

Diploma in Engineering – Fast Track

Subject Description

Tertiary Study Skills

This non-award subject is designed to introduce students to academic writing conventions, provide knowledge of different academic genres, taking lecture notes, exam preparation methods, effective study techniques and organisational skills.

Engineering Computing

Students are introduced to the techniques of data manipulation and presentation using the common functions of a spreadsheet facility.

Engineering and Design Concepts

This subject equips students with the fundamental skills that will enable them to use creative design and engineering approaches to solve challenging problems and to understand the design process.

Engineering Design and Construction Practice

This subject aims to engender in participants an understanding of the many facets of professional practice that can be pursued as an Engineer or Designer.

Electrical Fundamentals

The objective of this subject is to provide an introduction to fundamental electromagnetism and electric circuit principles. Discussion is restricted to DC, although first-order systems are presented and second order systems introduced.

Fundamentals of Mechanics

This subject deals with the action and interaction of forces, moments and couples in two and three dimensions, and on machine elements and simple structures. It examines the equilibrium of single bodies, multi-body structures, and mechanisms.

Mathematics for Engineers 1

This subject covers the following topics: Differential and integral calculus of a single variable, complex numbers, aspects of matrix algebra, vectors and some elementary statistics and probability theory.

Mathematics for Engineers 2

This subject covers the following topics: Ordinary Differential Equations and Multivariable Calculus.

Physics and Materials

This subject serves as an introduction to the fundamentals of physics and materials with appropriate applications in a wide range of engineering and industrial design systems.