

Module Specifications

Year/Level: 5
Programme: Mechanical & Mechatronics

Module:	Further Engineering Mathematics	Module Code:	5FTC2041	Credits:	15
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Module Description:

Mandatory

The aims of this module are to enable students to enhance and develop the students understanding of the mathematical techniques required for engineering; use the language of mathematics in the description of engineering problems, how to handle nonlinear engineering problems using numerical methods, understanding basic concepts of statistics and probability, understanding other related mathematical concepts that help in other engineering modules.

Module:	Computer Aided Engineering	Module Code:	5FTC2042	Credits:	15
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Module Description:

Mandatory

The aims of this module are to enable students to apply Computational Fluid Dynamics to the analysis of fluid flow ; develop an understanding of fluid mechanics; gain experience in the use of CAD solid modelling software; gain an understanding of the potential of solid modelling as a design tool; and gain experience in the use of a stress analysis program.

Module:	Dynamics	Module Code:	5FTC2043	Credits:	15
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Module Description:

Mandatory

The aims of this module are to enable students to... further a student's understanding of the principles of dynamics; perform simple experiments to measure the dynamic performance of mechanical systems.

Module:	Electrical Engineering and Power Control	Module Code:	5FTC2044	Credits:	15
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Module Description:

Mandatory

The aims of this module are to enable students to... gain an insight into principles of electric and magnetic fields and transmission lines; gain an insight into the principles of designing transformers and common rotating machines for light current and heavy current applications; gain an insight into the principles of balanced and unbalanced 3 phase systems.

Module:	Project Management and Product Development	Module Code:	5FTC2045	Credits:	15
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Module Description:

Mandatory

The aims of this module are to enable students to... understand the techniques used in the management of engineering projects; understand the team and organisational issues of project management; understand the product development process and techniques typically used during product development; be aware of the economic, social, legal and ethical issues associated with the development of a new product.

Module:	Introduction to Manufacturing Technology	Module Code:	5FTC2046	Credits:	15
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Module Description:

Mandatory

The aims of this module are to enable students to... acquire basic engineering workshop practice in CNC, fabrication and machining ; be aware of the influence of production processes on product design and manufacture; understand and apply the engineering processes creating machined parts.

Module:	Structural Mechanics	Module Code:	5FTC2047	Credits:	15
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Module Description:

Mandatory

The aims of this module are to enable students to... extend their understanding of engineering and scientific principles appropriate to mechanical engineering; gain an understanding of fundamental mechanics concepts and structural behaviour for combinations of types of loading; further their knowledge and understanding of mechanics.

Module:	Integrated Engineering Systems Design	Module Code:	5FTC2048	Credits:	15
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Module Description:

Mandatory

The aims of this module are to enable students to understand top level integrated system design for a product and experience the process of system design