

### Summary Information

Module Code	4500ICBTME
Formal Module Title	Engineering Mechanics
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
Practical	18
Tutorial	15
Workshop	6

### 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-PAR	PAR	September	12 Weeks

## Aims and Outcomes

Aims	This module introduces an extended range of mechanical principles that underpin the design and operation of mechanical engineering systems. Also it introduces approaches and techniques to determine the behavioural characteristics of engineering components and materials in machines.
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**After completing the module the student should be able to:**

### Learning Outcomes

Code	Number	Description
MLO1	1	Demonstrate a comprehensive knowledge of the scientific concepts of engineering statics and dynamics.
MLO2	2	Apply these concepts in problem solving.
MLO3	3	Relate these concepts to practical applications.
MLO4	4	Develop a design based on these concepts.

## Module Content

Outline Syllabus	Kinematics of particles and rigid bodies.Principles of mechanical engineering systems and their applications (e.g. thermal systems, energy, fluid power systems, control systems, mechanics etc.).Two- and three-dimensional loading.Loaded beams.Stresses in cylinders.Introduction to friction clutches, belt drives, gear trains.Plane mechanisms.Balancing of rotating masses.Mechanical vibrations (Underdamped, overdamped and critically damped).
Module Overview	
Additional Information	

## Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Essay	Essay	40	0	MLO3, MLO4
Exam	Exam	60	2	MLO1, MLO2

## 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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