



# Construction Management

Construction Management covers the development, conservation and improvement of the built environment and it ensures the design, construction and operation of buildings and other built facilities meet business, client and end user needs, and operate within financial, environmental and safety constraints. By working collaboratively with a broad range of stakeholders, the construction management professionals maintain and enhance the quality of the environment and community.

Modules year 1	
Module Title	Module description and context
Construction Science, Materials and Performance	The module aims to introduce students to the composition and properties of materials used in buildings and structures. It covers: common engineering materials used in construction, laboratory measurement of physical properties of materials, and science of the building in relation to its performance.
Construction Technology	Here you will learn different technological concepts used to enable the construction of building elements, from substructure to completion with a focus on low rise domestic buildings and simple industrial and commercial buildings.
Interdisciplinary Design Project	You will begin to develop skills in design through a series of tasks where you will have to come up with a range of options to solve a design problem. The student will get introduced to the ways that professionals work collaboratively in design.
Introduction to the Built Environment, Professional Skills and Context	The module introduces students to some of the important roles carried out by professionals to create the built environment. They will learn about the typical professional activities, professional code of conduct and explain how these integrate with all stakeholders, processes and practices in the built environment industry.
Land Surveying, Drawing and Measurement	This module consists of land surveying, drawings and measurement. For land surveying, the students will develop an understanding of surveying equipment, conduct basic surveys, plot basic surveying diagrams, and set out simple geometries on the field. Drawings and measurement gives students an awareness of the skills required in drawing, manually using sketches and 2D/3D software and interpreting drawings. This section will be delivered mainly via small group sessions where the underlying principles regarding building drawings and measurement will be presented.

Modules year 2	
Module Title	Module description and context
Construction Technology 2	Here you will focus on the technology of high-rise frame construction and new methods of construction. Students will develop a deeper understanding of contemporary construction technology principles in complex buildings including basements.
Estimating, Tendering and Financial Management	Estimating covers the principles of design economics, pre-contract estimating and cost control in a built environment context. Tendering covers the tendering practices, which will focus on the construction manager's responsibilities at tender stage. Financial Management covers analysis and interpretation of profit and loss accounts, balance sheets and cash flow statements, financial forecasting, budgetary control and cash flow analysis.
Interdisciplinary Design Project 2	For this project you will present your design appropriately using hand-drawn sketches, computer generated graphics, computer aided drawings, physical models, calculations, specifications, and bills of materials/ quantity. Students will be developing their knowledge of CAE in context and its value in terms of optimisation and parametric design.
Procurement and Contract Law	This module encourages students to adopt a problem-solving approach towards aspects of procurement strategies and contract management. They will need to justify their solutions by reference to professional principles and practice that are current within the industry.
Professional Practice and Digital Applications	This module aims to support students in future career and employability. They will demonstrate their digital and professional skills and develop an understanding of the key considerations required to develop and support their practice, continued study and career aspirations.

Modules year 3	
Module Title	Module description and context
Construction Project Management	The module covers the fundamental theories and concepts of project management in construction. Construction projects are complex and provide challenges in managing resources mainly people, plants and materials, specialist subcontractors effectively. Students are introduced to the processes, tools and methodologies that are utilised to complete the construction projects successfully are explored.
Interdisciplinary Design Project 3	The project will require researching the background of a site, and developments in construction practices and techniques. It will therefore contain research methods teaching, also required for the Investigative Project.
Research Methods and Dissertation	Here students have an opportunity to independently choose and research a topic in the built environment and take responsibility for managing time, identifying objectives and following a systematic approach to solve/ explore a problem and production of a dissertation.
Sustainable and Emerging Technologies	In this module you will develop knowledge and understanding of how sustainable and emerging technologies are transforming the design, production and management processes of buildings. This is important to ensure that these buildings are energy efficient, resilient to climate change and contributing to UN sustainable development goals. Students will explore and evaluate options for sustainable design and production technologies and management for future buildings.

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