COMPUTER ENGINEERING

FACULTY OF SCIENCE

SCAN ME

The computer engineering major integrates electrical engineering and computer science to give graduates skills in developing computer systems. While graduates do not become engineers, they acquire the critical skills to bridge between hardware and software by taking courses from both Computer Science and Electrical Engineering.

Students who study computer engineering are typically involved with tasks such as writing software and firmware for embedded systems; interfacing with sensors, actuators and micro-processors; and working with specialized hardware devices such as IoT (Internet of Things) devices.

WHO WOULD BE INTERESTED IN THIS MAJOR?

The computer engineering major is best suited to creative thinkers who want to work with physical electronic artefacts. Specifically, this major suits those who want to work on hardware devices that are commonplace or custom-designed for a range of different solutions. Consequently, students who study computer engineering need a personality that handles frequent swapping from a realm of circuits, soldering and hardware construction, to the abstract paradigm of algorithms and programming.

WHAT COURSES WILL YOU TAKE?

Computer Engineering is linked to the Computer Science major and must be taken concurrently with a Computer Science major.

1ST YEAR LEVEL COURSES

- Computer Science 1015 (foundations of computing; problem solving)
- Computer Science 1016 (object-oriented design and programming)
- Mathematics 1
- Physics 1

2ND YEAR LEVEL COURSES

- Basics of Electronic Engineering
- Embedded Systems 1

3RD YEAR LEVEL COURSES

- Embedded Systems 2
- C++ and Machine Learning

CAREER OPPORTUNITIES FOR GRADUATES

There is an increasing demand for graduates with hardware device skills in the workplace. These graduates can adapt to a variety of different vocations in which computers and electronics are instrumental to the operation of a business or system. Since this major develops a thorough understanding of electronic systems, in addition to skills in computer science, these graduates are not limited to developing computing platforms – indeed, they tend to be well equipped to transition to more general computing careers, such as designing and maintaining networks, embedded systems and specialised computing facilities.

Students who have completed a computer engineering major can find work in such diverse fields as manufacturing, telecommunications, robotics, product development and transportation.

MINIMUM ADMISSION AND SUBJECT REQUIREMENTS

FPS of 550 (but admission only guaranteed at FPS above 660)
Mathematics 70% & Physical Science 60%, NBT in Mathematics, AL & QL to be written