Introductory Foundation Physics

Module Information

2022.01, Approved

Summary Information

Module Code	3107FNDET
Formal Module Title	Introductory Foundation Physics
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 3
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

Learning Methods

Learning Method Type	Hours
Lecture	33
Workshop	22

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
SEP-CTY	CTY	September	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 basic knowledge of electricity mechanics, materials and waves which is required to go on to study for an engineering or technology degree.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Describe the structure of an atom and explain how that relates to electrical properties
MLO2	2	Describe the general properties of longitudinal and transverse waves in different media, and apply the governing equations to simple applications
MLO3	3	Apply knowledge of force and motion to analyse the behaviour of simple mechanical systems
MLO4	4	Demonstrate an understanding of the thermal properties of a simple system.
MLO5	5	Explain the behaviour of simple resistive circuits and apply the equations which characterise them.

Module Content

Outline Syllabus	Units, measurement and analysisScalars and vectorsAtomic structureMaterialsKinematicsForceFrictionEnergyEnergy conservationTemperature, material expansion, mechanical equivalent of heatCalorimetry, phase, heat transferSimple Harmonic Motion Waves and interferenceCircular motionElectric charge , current and potential difference, energy, ohms law, powerKirchhoff's Laws, resistor circuits, impedance matching, power transferConductors, Insulators and Semiconductors, structure, characteristics and devicesTransistors,
Module Overview	The aim of this module is to provide basic knowledge of electricity mechanics, materials and waves for those who have not studied A-level physics to be able to study an engineering or technology degree.
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)	Module Learning Outcome Mapping
Centralised Exam	Examination	50	2	MLO1, MLO2, MLO4, MLO5, MLO3
Test	On-line tests	50	0	MLO1, MLO2, MLO4, MLO5, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Gerard Edwards	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings