

Summary Information

Module Code	7307BEUG
Formal Module Title	Building Engineering Research and Design Project
Owning School	Civil Engineering and Built Environment
Career	Postgraduate Taught
Credits	60
Academic level	FHEQ Level 7
Grading Schema	50

Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Hu Du	Yes	N/A

Module Team Member

Contact Name	Applies to all offerings	Offerings
Muhammad Ahmad	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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Teaching Responsibility

LJMU Schools involved in Delivery
Civil Engineering and Built Environment

Learning Methods

Learning Method Type	Hours
Lecture	8
Tutorial	12
Workshop	66

Module Offering(s)

Offering Code	Location	Start Month	Duration
SEP-CTY	CTY	September	44 Weeks

Aims and Outcomes

Aims	To develop the student's research and conceptual design skills and use these, together with other professional skills expected of a consulting engineer in the solution of an engineering problem presented by a client.
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Learning Outcomes

After completing the module the student should be able to:

Code	Description
MLO1	Interpret and assimilate a client's brief and complete a needs analysis to evaluate the scope, requirements, risks, and implications for a building services or architectural engineering project.
MLO2	Apply the feasibility and conceptual design process to building services or architectural engineering projects.
MLO3	Conduct an appropriate research/independent learning programme relevant to unfamiliar problems within a specific building services or architectural engineering project, synthesise, analyse, critically evaluate and where appropriate apply the research findings.
MLO4	Apply the detailed design process to a complex building services or architectural engineering project.
MLO5	Work effectively as part of a collaborative professional team.
MLO6	Critically evaluate design proposals and the methods by which a project was managed and progressed.

Module Content

Outline Syllabus

The philosophy of engineering design supported by case studies and historical examples. The wider issues relating to sustainability and to the economic, financial, political, social and environmental aspects of design. Client requirement: Needs analysis: Interpretation and assimilation of the project brief, scope and requirements of the project. Risk evaluation: evaluation of the financial, environmental, social, economic and other relevant risks to the project Feasibility: identification and analysis of possible solutions conceptual design for Building Services Engineering works. Detailed proposal: Development of detailed design Evaluation: Critical analysis of proposals Planning and task management: planning, task management, work allocation Individual research into an aspect related to the design Application of industry standard software for analysis, simulation, coordination, planning, detailing and presentation

Module Overview

This module aims to develop the student's research and conceptual design skills and use these, together with other professional skills expected of a consulting engineer, in the solution of an engineering problem presented by a client.

Additional Information

This module brings together the students' learning throughout their study, and as such synthesises their learning, skill acquisition, and evaluative abilities.

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Learning Outcome Mapping
Reflection	PROJECT APPRAISAL AND ANALYSIS	15	0	MLO1
Essay	FEASIBILITY, CONCEPT, DESIGN	45	0	MLO5, MLO4, MLO2
Report	INDIVIDUAL RESEARCH	40	0	MLO6, MLO3