Liverpool John Moores University

Title:	CONSTRUCTION TECHNOLOGY
Status:	Definitive
Code:	**5101BEHN** (118170)
Version Start Date:	01-08-2012
Owning School/Faculty:	Built Environment
Teaching School/Faculty:	Built Environment

Team	Leader
Martin Turley	Y

Academic Level:	FHEQ5	**Credit Value:**	24.00	**Total Delivered Hours:**	62.00
Total Learning Hours:	240	**Private Study:**	178		

Delivery Options
Course typically offered: Standard Year Long

Component	Contact Hours
Lecture	48.000
Tutorial	12.000

Grading Basis: BTEC

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Exam	AS1		40.0	2.00
Test	AS2		30.0	
Essay	AS3		30.0	

Aims

• To develop further the principles and practice of construction technology related to medium and high rise complex structures.
• To develop further the reasoning ability of the technologist in the selection and appraisal of materials and techniques used in the construction of complex buildings, taking account of geographical location, function, appearance, performance, efficiency, initial and in-use cost effectiveness.

• *To enhance the understanding of the concepts of sustainability and buildability within the context of modern construction systems.*

Learning Outcomes

After completing the module the student should be able to:

1	Describe and evaluate the range of materials and constructional forms available in relation to multi-storey construction.
2	Examine the range of systems used to provide flexibility of internal layout of commercial buildings.
3	Evaluate options available for design in relation to sustainability.
4	Identify and analyse the concept of buildability in terms of safety, efficiency, economy and quality and its application in multi-storey construction.
5	Evaluate the effectiveness of remedial works to existing buildings.
6	Describe the impact of the construction process has on the environment and the technologies used to reduce such components.
7	Explain and evaluate strategies for sustainable construction.
8	Explain how sustainable construction strategies benefit both traditional and modern methods of construction.

Learning Outcomes of Assessments

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

Exam	1	5	8
Test	2	4	7
Essay	3	6	

Outline Syllabus

Explains and illustrates the need for an adequate site investigation prior to commencing work on site, together with the range of techniques available for such investigations.

Identifies how decisions made throughout the construction/deconstruction process can afford designers and clients the opportunity to create a more sustainable built environment.

Examines the range of foundations suitable for various building types and forms together with the means available for improving low load bearing capacity ground.

Considers the options available to construction professionals to reduce the impact of the construction process on the wider environment.

Examines the range of ground floors for commercial and industrial buildings.

Examines the range of constructional forms in current use for complex structures,

together with the various materials used to provide the external envelope and internal finishes.

Considers options available to reduce the environmental impact of existing buildings on the environment.

Considers the feasibility of various combinations of constructional forms and materials used to provide the external envelope and the internal finishes for stated situations.

Consider and apply buildability to multi-storey construction. Application of Health and Safety in multi-storey construction.

Learning Activities

• Lecture/tutorials and studio sessions will be supported where possible with site visits, slides and videos.
• Part-time students are encouraged to input their own experiences into their work and into discussions.
• Wherever possible, case study information, i.e. drawings and site documentation will be used to supplement the learning material.
• Students will be expected to participate in on line activities in order to reinforce their knowledge in various subject areas
• Students should supplement their lecture notes with background reading of text books and professional journals.
• Students are expected to read digests and Trade Literature in relation to specific topic areas to identify how the principles are adopted in industry.

References

Course Material	Book
Author	Barry, R.
Publishing Year	1996
Title	The Construction of Buildings
Subtitle	
Edition	4th edition
Publisher	Blackwell Scientific
ISBN	063205543X

Course Material	Book
Author	Riley, M. and Cotgrave,A.
Publishing Year	2009
Title	Construction Technology 2
Subtitle	
Edition	
Publisher	Palgrave
ISBN	978-0-230-57571

Course Material	Book
Author	Adams, S.
Publishing Year	1989
Title	Practical Buildability
Subtitle	
Edition	
Publisher	Butterworths
ISBN	0408035250

Course Material	Book
Author	Holyroyd, M.
Publishing Year	2003
Title	Buildability
Subtitle	
Edition	
Publisher	Thomas Telford
ISBN	0727732072

Course Material	Reports
Author	Health and Safety Executive
Publishing Year	1996
Title	Health and Safety in Construction
Subtitle	
Edition	
Publisher	Health and Safety Executive
ISBN	0717611434

Notes

The module equips the student with the necessary level of skills and competencies in the following areas: site evaluation, foundations, ground floors and superstructure in relation to medium and high rise complex structures, sustainability in the built environment.

The relationship between learning outcomes and components of assessment are flexible to allow multiplicity of assessment.