

HIGHER NITEC IN ENGINEERING WITH BUSINESS

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 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.

Elements of Business Practice

On completion of the module, students should be able to perform effective business communications, comply with business ethics and practices, and conduct technical sales.

Manufacturing Processes and Prototyping

On completion of the module, students should be able to perform rapid prototyping, verify and troubleshoot machine parameters and perform part programming using CAD/CAM software, and also carry out study of equipment layout and process flow in a manufacturing environment.

Manufacturing Engineering

On completion of the module, students should be able to conduct work study, perform process planning, carry out productivity improvement activities, perform manufacturing resources planning and conduct risk assessment for the workplace.

Fundamentals of Marketing

On completion of the module, students should be able to carry out technical marketing, logistics administration, sales and services in the business set up.

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.