

### 3. Course of Study Modules

Students will choose any three (3) modules below for a total nine (9) credits

- Advanced Electromagnetic Theory
- Advanced Networks
- Automatic Control Systems
- Balanced Three-Phase Power Systems Analysis
- Computer Architecture 1
- Computer Architecture 11
- Computer Methods in Power Systems
- Digital Communications
- Discrete Time Signal Processing
- Modern Control Theory
- Unbalanced Power Systems

### 4. Thesis components — 22 credits

#### Graduate Office

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#### GENERAL QUERIES DIRECTED TO:

**Faculty of Engineering & Computing**  
**Graduate Studies Research & Entrepreneurship (FGSRE) Unit**  
**Room 1A25**  
**Engineering Building**  
**Tel: 927-1680-8 Ext 2158 or 2046,**  
**970-5158 or 970-5046**



**University of Technology,  
Jamaica**

**Faculty of Engineering  
&  
Computing**

***MASTER OF  
PHILOSOPHY/PhD***

***IN***

***ELECTRICAL  
ENGINEERING***

# ELECTRICAL ENGINEERING

## PREAMBLE

The Faculty requires an Mphil/PhD student to complete a total of forty (40) credits on the programme, comprising of eighteen (18) credits course work component and twenty-two (22) credits research component.

The eighteen (18) credits course work component is structured as below:

MPhil Programme Format	
Faculty Modules	6 credits (2 modules)
School Modules	3 credits (1 module)
Course of Study Modules	9 credits (3 modules)
Research Component (Thesis)	22 credits
Total	40 Credits

## **Entry Requirements**

Bachelors Degree in Computing or Engineering with minimum standard of 2<sup>nd</sup> Class Honours and GPA of 2.70. Applications will be considered based on the nature and scope of the proposed research.

## **PROGRAMME DURATION**

Minimum eighteen (18) months full-time and twenty four (24) months part-time

## **PROGRAMME FORMAT**

The course of study are scheduled for commencement at the beginning of each Utech academic semesters:

Semester 1 September—December

Semester 2 January—April

Semester 3 May—August

## **TUITION**

The tuition per course of study is US\$9743.00\*

\*subject to change.

## **COURSE OF STUDY MODULES**

### **1. Faculty Modules—Six (6) Credits**

#### **a. Graduate Research Methods (3 credits)**

This course is designed to guide the graduate students on how to successfully complete a thesis or dissertation in the computing and engineering disciplines. It will describe specific requirements and expectation for the sequence, format and presentations of the thesis or dissertation, which forms the most important requirements in graduate studies, mostly especially, as required in the Faculty of Engineering and Computing graduate programmes.

#### **b. Graduate Research Seminar (3 credits)**

This module presents a great opportunity for FENC graduate students to develop stimulating dialogue among themselves and with other seasoned researchers. Ideally, the presentations should be recorded electronically to give the student the chance to review the sessions. The presentations will be open to all research students in the faculty. The student will be required to circulate in advance a hand-out, abstract or draft of the paper. Faculty members and guest lecturers will also be engaged to present papers in order for the student to gain experience.

### **2. School Module — Three (3) Credits**

#### **Advanced Engineering Analysis**

This course investigates mathematical solution methods applied to problems encountered in mechanical, electrical and chemical engineering applications. These applications include fluid mechanics, heat and mass transfer, stress analysis and chemical kinetics. The mathematical techniques studied include solving linear systems of simple-algebraic or differential equations using vector-matrix operations, and the application of eigenvectors, eigenvalues and singular values to engineering problems. Familiarity with computer programming is recommended. Students will be familiarized with the use of the Matlab software and programming language.