

# BASC MULTIDISCIPLINARY DESIGN ENGINEERING

## Overview

The University of Ottawa BAsC in Multidisciplinary Design Engineering is a 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.

The program is intended for students who consider engineering across multiple disciplines as their educational path, thereby providing opportunities for a diverse set of students. 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 flexible learning paths offered by the program provide students with a unique opportunity to develop skills attuned to current market demands and future industry needs. Students graduate with specific subsets of traditional engineering elements and an expansive multidisciplinary focus.

This program is offered in English and in French.

## Program Requirements

### Compulsory First-Year Courses:

GNG 1103	Introduction to 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

### Compulsory Second-Year Courses:

GNG 2101	Introduction to Product Development for Engineers and Computer Scientists	3 Units
SED 2113	Leadership and communication	3 Units
SED 2116	Ethics and Technology	3 Units
SED 2901	Engineering Accreditation I	1.5 Units
SED 2917	Internship I	3 Units

### Compulsory Third-Year Courses:

SED 3111	Multidisciplinary Design I	3 Units
SED 3112	Multidisciplinary Design II	3 Units
SED 3115	Introduction to Artificial Intelligence	3 Units
SED 3901	Community engagement	
SED 3917	Internship II	3 Units

### Compulsory Fourth-Year Courses:

SED 4111	Capstone Design I	3 Units
SED 4112	Capstone Design II	3 Units

SED 4901	Engineering Accreditation II	1.5 Units
SED 4917	Internship III	3 Units

### Optional Courses

3 course units from: 3 Units

ITI 1120 Introduction to Computing I

SED 1115 Embedded programming and scripting

3 course units from: 3 Units

ITI 1121 Introduction to Computing II

SED 2115 Web and Mobile Applications

9 course units from SEDTI's approved list of mathematics/science courses 9 Units

12 course units from the list of SEDTI's approved technical electives<sup>2</sup> 12 Units

39 elective course units<sup>1, 3, 4</sup> 39 Units

**Total: 120 Units**

<sup>1</sup> Optional course units must be approved by the program coordinator.

<sup>2</sup> Students who wish to take courses in computer science or software engineering must take Introduction to computing I and II (ITI 1120 and ITI 1121). Otherwise, students must take SED 1115 and SED 2115.

<sup>3</sup> The electives may be replaced by a combination of a Minor, and/or elective units.

<sup>4</sup> The actual number of total units required for the program are determined by CEAB accreditation requirements and dependant on the stream chosen by the student.