Mechanical Engineering Design 3

Module Information

2022.01, Approved

Summary Information

Module Code	6502MDLBHG
Formal Module Title	Mechanical Engineering Design 3
Owning School	Engineering
Career	Undergraduate
Credits	20
Academic level	FHEQ Level 6
Grading Schema	40

Teaching Responsibility

LJMU Schools involved in Delivery
LJMU Partner Taught

Partner Teaching Institution

Institution Name
Beaconhouse Group

Learning Methods

Learning Method Type	Hours
Online	33

Module Offering(s)

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

Aims and Outcomes

Aims	This module will deliver a project based learning experience in Engineering Design. It is intended to present a practical focal point for knowledge and techniques learned in other modules as well as to continue to build on the engineering design curriculum from levels 4 and 5. Its participants will follow a systematic approach to generate detailed designs for a component or system.

After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Actively manage the design process and monitor progress
MLO2	2	Communicate design information and data effectively.
MLO3	3	Apply analytical techniques, from a range of engineering disciplines, in a design context.
MLO4	4	Apply engineering knowledge and judgement to solve design problems.
MLO5	5	Determine the compliance of designs relative to the relevant engineering standards.
MLO6	6	Determine the cost of a proposed design based on relevant economic considerations.

Module Content

Outline Syllabus	Management of the Design Process• Coordination of design teams. • Design project management, BS7000 Design Management. • Collaborative design briefs, needs recognition and creation of effective design specifications. • Concept generation and presentation. • Embodiment design, layout planning, part modelling. • Design for Manufacture, Bills of Process and process planning. Cost estimation and modelling. • Team evaluation of ideas. • Writing design reports.Principles of systems design• Application of appropriate design methodologies for complex design projects. • Ensuring compliance with standards and & laws. • Intellectual Property, Copyright, Patents. • Further applications of ISO/BS8887:2009 Design for Manufacture, Assembly, Disassembly and End-of- life processing for multiple subsystems. • Concurrent engineering.
Module Overview	
Additional Information	This module aims to equip the student with important underpinning engineering skills.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Report	Design Project	100	0	MLO1, MLO2, MLO3, MLO4, MLO5, MLO6

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Russell English	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings