Liverpool John Moores University

Title:	BUILDING ENGINEERING COLLABORATIVE PROJECT 2
Status:	Definitive
Code:	**5221BEUG** (122825)
Version Start Date:	01-08-2021
Owning School/Faculty:	Civil Engineering and Built Environment
Teaching School/Faculty:	Civil Engineering and Built Environment

Team	Leader
Saiful Bhuiyan	Y
Stephen Wynn	
Sian Dunne	
Laurence Brady	

Academic Level:	FHEQ5	**Credit Value:**	20	**Total Delivered Hours:**	60
Total Learning Hours:	200	**Private Study:**	140		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	25
Tutorial	35

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS2	SPECIALIST DESIGN PROJECT	50	
Portfolio	AS1	COLLABORATIVE PROJECT	50	

Aims

This module aims to bring together different professions as represented by Level 5 students from the built environment disciplines and to enable them to work collaboratively on a BIM (Building Information Modelling) project. It highlights the

interdisciplinary nature of the construction and property roles using industry standard software to support the decision making process in a sustainable environment.

In addition this module provides a vehicle for Building Services and Architectural Engineering students to develop and refine the skills necessary for the management and successful completion of a significant project. This will include attention to building services systems, function, form and aesthetics of buildings.

Learning Outcomes

After completing the module the student should be able to:

1 Apply negotiating skills in a collaborative environment.
2 Apply built environment principles and techniques to a complex construction project by utilising appropriate architectural, engineering and construction software to facilitate the decision making process.
3 Reflect upon their developmental learning, performance and or achievement and to plan for their personal, educational and career development.
4 Interpret project briefs and assimilate information from a variety of sources in order to define and contextualize the scope and complexity of a project.
5 Propose, test and select feasible solutions to specified tasks and problems across a range of building services related subjects.
6 Apply, evaluate and justify appropriate solutions to specified tasks and problems across a range of building services related subjects.

Learning Outcomes of Assessments

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

DESIGN PROJECT	1	2	3
PROJECT MANAGEMENT FOLIO	4	5	6

Outline Syllabus

This module will facilitate the learning process by enabling students to apply previously gained knowledge and theory in a practical context, working collaboratively using a 3D model on a BIM enabled project in order to negotiate decisions in relation to specific tasks. Within the module itself the following areas will be considered and applied to the project: BIM software technologies, negotiation skills, sustainable design, cost, programme and legal considerations. Assessment will be a group presentation to a panel comprising of academic staff and representatives from industry and peer assessed and a personal development statement linked to PSRB competencies.

The module also serves as a vehicle for the application and development of the student's knowledge, skills and understanding developed in other modules of the course. An essential feature of the module is the integration of the various modules within a particular building engineering vocational pathway.

The structure and detail of the project calls for:

Needs Analysis: Interpreting and assimilating the project brief, client familiarisation, scope and requirements of the project, aims, objectives and targets, identification of legislative and other constraints.

Feasibility: Investigation and analysis of possible solutions.

Detailed Proposals: Selection and development of detailed solutions to set tasks.

Evaluation: Critical analysis of proposals.

Planning and task management: Planning, time management, work allocation, progress review, standards and quality control, record keeping and documentation.

Evaluation, Presentation & Review: review and evaluation of final outcomes, presentation of outcomes and final documentations via written, verbal, graphical and multi-media presentations

Learning Activities

Lectures, workshops, group work and presentations.

There are two main themes addressed by this module:

1. The production of a suitable work derived project supported by the other modules within the second year of the programme. Group work is a key theme of the module; the intention being to simulate the experience of the work place and work place activity using a 3D model on a BIM enabled project, endorsed and approved by the involvement of employers and stakeholders as relevant to the workplace generally.

2. The specialist building engineering part of the module in delivered through a multi-task project which requires the students to produce designs or propose commercial procedures, recommendations, solutions for tasks based on the engineering services needs of a moderately complex building.

Notes

There are two main themes addressed by this module:
1. The module requires production of a suitable work derived project based on industry standard collaboration and application of industry standard software and it is supported by the other modules within the second year programme.
Collaborative work is a key theme of the module; the intention being to simulate the experience of the work place and work place activity, endorsed and approved by the involvement of employers and stakeholders as relevant to the workplace generally.

2. This module also provides the students with an opportunity to demonstrate their learning from all modules across their programme. The module requires the students

to complete a specific building engineering project working within small teams, which should be multi-disciplinary where the mixture of specialisms within a student cohort allow.