Construction Technology 2

Module Descriptor

Module Code: CON4TE2

Version: 6.00

Status: Final

Date: 18/03/2021

Summary Module Details

Module Title: Construction Technology 2

Module Leader: Dean Bieganek
Module Mode: Supported online learning

Semester: Spring (UK)

Level: 4

Credits: 20

Learning Hours: 200

Contact & Study Hours

Directed Study Time: 90 hrs (45%)

Self-directed Study Time: 50 hrs (25%)

Assessment Study Time: 60 hrs (30%)

Assessment Type

Coursework: 70%

Computer Marked Assessment: 30%

Self-directed Research Project: 0%

Portfolio: 0%

Module Summary

This module provides an introduction to the building and environmental technology of framed construction. Topics covered include: the principles of framed structures; design and its communication; material and component selection; construction techniques; simple environmental services, as well as more complex related issues of sustainability; and legislation and fire safety.

Key generic skills such as producing and understanding simple drawn information and professional report writing are introduced.

Examples of framed buildings are included, such as steel, reinforced concrete and timber construction applicable to buildings with different types of usage such as commercial, industrial and residential. Perspectives such as sustainability are also considered.

Taken on which Programmes

BSc (Hons) Building Control (C)

BSc (Hons) Building Surveying (C)

BSc (Hons) Construction Management (C)

BSc (Hons) Quantity Surveying (C)

BSc (Hons) Real Estate Management (C)

Core (C) or Elective (E)

Module Aims

This module aims to:

- Provide an introduction to framed building construction technology and environmental services. This includes framed structural principles, material and component selection, design and its communication and to introduce more complex issues such as sustainability, statutory design and construction regulation and design for fire;

- Develop and encourage competence in the skills of communicating. In particular, to develop report writing, sketching and drawing skills, enabling the student to describe and explain building, environment, technology and framed construction; and

- Build on a foundation of building, technology and environment knowledge and understanding, either developed previously or in parallel, so that it can be developed further in other modules.

Module Learning Outcomes

LO1.   Identify the concepts and principles associated with the building, environment and technology of framed structures and be able to present, evaluate and interpret them using sketches, drawings and in written form.

LO2.   Describe the design and construction process, the statutory context for the production of framed buildings, and how to justify when and where their selection would be appropriate.

LO3.   Evaluate the appropriateness of different approaches, materials and construction in framed or similar buildings in accordance with building, environment and technology theories and sustainability.

LO4.   Communicate accurately and reliably on building, environment and technology issues for framed buildings using coherent structured arguments and analysis.

Indicative Module Content

Module topics

- **The construction technology of framed buildings**

  This will include an understanding of the basic structural issues for framed structures; typical materials used in structural frames, the reasons for their use; typical details and sustainability issues; foundation & basement options and selection; and the external and internal element options, materials and details, ground floors, upper floors.

- **Environmental servicing technology for framed buildings**

  This will include space heating and ventilation requirement options and an introduction to air conditioning. In addition, issues of sustainability will be introduced.

- **An introduction to the statutory control and regulation relating to the sustainable development of framed buildings**

  This will include an identification of planning systems and building regulation/codes typically encountered in the development process. In particular, a focus on the consideration of designing to deal with fire in framed buildings will be included.

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- **Construction management processes relating to the sustainable development of framed buildings**

  The basic concepts and processes for construction management and planning: risk management, critical path analysis and other construction management processes will be introduced.

- **Technical drawing skills**

  An introduction to design principles, drawn design communication and report writing will form part of the skills developed within the module.

This content will be reviewed and updated regularly to reflect the legal, moral and financial changes in professional standards and practice.

Overview of Summative Assessment

Module learning outcomes	Assessment	Word count or equivalent	Weighting
LO1	**Assessment 1** Computer Marked Assessment (CMA)	300 word equivalency	10%
LO2 & LO3	**Assessment 2** Computer Marked Assessment (CMA)	600 word equivalency	20%
LO1, LO2, LO3, LO4	**Assessment 3** Coursework	2,100	70%

Module Pass Mark (as a weighted average of all assessments): 40%

Key Module Learning Resources

Core Sources and Texts

The core reading resources within each module will be provided via the specific Virtual Learning Environment (VLE) module pages and within the e-Library. Additional reference material and supplementary resources to support your studies are available through the UCEM e-Library.

Module tools

Students will have access to study materials, dedicated academic support, student forums, and learning activities via an online learning platform (VLE).

The module page on the VLE is broken down into structured study weeks to help students plan their time, with each week containing a mixture of reading, case studies, videos/recordings and interactive activities to go through. Online webinars/seminars led by the Module Leader can be attended in real time and provide opportunities to consolidate knowledge, ask questions, discuss topics and work through learning activities together. These sessions are recorded to support students who cannot attend and to enable students to recap the session and work through it at their own pace. Module forums on the VLE provide further opportunities to discuss topics with other students, complete collaborative work and get extra help from the module team.

Professional online resources

The e-Library provides access to trusted, quality online resources, selected by subject specialists, to support students' study. This includes journals, industry publications, magazines, academic books and a dissertation/work-based library. For a list of the key industry specific and education resources available please visit the VLE e-Library.

Other relevant resources

Access is also provided to further information sources that include the British Library and Open University UK catalogues, as well as providing a monthly current awareness service entitled, *Knowledge Foundations* - a compendium of news, research and resources relating to the educational sector and the Built Environment.

The module resource list is available on the module website and is updated regularly to ensure materials are relevant and current.