

Liverpool John Moores University

Title: BUILDING SERVICES ENGINEERING PROJECT 1
Status: Definitive
Code: **4215BEUG** (122815)
Version Start Date: 01-08-2021

Owning School/Faculty: Civil Engineering and Built Environment
Teaching School/Faculty: Civil Engineering and Built Environment

Team	Leader
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Stephen Wynn	
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Academic Level: FHEQ4 **Credit Value:** 20 **Total Delivered Hours:** 50

Total Learning Hours: 200 **Private Study:** 150

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Lecture	20
Workshop	30

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	FEASIBILITY STUDY AND INITIAL DESIGN PROPOSALS	40	
Portfolio	AS2	DETAILED DESIGN DOCUMENTATION AND PRESENTATION	60	

Aims

To introduce the fundamental skills needed for the design process;

To equip the student with the fundamental tools, including the necessary IT skills

necessary to carry out a building services engineering design project;

To develop and refine the student's written, verbal, graphical and presentation skills.

Learning Outcomes

After completing the module the student should be able to:

- 1 Investigate a range of building services design solutions for a simple commercial or domestic building and determine installation requirements.
- 2 Use appropriate CAD and IT packages to produce building services design documentation.
- 3 Communicate design solutions graphically, verbally and in writing.

Learning Outcomes of Assessments

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

FEASIBILITY STUDY & DESIGN PROP	1	2
DESIGN DOCUMENTATION & PRES	2	3

Outline Syllabus

Students will be given the construction details of a non-complex commercial or domestic building and will be required to investigate sustainable and practical design solutions for a range of building services systems. Students will produce feasibility studies, design drawings, schedules, reports and associated documentation related to their design. The services to be designed include: above and below ground drainage; cold and hot water services; electrical small power distribution; lighting; wet central heating.

Learning Activities

Students will be introduced to the necessary basics of interpreting building drawings and industry standard design methods, including practice with relevant software packages. Students will be taught the theoretical aspects of energy efficient and sustainable engineering solutions for non-complex buildings and will be given the opportunity to apply these to a real building.

Notes

The module is delivered through a multi-task project which requires students to produce designs based on the building services needs of a non-complex building. Interdisciplinary working is actively encouraged and facilitated and it is envisaged that students will be working alongside Architectural Engineering students on a

complementary design project module.