

## NITEC IN TECHNOLOGY - MECHANICAL TECHNOLOGY

Course Code: NTMET / Plan Code: NTMET

### COURSE OBJECTIVE

This course provides students with the skills and knowledge to perform preventive and predictive maintenance programmes, maintain basic automation control systems and ensure the smooth operation of industrial and mechanical equipment. It also provides grounding in the application of computerised machine conditioning monitoring system and laser alignment techniques.

### COURSE STRUCTURE

S/N	Module Details	Module Code	Module Objectives
M1	<b>CAD and 3D Printing</b> 48 hrs (T) 60 hrs (P) Credits: 6 Prerequisite: Nil	ME2011FP	On completion of this module, students should be able to interpret engineering blueprint drawings, draw engineering components, update engineering drawing and convert 3D models to 2D drawings by using CAD system. Students are also trained to print 3D models from 3D printer and perform free hand sketching of engineering drawings.
		Equivalent Code Nil	
M2	<b>Industrial Piping and Valve System</b> 48 hrs (T) 60 hrs (P) Credits: 6 Prerequisite: Nil	ME2012FP	On completion of the module, students should be able to carry out minor repair and replacement of fluid supply pipes and fittings and to maintain, troubleshoot and repair fluid valves.
		Equivalent Codes ME2002FP ME2002FPR	
M3	<b>Machinery Maintenance</b> 48 hrs (T) 60 hrs (P) Credits: 6 Prerequisite: Nil	ME2013FP	On completion of this module, students should be able to maintain and service bearings and basic engineering mechanisms, lubrication systems and mechanical transmission systems; lift and move heavy loads safely. Students are also trained to maintain, troubleshoot and repair machinery and equipment.
		Equivalent Codes ME2003FP ME2003FPR	
M4	<b>Electro Pneumatics and Hydraulics</b> 48 hrs (T) 60 hrs (P) Credits : 6 Prerequisite: Nil	ME2014FP	On completion of this module, students should be able to install, maintain and troubleshoot electro pneumatic and electro hydraulic systems in plant machinery and auxiliary equipment.
		Equivalent Codes ME3001FP ME3001FPR  ME2004FP* ME2004FPR*	
M5	<b>IoT and Electrical Applications</b> 48 hrs (T) 60 hrs (P) Credits: 6 Prerequisite: Advised to complete ME2013FP	ME3011FP	On completion of this module, students should be able to program microcontroller using High Level Programming Language, transmit the data collected from the sensors to Cloud Server to be presented as graphical information. Students are also trained to understand the types of electrical accessories, connect up simple electrical circuits, and replace faulty electrical components.
		Equivalent Codes ME3002FP ME3002FPR	
M6	<b>Plant Equipment Maintenance</b> 48 hrs (T) 60 hrs (P) Credits: 6 Prerequisite: Advised to complete ME2012FP	ME3012FP	On completion of this module, students should be able to carry out a preventive maintenance programme, install, maintain, troubleshoot and repair air compressor system and industrial fluid pumps.
		Equivalent Codes ME3003FP ME3003FPR	

Abbreviations: T – Theory, P – Practical

\* Manual exemption after completion of Industrial Pneumatics and Hydraulics (ME2004FP, ME2004FPR) module.

**CREDITS FOR CERTIFICATION**

Total of 36 credits from successful completion of 6 modules.

**OTHER ENTRY REQUIREMENTS**

- Passed /SC in Mechanical Servicing; or
- Passed /SC in Shielded Metal Arc Welding; or
- Passed /SC in Gas Tungsten Arc Welding.

**VENUE**

ITE College Central, ITE College East

**Note:**

- 1) The training schedule of lessons is subject to change.
- 2) Depending on demand, not all the modules in the CET *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.