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Engineering - Mechatronics Engineering, Bachelor of

Honours Degree

Program Code: ME411

Campus: North

Length: 8 semesters

Humber's Bachelor of Engineering program begins with a common platform of first year courses which provide foundational engineering knowledge.

The Bachelor of Engineering – Mechatronics Engineering discipline gives you hands-on experience with industry-standard advanced manufacturing technologies.

In addition, this program provides an opportunity to work on industry-led projects through multidisciplinary capstone projects as well as a co-operative education placement.

This program is also offered at Sault College in Sault Ste. Marie, Ontario. Students in the program will collaborate on activities using industry-standard software and equipment.

A co-operative education placement (three consecutive work terms, 420 hours each) ensures that work-integrated learning experience is a key component of the program.

Courses

Semester 1

ALGB 1100: Linear Algebra

CALC 1100: Calculus 1

ENGI 1000: Physics 1

ENGI 1010: Introduction to Engineering

ENGI 1020: Engineering in Society

ENGI 1021: Technical Communication and Critical Thinking for Engineers

Semester 2

CALC 1500: Calculus 2

ENGI 1500: Physics 2

ENGI 1510: Engineering Design

ENGI 1511: Engineering Materials

ENGI 1512: Teamwork and Leadership for Engineers

ENGI 1515: Introduction to Programming

Semester 3

DIFF 2100: Differential Equations

ENGI 2000: Engineering Project Management

MENG 2000: Electric Circuits Analysis

MENG 2010: Applied Mechanics

MENG 2020: Computer Programming

MENG 2030: Digital Electronics

Semester 4

MENG 2500: Mechatronics Project

MENG 2510: Instrumentation & Measurement

MENG 2520: Pneumatics & Hydraulics

MENG 2530: Microcontrollers

NUMM 2500: Numerical Methods

Select 1 from the following courses

DEGE: Degree Breadth Elective

Semester 5

ENGI 3000: Engineering Economics and Entrepreneurship

MENG 3000: Statistics and Quality Assurance

MENG 3010: Electric Motors

MENG 3020: System Modeling and Simulation

MENG 3065: Introduction to Artificial Intelligence

WORK 3590: Work Preparation

Select 1 courses from one of the following groupings

Semester 6

ENGI 3500: Law, Ethics and Professional Practice

MENG 3500: Programmable Logic Controllers

MENG 3510: Control Systems

MENG 3520: Signal Processing

Select 2 courses from one of the following groupings

Work Experience - SEM 6A

ENGI 3591: Co-operative Education 1 - Faculty of Applied Science & Technology

Work Experience - SEM 6B