

**Summary Information**

<b>Module Code</b>	5106MECH
<b>Formal Module Title</b>	Mechanical Engineering Design 2
<b>Owning School</b>	Engineering
<b>Career</b>	Undergraduate
<b>Credits</b>	20
<b>Academic level</b>	FHEQ Level 5
<b>Grading Schema</b>	40

**Module Contacts****Module Leader**

<b>Contact Name</b>	<b>Applies to all offerings</b>	<b>Offerings</b>
Robert Darlington	Yes	N/A

**Module Team Member**

<b>Contact Name</b>	<b>Applies to all offerings</b>	<b>Offerings</b>
Christian Matthews	Yes	N/A

**Partner Module Team**

<b>Contact Name</b>	<b>Applies to all offerings</b>	<b>Offerings</b>
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**Teaching Responsibility**

<b>LJMU Schools involved in Delivery</b>
Engineering

**Learning Methods**

Learning Method Type	Hours
Lecture	22
Practical	22

### Module Offering(s)

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

### Aims and Outcomes

<b>Aims</b>	This module aims to build on the skills developed in the Level 4 Engineering Practice 1 module by introducing systematic approaches to the design process and to the analysis of mechanical designs for the determination of strength and life. It will provide participants with a practical experience of the design process both as an individual and within a group.
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### Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Design a mechanical system which incorporates properly specified standard components
MLO2	Perform appropriate engineering analysis to support the design process
MLO3	Evaluate designs according to engineering standards

### Module Content

Outline Syllabus
This module will build upon the students' knowledge of standard engineering components by considering design for strength and service life. This will include the use of specifications to determine boundary conditions, loads and other constraints on the design and/or selection of components. In particular:• Shafts• Bearings• Gears• Fasteners (Nuts, Bolts & Screws)Standards relating to the design of engineering components will also be introduced and incorporated into the requirements of the assessment.

Module Overview
This module aims to build on the skills developed in Engineering Practice 1 module by introducing systematic approaches to the design process and to the analysis of mechanical designs for the determination of strength and life. It will provide a practical experience of the design process both as an individual and within a group.

### Additional Information

The Mechanical Engineering Design 2 module aims to build on and apply the skills developed in the level 4 Engineering Practice module and enable engineering students to apply a systematic approach to the design process.

### Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Centralised Exam	Guided Design Exercise 1	50	0	MLO1, MLO2, MLO3
Report	Guided Design Exercise 2	50	0	MLO1, MLO2, MLO3