

Pearson BTEC Level 5 HND in Construction and the Built Environment (Surveying)

Individual Project

The aim of this unit is to support students in using and applying the knowledge and skills they have developed through other areas of their studies to complete and present an individual project. In addition, this unit will provide students with key study skills that will support them in further study.

Construction Technology

This unit will introduce the different technological concepts used to enable the construction of building elements; from substructure to completion, by understanding the different functional characteristics and design considerations to be borne in mind when selecting the most suitable technological solution.

Science & Materials

This unit aims to support students to make material choices to achieve the desired outcomes of a brief. This is approached from the perspective of materials being fit for purpose; as defined by testing standards and properties, but also by consideration of the environmental impact and sustainability. Awareness of health & safety is considered alongside the need to meet legislative requirements.

Construction Practice & Management

The unit compares and investigates small, medium and large construction companies within the market place and how construction processes, for development, have evolved.

Legal & Statutory Responsibilities

This unit will introduce the different areas of law that are relevant to the construction industry throughout the development process. This includes applying for planning approval to undertake construction activities and using building control regulations to evaluate building design and alterations at the preconstruction stage. The unit will explore the laws of occupiers' liability, trespass and nuisance to manage construction activities on-site, and the legal aspects of the sale and leasing process involved in the disposal of buildings; using the law of contract and land law.

Measurement & Estimating

The overall aim of this unit is to provide students with an understanding of the quantity surveying techniques of measurement and the estimation of rates for the compilation of tender information. This is a vital activity in achieving a successful outcome for a contracting company in tendering and winning work.

Financial Management & Business Practice in Construction

This unit introduces the concepts of business management and financial control. Students will examine a range of factors that influence the ways in which companies grow, raise finance and control their costs and resources. Topics included in this unit are: the legal status of building companies and how this impacts on raising finance, the different sources of finance and how a company manages them, contemporary management strategies, and how the day-to-day management of the different resources used by a construction company impact on their success.

Group Project

Content in this unit will typically include role identification and allocation, collaborative structures, human resources management, project management, procurement, tender documentation, information/data sharing, meetings, health & safety, project costing and Building Information Modelling.

Contracts & Management

The overall aim of this unit is to provide students with a working knowledge of contracts, so they can manage a project team in accordance with the agreed terms and conditions of the contract. The principle person responsible for this is often the quantity surveyor and it is their responsibility to ensure compliance with the conditions of the contract.

Advanced Quantities for Complex Project

This unit has been designed to enable students studying construction, civil engineering and building services engineering to apply, analyse and measure a range of components and elements found in large-scale buildings or structures, and to produce quantities within the function of a quantity surveyor.

Surveying for Conversation, Renovation and Refurbishment

This unit will introduce students to the process, techniques and underpinning knowledge required to undertake a survey of a building. The unit will focus on surveying the condition of the fabric rather than a measured survey. However, where appropriate, consideration will be given to taking measurements to record the condition of the building. The unit will consider the different styles and methods of construction, how to analyse them and how they typically fail over time. The unit takes a practical approach, drawing on the initial learning and knowledge and applying it to surveying a property and producing a professional, detailed survey report for a variety of end users.

Alternative Methods of Construction

On successful completion of this unit students will have examined how the construction industry impacts on the environment; explored alternative construction methods which are fit for purpose; government policy implications and health & safety constraints associated with alternative construction methods; and designed a fit-for-purpose structure using an alternative construction method.

Maintenance & Operations

The aim of this unit is to provide students with background knowledge and understanding of maintenance and operations required in relation to the safe and efficient use of buildings; within both specific contexts and the wider environment.

Advanced Materials

The aim of this unit is to enable students to make decisions based on the application of knowledge and concepts related to advanced materials. As ever more innovative structural solutions are sought, so the need for greater understanding of material performance and behaviour is required. This encapsulates an understanding of the relationship between material microstructure, composition and mechanical properties in use, and also a knowledge of ‘smart’ materials that are at the heart of innovative material technology development.

Civil Engineering Technology

This unit explores the role of professional civil engineers, their essential involvement in the construction and maintenance of infrastructure, and the key technologies they apply. The technologies and processes of civil engineering, in the development of

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