

HIGHER NITEC IN TECHNOLOGY - ELECTRONICS ENGINEERING

Course Code: HTECE / Plan Code: HTECEIC

COURSE OBJECTIVE

This course provides students with the skills and knowledge to install, configure, test and maintain sensor devices and controllers to support the Internet-of-Things (IoT) architecture platform. Students will learn to program microcontroller-based systems, perform sensors and communication networks interfacing which could be deployed in the healthcare, transportation, logistics, retail, etc. industries.

COURSE STRUCTURE

S/N	Module Details	Module Code	Module Objectives
C1	Analogue Principles and Applications 60 hrs (T) 60 hrs (P) Credits: 7 Prerequisite: Nil	EC4105FP	On completion of the module, students should be able to interpret, construct, test and analyse various analogue circuits and devices.
		Equivalent Codes EC4002PA EC4008PA EC4101FP EC4101FPR	
C2	Digital Principles and Applications 60 hrs (T) 60 hrs (P) Credits: 7 Prerequisite: Nil	EC4106FP	On completion of the module, students should be able to interpret, design, construct, test and troubleshoot digital electronic circuits and devices.
		Equivalent Codes EC4004PA EC4010PA EC4102FP EC4102FPR	
C3	Communications and Networking 60 hrs (T) 60 hrs (P) Credits: 7 Prerequisite: Nil	EC4107FP	On completion of the module, students should be able to set up and maintain wired and wireless Local Area Network (LAN) and radio communication systems. They should be able to perform troubleshooting on networks and systems.
		Equivalent Codes EC4003PA EC4009PA EC4103FP EC4103FPR	
C4	Microcontroller Applications 30 hrs (T) 90 hrs (P) Credits: 6 Prerequisite: Nil	EC4108FP	On completion of the module, students should be able to interpret system requirements, create algorithms and develop microcontroller program to control and monitor external devices.
		Equivalent Codes EC4006PA EC4012PA EC4104FP EC4104FPR	
C5	Devices and Applications 60 hrs (T) 60 hrs (P) Credits: 7 Prerequisite: Advised to complete EC4107FP	EC5501FP	On completion of the module, students should be able to identify and apply the various types of sensors for different applications.
		Equivalent Code Nil	
C6	IoT Integration 30 hrs (T) 90 hrs (P) Credits: 6 Prerequisite: Nil	EC5502FP	On completion of the module, students should be able to set up and integrate sensors/actuators with controllers; configure and test wired/wireless sensor networks to perform useful tasks. Students will also be able to deploy IoT in areas such as Healthcare, Logistics and Transport.
		Equivalent Code Nil	

Abbreviations: T - Theory, P - Practical

CREDITS FOR CERTIFICATION

Total of 40 credits from successful completion of 6 modules.

VENUE

ITE College Central, ITE College East, ITE College West

Note:

- 1) Applicant must be free from colour appreciation deficiency.
- 2) The training schedule of lessons is subject to change.
- 3) Depending on the demand, not all the modules in the CET *Higher Nitec* in Technology courses will be offered in each intake. Where the modules are offered and there is insufficient enrolment, the classes will be cancelled and a full refund will be given to the affected students.