HIGHER NITEC IN ENGINEERING WITH BUSINESS

CERTIFICATION

Credits required for certification:

Core Modules	:	48
Life Skills Modules	:	9
Elective Modules	:	4
Total	:	61

COURSE STRUCTURE

Module Title	Credits
CORE MODULES	
Mathematics and Engineering Systems	7
CAD and Engineering Design	6
Quality Engineering	7
Engineering Materials and Mechanics	7
Marketing & Business Practice	8
Manufacturing Processes	5
Industry Attachment	8
ELECTIVES (COURSE SPECIFIC)	
Conventional Machining	2
Jig and Fixture Design	2
Product Prototyping	2
ELECTIVES (GENERAL) AND LIFE SKILLS MODULES	
For details, click here	

Note: The offer of electives is subject to the training schedule of respective ITE Colleges. Students are advised to check with their Class Advisors on the availability of the elective modules they intend to pursue.

MODULE OBJECTIVES

Core Modules

Mathematics and Engineering Systems

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.

CAD and Engineering Design

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.

Quality Engineering

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.

Engineering Materials and Mechanics

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.

Marketing & Business Practice
On completion of the module, students should be able to perform effective business communication, conduct technical sales and marketing; and manage logistic administration in compliance with business ethics and practices.

Manufacturing Processes and Prototyping
On completion of the module, students should be able to evaluate equipment layout and process flow, perform process planning, carry out productivity improvement, conduct equipment diagnostic analysis and risk assessment for workplace.

Industry Attachment
On completion of the module, students should be able to acquire and apply a cluster of key technical, social and methodological competencies in their occupation.

Electives (Course Specific)

Conventional Machining
On completion of the module, students should be able to perform machining operations on conventional lathe and milling machines.

Jig and Fixture Design
On completion of the module, students should be able to design and draw a drill jig, turning and milling fixture using CAD software.

Product Prototyping
On completion of the module, students should be able to create simple design of a product using 3-D CAD software and produce a 3-D model of it using basic prototyping devices.

Electives (General) and Life Skills Modules
For details, click here.