Liverpool John Moores University

Title:	ENGINEERING DESIGN PROJECT
Status:	Definitive
Code:	**7115BEUG** (120981)
Version Start Date:	01-08-2019
Owning School/Faculty:	Built Environment
Teaching School/Faculty:	Built Environment

Team	Leader
Stephen Wynn	Y
Denise Lee	
Felicite Ruddock	

Academic Level:	FHEQ7	**Credit Value:**	60	**Total Delivered Hours:**	132
Total Learning Hours:	600	**Private Study:**	468		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	12
Practical	6
Seminar	6
Tutorial	12
Workshop	96

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS2	Individual Report	40	
Portfolio	AS1	Feasibility Study	20	
Report	AS3	Final Design	40	

Aims

To develop the student's conceptual design skills and use these, together with other

skills such as detailed design, financial appraisal, Environmental Impact Assessment and Health and Safety to act as a consulting engineer in the solution of an engineering problem presented by a client.

Learning Outcomes

After completing the module the student should be able to:

1	Apply the conceptual design process to Civil, and Building Services, Engineering problems.
2	Apply the detailed design process to Civil, and Building Services, Engineering problems.
3	Critically evaluate their own, and other people's, designs
4	Critically compare design options considering sustainability and other design risks
5	Work successfully as part of a team
6	Conduct an appropriate practical and/or laboratory research programme and synthesise, analyse and critically evaluate the research findings.

Learning Outcomes of Assessments

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

INDIVIDUAL REPORT	6		
FEASIBILITY STUDY	1	4	
FINAL DESIGN	2	3	5

Outline Syllabus

Conceptual design.
3D CAD
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 and conceptual design for Civil, and Building Services, Engineering works.
The structure and detail of the project calls for:-
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
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

Learning Activities

Lectures, tutorials, practicals, seminars, and design studio sessions during which students will work in teams. Each team will act as a firm of consulting engineers and will be given a design brief by a member of staff, who will act as client. Each group will be required to work to produce both a conceptual and a detailed design in response to its brief.

Notes

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