

Liverpool John Moores University

Title: BUILDING SERVICES ENGINEERING PROJECT
Status: Definitive
Code: **6505ICBTBS** (127104)
Version Start Date: 01-08-2021

Owning School/Faculty: Civil Engineering and Built Environment
Teaching School/Faculty: ICBT, Colombo

Team	Leader
Alison Cotgrave	Y

Academic Level: FHEQ6
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	10
Tutorial	10
Workshop	30

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	AS1	This portfolio completed collaboratively in teams but with individual responsibilities documents the developmental stages of the project from appraisal through concept design to detailed development.	65	
Presentation	AS3	This presentation requires the students to communicate and justify their project solutions and complete an analysis of the resultant professional development.	15	
Report	AS2	This report, produced collaboratively in teams,	20	

Category	Short Description	Description	Weighting (%)	Exam Duration
		documents the strategies and procedures by which the project was managed.		

Aims

To enable the student to work both collaboratively and individually on realistic projects that facilitate the development and integration of a range technical and professional skills within the context of building services.

Learning Outcomes

After completing the module the student should be able to:

- 1 Work as part of a team to critically evaluate the requirements, risks, and implications of a clients brief for a building services engineering project
- 2 Apply building services engineering technology and management procedures to produce, and evaluate, conceptual designs for building services projects and to progress these to detailed solutions.
- 3 Produce documentation to demonstrate how the project was organised and managed professionally and effectively within the team.
- 4 Present project solutions to an expert panel and critically evaluate the skills and competences demonstrated in the completion of the project against the relevant competence criteria of appropriate professional institutions.

Learning Outcomes of Assessments

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

PORTFOLIO	1	2
PRESENTATION	4	
REPORT	3	

Outline Syllabus

The philosophy of Building Services Engineering design and the wider issues relating to the economic, financial, political, social and environmental aspects of design. Interpreting and assimilating the project brief for a specific building and client; client familiarisation, scope and requirements of the project, energy requirements, identification of legislative, health & safety and other constraints relevant to the specified building.

Development and review of mechanical and electrical building services designs; identification of initial alternative options, selection of optimum solution via feasibility analysis and production of outline concept designs. Development of concept designs

into detailed designs including supporting calculations, annotated drawings and equipment schedules. Use of industry standard software as analytical, design, calculation and management tools.

Techniques for effective project management; Promoting and developing effective teamwork and communication strategies, teamwork roles and responsibilities. Project planning, time management, work allocation, progress review, maintaining standards and quality control, record keeping and documentation.

Planning and preparation of formal presentation to an expert panel; use of presentation software, structuring a presentation, communicating at a level appropriate for the audience, techniques for answering questions, managing nerves. Personal professional development review.

Learning Activities

Lectures, tutorials, seminars, and design studio sessions during which students will work in teams towards a project brief with a member of staff, who will act as client.

Notes

This module brings together the students' learning throughout their study and further develops the project work undertaken at levels 4 and 5. The module requires the students to demonstrate professional standards both in the production of solutions to building services engineering projects and in the management of the process by which the solutions are developed in a team situation. Additionally, students will reflect on their professional development against the competence standards published by appropriate professional institutions.