units
- SED 2917 Internship I 3 Units
- 3 course units from: 3 Units

Compulsory Third-Year Courses:

- SED 3111 Multidisciplinary Design I 3 Units
- SED 3112 Multidisciplinary Design II 3 Units
- SED 3901 Community engagement 3 Units
- SED 3917 Internship II 3 Units

Optional Courses

- 9 course units of mathematics or science courses from the list of science electives for the programs at Faculty of Engineering and the list of the following mathematics courses:
  - MAT 1320 Calculus I
  - MAT 1322 Calculus II
  - MAT 1341 Introduction to Linear Algebra
  - MAT 1348 Discrete Mathematics for Computing
  - MAT 2322 Calculus III for Engineers
  - MAT 2377 Probability and Statistics for Engineers
  - MAT 2384 Ordinary Differential Equations and Numerical Methods
- 12 technical course units of technical electives from the list of technical electives of the Faculty of Engineering programs approved by SEDTI
- 24 elective course units

1 Students who wish to take technical electives in computer science or software engineering must take ITI1120 and ITI1121. Otherwise, students must take SED1115 and SED2115.
2 SED 3901 Community Engagement (0 units)
3 The list of 12 technical course units of the Faculty of Engineering programs approved by SEDTI is as follows: all courses offered by the Faculty of Engineering except CSI 2911, CVG 1107, ELG 2911, GNG 1106, GNG 4120, GNG 4170, ITI 1100, ITI 1120, ITI 1121, SEG 2911, theses, projects, seminar courses and COOP placements.