

Summary Information

Module Code	3512USST
Formal Module Title	Additional Foundation Physics
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 3
Grading Schema	40

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Dante Matellini	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings
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Partner Module Team

Contact Name	Applies to all offerings	Offerings
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Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
University of Shanghai For Science and Technology

Learning Methods

Learning Method Type	Hours
Lecture	33
Tutorial	22

Module Offering(s)

Offering Code	Location	Start Month	Duration
JAN-PAR	PAR	January	12 Weeks

Aims and Outcomes

Aims	The aim of this module is to provide students who may not have studied A-level physics with the prerequisite knowledge regarding mechanics, thermodynamics, materials, fields, electricity and electronics which is required to go on to study for an engineering or technology degree.
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Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Apply knowledge of force, energy and momentum considerations to analyse the behaviour of simple mechanical systems.
MLO2	Demonstrate an understanding of the application of thermodynamics to properties of materials and ideal gases, and use the equations that describe their characteristics.
MLO3	Describe simple electromagnetic fields and their applications mathematically.
MLO4	Use basic techniques to determine the behaviour of electrical/electronic components and systems.
MLO5	Describe mathematically the behaviour of reactive components in DC and AC systems.

Module Content

Outline Syllabus

Projectiles
Momentum and collisions
Solids and elasticity, plastics and fracture
Laws of thermodynamics
Gas dynamics
Electrostatics,
Capacitance, AC circuits, RC circuits, reactance and impedance
Magnetic fields, flux density, Faraday's law, Lenz's law, inductance,
motors, transformers, solenoids
Logic gates, Boolean algebra, combinational logic

Module Overview

Additional Information

This module looks at the fundamentals of Physics, using the maths developed during the Foundation Mathematics modules.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Test	Online tests	50	0	MLO1, MLO2, MLO3, MLO4, MLO5
Exam	Exam	50	2	MLO1, MLO2, MLO3, MLO4, MLO5