

Liverpool John Moores University

Title: BUILDING SERVICES INTEGRATED GROUP PROJECT
Status: Definitive
Code: **4502BEFDS** (118438)
Version Start Date: 01-08-2011

Owning School/Faculty: Built Environment
Teaching School/Faculty: Built Environment

Team	Leader
Derek King	

Academic Level: FHEQ4 **Credit Value:** 24.00 **Total Delivered Hours:** 54.00
Total Learning Hours: 240 **Private Study:** 186

Delivery Options

Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	24.000
Workshop	30.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Artefacts	Groupwork	Group project design folio	60.0	
Report	Management	Folio containing project organisational documentation relating to project management, teamwork, planning, written records.	30.0	
Presentation	Present	Presentation and review, assessed through group and individual presentation to an assessment panel.	10.0	

Aims

The module aims to apply the skills and knowledge developed in other modules of the programme and experiences from work, within a design project based on realistic

practical Building Services problems. The three key aims of the module are:

- 1. To provide a framework for the integration of the knowledge and skills of students from the mechanical, electrical and commercial disciplines of building services (wherever possible) into project teams working on realistic projects.*
- 2. To provide a realistic opportunity for the application of industry standard specialist computer software for design, drawing, thermal modelling, environmental compliance and project planning.*
- 3. To provide a vehicle in order to develop the human, interpersonal, managerial, operational and organisational skills required for the successful development and execution of a realistic team project. Successful completion of the module will require the student to develop and refine communication, written, verbal, graphical and presentation skills within a teamwork environment.*

Learning Outcomes

After completing the module the student should be able to:

- 1 Interpret project briefs and client requirements, assimilate information from a variety of sources in order to define and contextualise the scope and complexity of a project.
- 2 Propose, test, select, justify, apply and evaluate appropriate solutions to specified building services project tasks using previously acquired skills and knowledge.
- 3 Apply a range of industry standard specialist software for the planning, generation and communication of reliable viable and environmentally acceptable design solutions for building services projects.
- 4 Apply, evaluate and justify appropriate solutions to specified building services tasks across a range of integrated building services related subjects.
- 5 Apply the principles and practices of planning & review, effective time management, task management and effective teamwork.
- 6 Participate in team dynamics and debate using logical arguments, listen and negotiate with others.
- 7 Communicate concepts, proposals and strategies to technical and non-technical audiences using a variety of media.

Learning Outcomes of Assessments

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

Group project folio	1	2	3	4
Project management folio	5	6		
Presentation	7			

Outline Syllabus

The module provides an opportunity to refine aspects of knowledge, skills and

understanding developed in other modules, whilst also providing a vehicle for the application and development of effective teamwork and project management. An essential feature of the module is the learning experience gained by the integration of the familiar aspects of the students' own building services pathway with the less familiar aspects of the other building services vocational pathways.

The structure and detail of the projects call 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

Software Applications: use of industry standard software (within a teamwork situation) for, CAD, project planning, thermal modelling and design calculations, statutory and non-statutory schemes of environmental compliance, project management, tendering etc.

Detailed Proposals: selection and development of detailed solutions to set tasks, evaluation and critical analysis of proposals.

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

Teamwork: leadership and management, team structures, individual and collective responsibility, team building, skills analysis, co-ordination and co-operation, listening, and agreeing, resolving disputes, problems and disagreements, motivation, communications

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

The module is delivered through multi-disciplinary (wherever possible) team projects which forms a core to level 4 of the programme. The projects require the students to work in integrated teams to produce building services designs and commercial proposals for tasks based on the needs of realistic non-domestic buildings. The specific tasks of the project are selected to reflect the vocational composition of the team members.

To complete the assessed work students (within their teams) are required to use a range of both general and specialist software, including Excel, Powerpoint, Word, CAD, IES Virtual Environment, Powerproject, and other industry standard software.

Many of the software packages listed or inferred above are large, highly specialised applications. Some of the environmental compliance software requires the user to be licensed and certificated in order to use it commercially. To achieve learning outcome 3 the students are not required to master all aspects of all the software but to develop a basic working ability which can be built on as they become more experienced.

References

Course Material	Book
Author	Cox, D.
Publishing Year	2002
Title	Leadership When The Heat's On
Subtitle	
Edition	2nd
Publisher	McGraw-Hill
ISBN	9780071400831

Course Material	Book
Author	Maddux, R.B.
Publishing Year	2003
Title	Team Building
Subtitle	An Exercise in Leadership
Edition	4th
Publisher	Crisp Publications
ISBN	1560526912

Course Material	Book
Author	Levin P.
Publishing Year	2006
Title	Perfect Presentations
Subtitle	
Edition	
Publisher	OUP
ISBN	0335219055

Course Material	Book
Author	Shepherd K.
Publishing Year	2005
Title	Presenting at Conferences, Seminars and Meetings
Subtitle	
Edition	
Publisher	Sage
ISBN	000722268

Course Material	Book
Author	Ellis, R.
Publishing Year	1999
Title	Constructive Communication
Subtitle	Skills for the Building Industry
Edition	
Publisher	Arnold
ISBN	0340720077

Notes

Throughout the construction industry in general and the building services sector in particular the successful completion of a project is only likely to happen when the various professionals work together in effective and cooperative teams. The same ethos applies throughout this module, students will be required to work together in multi-disciplinary teams to complete projects which reflect the content of the various specialist modules. This module recognises both the product of effective teamwork and the process itself. The module requires students to demonstrate skills in managing projects and forming effective teams with all the implications of leadership, time management, interpersonal relationships as well as managerial, organisational and communication skills.