

<b>Module Title:</b>	Production of Buildings
<b>Module Code:</b>	BSCC04I
<b>Level:</b>	5
<b>Credits:</b>	15
<b>Pre-requisites:</b>	CONSTRUCTION AND MATERIALS TECHNOLOGY

**Module Description:**

This module is designed to extend student's knowledge of the construction of buildings. It concentrates on the construction of complex multi storey structures for residential and commercial buildings and the use of contemporary systems to create appropriate environments. Students will also investigate alteration, remediation and demolition processes. The module will also enable students to demonstrate their skills in reasoning, analysis, communication and appraisal of materials and techniques.

**Indicative Content:**

- Materials and construction forms: structural frame, external envelope, floors, roofing, material compatibility and structural form.
- Buildability: principles and effects, coordination and standardisation, specification of materials, components and assemblies, CDM regulations.
- Integrated design of buildings, intelligent buildings
- Sustainable strategies: environmental issues, energy sources and management, costs and efficiency ratings, resource management., client requirements, social and political issues
- Alteration, remediation and demolition of buildings: project appraisal, modern conversion methods, support techniques, demolition practice and procedures, legal, health and safety and CDM requirements.

**Learning and Teaching Methods:**

The module will comprise lectures, tutorials and case studies and presentations to integrate theoretical studies with construction applications.

This module will also develop knowledge so that students can relate to, appreciate, and apply their technical knowledge to the scenario in the work based learning project.

It will assist in helping them recognise not only construction techniques and processes but also the health and safety risks associated with construction projects for example when considering demolition or building conversion activities.

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It also will develop appreciation and application of the relationship between health and safety and the CDM regulations.

The module will explore the relationship of sustainability and environmental issues within the construction process.

Through out the delivery of this module it is implicit that work place issues and activities are at the forefront alongside the technological aspects of this module. It is essential that the contemporary practice is at the heart of all teaching. Visiting lecturers will be used to develop areas of a specialist nature.

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### **Specific Learning Resources:**

Barbour Index

Resource room with internet connection to workstations

Building Regulations Approved Documents

### **Bibliography**

#### Highly Recommended

Chudley,R, Greeno R (2010) Building Construction Handbook 8th Edition Oxford: Butterworth Heinemann

Riley, M and Cotgrave, A (2009) Construction Technology 2: Industrial and Commercial Building Basingstoke: Palgrave Macmillan

Riley M, Cotgrave A, Construction Technology 3: The Technology of Refurbishment and Maintenance Basingstoke: Palgrave Macmillan

Everett A, Barritt C M H (1994) Materials 5th Edition Harlow: Longman

HMSO (2004) Building Regulations Approved Documents, HMSO

Emmitt S and Gorse C (2010) Barry's Advanced Construction of Buildings Oxford: Blackwell Science

Health and Safety Executive (2005) A Guide to the Health, Safety and Welfare etc Act 1974 Sudbury: HSE

Perry P (2008) CDM 2007 Questions and London: Elsevier Science & Technology

#### Recommended

Building Research Station Digests

Technical Papers from the Cement and Concrete Association

Foster J.S , Greeno R(2006) Structure and Fabric Part1 Pearson Education (US)

Foster J S, Greeno R Structure and Fabric Part 2 Pearson Education (US)

McMullan R, Seeley I H (2007) Environmental Science in Buildings Basingstoke: Palgrave Macmillan

Richardson, B (2002) Defects and Deterioration in Buildings Taylor and Francis

Health and Safety Executive (1992) Management of Health and Safety at Work Regulations

BSI (2000) British Standard 6187:2000 Code of Practice for Demolition London: BSI

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Diven,RJ, Shaurette, M (2011) Demolition, Purdue University Press

Winkler, G (2010) Recycling Construction and Demolition Waste: A LEED based Toolkit, McGraw-Hill Education Europe

Edwards B (2009) Rough Guide to Sustainability London: RIBA Publishing

(2011) The Sustainable Building Bible: An Insider's Guide to Green Building, Ovolo Books Ltd

### Background Reading

Technical Papers from RIBA

Technical Papers from TRADA

Technical Papers from ICE

Technical, professional and trade literature

## Module Learning Outcomes

### Subject Specific Learning Outcomes

*On successful completion of this module you will be able to:*

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|-------------|---|
| <b>LO 1</b> | Appraise the materials and construction forms for the construction of multi-storey buildings. |
| <b>LO 2</b> | Evaluate the concepts of sustainability and buildability and their application.               |
| <b>LO 3</b> | Compare methods used for alteration, remediation and demolition of buildings.                 |
| <b>LO 4</b> | Apply skills in reasoning, analysis, communication and appraisal of materials and techniques. |

Assessment Title or element	Weighting (%)
Case study	70%
Report	30%

*Information correct at point of publication.*