

## Liverpool John Moores University

Title: DESIGN PROJECT  
Status: Definitive  
Code: **5500ICBT**EL (127019)  
Version Start Date: 01-08-2021

Owning School/Faculty: Engineering  
Teaching School/Faculty: ICBT, Colombo

Team	Leader
Alison Cotgrave	Y

**Academic Level:** FHEQ5      **Credit Value:** 15      **Total Delivered Hours:** 30  
**Total Learning Hours:** 150      **Private Study:** 120

### Delivery Options

Course typically offered: S2 and Non Std S2 (S2 for Jan)

Component	Contact Hours
Lecture	30

**Grading Basis:** 40 %

### Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	Coursework (3500 words)	50	
Presentation	AS2	Defended Presentation (30 minutes)	50	

### Aims

*This module provides students with a broad understanding of a design and build engineering project in engineering, and intends to solve real engineering problems by using appropriate theories, tools and process.*

### Learning Outcomes

After completing the module the student should be able to:

- 1 Demonstrate the ability to work as a member of a team to achieve a shared aim and objectives within a specified time period.
- 2 Investigate a valid problem identification and a project proposal with a clear aim and minimum four of objectives.
- 3 Propose three conceptual designs, select & implement the optimum design and produce a working prototype.
- 4 Demonstrate effective verbal communication and presentation skills to a technical and non-technical audience.

## Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Coursework	2	3
Presentation	1	4

## Outline Syllabus

*Identification of objectives, requirements and nature of the project; Formulation of design alternative and analysis of feasibility, social, economic and financial aspects; Planning of design phase and preparation of work breakdown structure (WBS); Project organization and team building, Creative Thinking and Leadership & Management.*

*Introduction to Engineering Design, life cycles of engineering products and processes, design processes and design tools, concurrent engineering, creativity and reasoning, analysis and synthesis, simulation, evaluation and decision making. Several simple but comprehensive design case studies selected from different disciplines of engineering addressing the topics.*

## Learning Activities

The unit is designed to bring multi-disciplinary teams together to support learners to gain the knowledge of multi-disciplinary skills of engineering. Therefore, the learners will be able to coordinate with individuals sharing knowledge and with strong team working skills. The learners will work as a group with minimum three to maximum five.

## Notes

Members per group – 3 to 5