

## HIGHER NITEC IN TECHNOLOGY - MECHANICAL ENGINEERING

Course Code: HTMEC

### COURSE OBJECTIVE

This course provides students with the skills and technical knowledge to carry out technical support functions in mechanical engineering design and operations, perform fault diagnosis and maintenance of instrumentation and control equipment as well as integration of mechanical components and sub-systems.

### COURSE STRUCTURE

S/N	Module Details	Module Code	Module Objectives
C1	<b>Mathematics and Engineering Systems</b> 75 hrs (T) 45 hrs (P) Credits: 7 Prerequisite: Nil	ME4010FP	On completion of the module, students should be able to solve engineering problems involving algebra, indices, graphs, trigonometry and statistics, and to perform electrical installation as well as connect pneumatic and hydraulic control systems.
		Equivalent Codes ME4005PA ME4005PAR	
C2	<b>CAD and Engineering Design</b> 45 hrs (T) 75 hrs (P) Credits: 6 Prerequisite: Nil	ME4011FP	On completion of the module, students should be able to create 2D drawings of engineering components using a CAD system as well as produce 3D solid models and also to design a mechanical system comprising various machine elements.
		Equivalent Codes ME4002PA ME4006PA ME4006PAR	
C3	<b>Quality Engineering</b> 75 hrs (T) 45 hrs (P) Credits: 7 Prerequisite: Nil	ME4012FP	On completion of the module, students should be able to interpret the Workshop Safety and Health (WSH) regulations, the requirements of ISO 9001 and 14001 under Quality Management System, Lean Six Sigma, and apply fundamental quality tools and techniques for problem solving and quality inspection and also the use of precision measuring tools with statistical process control capabilities.
		Equivalent Codes ME4007PA ME4007PAR	
C4	<b>Engineering Materials and Mechanics</b> 75 hrs (T) 45 hrs (P) Credits: 7 Prerequisite: Nil	ME4013FP	On completion of the module, students should be able to classify engineering materials, conduct destructive and non-destructive testing and also able to apply the laws and principles of statics and dynamics to design engineering systems.
		Equivalent Codes ME4008PA ME4008PAR	
C5	<b>System Integration and Controls</b> 75 hrs (T) 45 hrs (P) Credits: 7 Prerequisite: Nil	ME5016FP	On completion of the module, students should be able to perform testing, calibration, fault diagnosis and maintenance of instrumentation and control equipment, program PLC system, interface engineering components and sub-systems, as well as install part feeding system and electrical drive system.
		Equivalent Codes ME5008PA ME5008PAR	
C6	<b>Engineering Development and Applications</b> 45 hrs (T) 75 hrs (P) Credits: 6 Prerequisite: Advised to complete ME4011FP	ME5017FP	On completion of the module, students should be able to carry out design and development activities including applications of design concepts for a sustainable environment, verify product design, perform rapid prototyping, as well as carry out product design change process and enhancement of product design.
		Equivalent Codes ME5009PA ME5009PAR	

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) The training schedule of lessons is subject to change.

- 2) 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.