Liverpool John Moores University

Title:	CONSTRUCTION TECHNOLOGY AND SERVICES 2
Status:	Definitive
Code:	**5556BEFD** (118425)
Version Start Date:	01-08-2011
Owning School/Faculty:	Built Environment
Teaching School/Faculty:	Stockport College

Team	Leader
Russell Bennett	Y

Academic Level:	FHEQ5	**Credit Value:**	24.00	**Total Delivered Hours:**	75.00
Total Learning Hours:	240	**Private Study:**	165		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	48.000
Tutorial	24.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS2	report - construction assignment	25.0	
Exam	AS1	Examinations - choice of questions	50.0	3.00
Report	AS3	Report- services assignment	25.0	

Aims

To examine the impact of site and soil investigations and the financial impact of choice of foundations for medium to high rise buildings.
To compare alternative construction solutions for framed buildings and the impact on buildability, building flexibility and sustainability.
To consider the component features, principles and techniques of typical service installations to medium to high rise buildings.

Learning Outcomes

After completing the module the student should be able to:

1	Assess the impact of the site and soil investigations and the financial impact of choice of foundations for a variety of medium to high rise buildings.
2	Evaluate alternative structural forms and recommend their adoption in given circumstances.
3	Evaluate various construction solutions for framed medium to high rise buildings.
4	Critically compare alternative methods of forming external walls and roofs to framed buildings.
5	Select suitable methods of demolition for given circumstances.
6	Apply the principles and techniques used to plan, design and install a simple heating and ventilation system, lighting system and service and disposal system.
7	Analyse the environmental impact that mechanical and electrical services have on the environment and discuss sustainable alternatives.
8	Identify and discuss methods for integration, accommodation and maintenance of services within a building and evaluate the impact on the design and construction.

Learning Outcomes of Assessments

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

CONSTRUCTION REPORT	1	2		
EXAM	3	4	5	7
SERVICES REPORT	6	8		

Outline Syllabus

Site and soil investigations, choice of foundations and financial impact for low and high rise buildings.
Alternative structural forms used for framed low and high rise buildings.
Analysis of the various forms of demolition, including types of temporary support.
Alternative external claddings.
Buildability in construction.
Flexible design within a building.
Alternative sustainable solutions in construction.
Simple Heating and Ventilation systems.
Provision of services to a building.
Disposal systems within and external to a building.
Vertical and horizontal transportation within buildings.
Environmental impact of Mechanical and Electrical services.
The use of green and sustainable technologies in service provision and disposal.
Installations for fire fighting.

Learning Activities

Lectures and tutorials, presentations of research, critical reading and exploration of texts, industrial visits.

References

Course Material	Book
Author	Riley, M. & Cotgrave, A.
Publishing Year	2009
Title	Construction Technology 2
Subtitle	Industrial and Commercial Building
Edition	2nd Edition.
Publisher	Palgrave Macmillan
ISBN	0230575714

Course Material	Book
Author	Hall, F. & Greeno, R.
Publishing Year	2009
Title	Building Services Handbook
Subtitle	Incorporating Current Building & Construction Regulations'
Edition	5th Edition.
Publisher	Butterworth-Heinemann
ISBN	1856176266.

Course Material	Book
Author	Chudley R. & Greeno, R.
Publishing Year	2010
Title	Building Construction Handbook
Subtitle	
Edition	8th Edition.
Publisher	Butterworth-Heinemann.
ISBN	1856178056.

Notes

The module provides the student with a broad understanding of the construction solutions applied for high and low rise framed buildings. It is reflective of the issues that need to be considered with respect to building performance and efficiency. Buildability, sustainability, energy efficiency, and other environmental aspects of construction are examined.