

## Module Information

2022.01, Approved

### Summary Information

Module Code	4506ICBTME
Formal Module Title	Energy Science and Applications
Owning School	Engineering
Career	Undergraduate
Credits	15
Academic level	FHEQ Level 4
Grading Schema	40

### Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

### Partner Teaching Institution

Institution Name
International College of Business and Technology

### Learning Methods

Learning Method Type	Hours
Lecture	45
Off Site	6
Seminar	6
Tutorial	15

### Module Offering(s)

Display Name	Location	Start Month	Duration Number	Duration Unit
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APR-PAR	PAR	April	12 Weeks
JAN-PAR	PAR	January	12 Weeks
SEP_NS-PAR	PAR	September (Non-standard start date)	12 Weeks

## Aims and Outcomes

Aims	This unit aims to investigate energy management principles and techniques. The principal aim of this unit is to establish and develop understanding of energy science and its applications in industry context and to develop the ability to carry out an energy audit in the context of a plant engineering environment independently.
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**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Appraise different types of energy sources and characterise appropriate energy sources and conversion technologies.
MLO2	2	Recognise environmental impact of different energy sources.
MLO3	3	Calculate basic parameters of energy conservation mechanical systems.
MLO4	4	Explain the concepts of energy audit and energy management.

## Module Content

Outline Syllabus	Efficient energy use and economic growth of a country Common energy sources (Fossil, Mineral, Solar, Wind, Small hydro, Biomass, Geothermal and Wave) Environmental impact of above energy sources in extraction, use and disposal Energy conservation in thermal systems, electrical systems, fluid machinery and in construction Energy audit procedure and standards Energy management
Module Overview	
Additional Information	

## Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Portfolio	Coursework	30	0	MLO2
Exam	Exam	70	2	MLO1, MLO3, MLO4

## Module Contacts

### Module Leader

Contact Name	Applies to all offerings	Offerings
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Karl Jones	Yes	N/A
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**Partner Module Team**

Contact Name	Applies to all offerings	Offerings
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