

Foundation Certificate in Engineering and Technology

Module Outlines

AutoCAD (2D & 3D)

This module covers the fundamentals of the technical knowledge needed in the engineering field. AutoCAD is the software that helps engineers transfer designs from their minds to the real world. It is mainly used to design blueprints for buildings, bridges, and roads. It gives the designer a tool to draw things to scale. Having the capability on the computer makes the process of creating tangible items that fit together infinitely easier and faster.

3D Printing

This module equips students with skills in Additive Manufacturing (AM), as the 3D printer revolutionises the manufacturing process. Students will learn and apply hands-on skills in handling 3D machines and design parts, which will prepare them for the manufacturing industry. Students will also be taught Design for Manufacturing and Assembly (DFMA), which is frequently used in industry practice.

Cyber Security Essentials

A single cyber security breach may seriously cripple organisations and individuals. This module focuses on the essentials of Cyber Security where students will be able to develop an understanding of cyber crime, security principles, technologies, and procedures used to defend networks. This module also equips students with the necessary knowledge to pursue the Cisco Certified Network Associate (CCNA) or CyberOps Associate Certifications.

Network Essentials

This module introduces the concepts of networking essentials, the heart of digital transformation. It covers basic networking concepts and skills that students can immediately apply. Students will gain knowledge of planning and installing a network through troubleshooting. The underlying principles covered in this module allows students to set up a network, or put them on the path to managing a business network.

Mathematics

This module covers fundamental concepts of Mathematics. It is designed to provide students with the fundamental skills in Mathematics required to solve basic problems in engineering, science, business, and technology. It aims to equip students with a better understanding of the application of Mathematics in real-life situations.

English as a Second Language (Count-in Speaking)

This English subject aims to equip students with the necessary language skills. A variety of topics will be explored to stretch students' critical thinking abilities. The approach taken will be process-based and highly interactive with varied activities and ample opportunities to hone students' listening, speaking, reading, writing and interpersonal skills.