

Mechanical Engineering Design 2

Module Information

2022.01, Approved

Summary Information

Module Code	5510USST
Formal Module Title	Mechanical Engineering Design 2
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 5
Grading Schema	40

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	22
Practical	22

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-PAR	PAR	January	12 Weeks

Aims and Outcomes

Aims	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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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Design a mechanical system which incorporates properly specified standard components
MLO2	2	Perform appropriate engineering analysis to support the design process
MLO3	3	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	
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)	Module Learning Outcome Mapping
Report	Guided Design Exercise 1	50	0	MLO1, MLO2, MLO3
Essay	Guided Design Exercise 2	50	0	MLO1, MLO2, MLO3

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Marco Messina	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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