

Unit 4: Construction Practice & Management

Unit code R/615/1390

Unit type Core

Unit level 4

Credit value 15

Introduction

The aim of this unit is to develop and provide students with a holistic understanding of construction practice and management processes. Students will investigate and research the modern construction industry, both from the practical skills embedded within the industry through to its linkage with development on-site and the connection with construction management; including roles within the industry.

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

Students will also explore how health & safety has evolved within the industry, including how the major stakeholders, from companies to site operatives, have embedded health & safety into their preferred areas of development and careers. In addition, students will explore Building Information Modelling and how it fits into construction processes/sequences ranging from domestic to large-scale and design and build projects.

The knowledge from this unit will provide students with the understanding of modern construction and management; the skills, management of people and projects, and how health & safety have changed the perception of the construction industry.

Learning Outcomes

By the end of this unit students will be able to:

1. Describe the construction industry with reference to company structures and other activities.
2. Explain different types of construction companies in the market and their relationships within the tendering process.
3. Discuss the key stages in a construction project, and how Building Information Modelling informs the different stages.
4. Analyse how the construction industry has developed suitable collaboration strategies in support of greater recognition of health & safety.

Essential Content

LO1 **Describe the construction industry with reference to company structures and other activities**

Understanding of the construction industry:

Historical development of the construction industry.

Professional and other institutes, including societies.

Links between professional, technical and skills professionals.

Contractor and head office structure.

Site structure and organisation.

Types of contractual work tendered by companies.

LO2 **Explain different types of construction companies in the market and their relationships within the tendering process**

Company types:

Professional relationships between companies.

Contract tendering.

Tender process.

LO3 **Discuss the key stages in a construction project, and how Building Information Modelling informs the different stages**

Master programmes and contract planning techniques.

The role of Building Information Modelling (BIM) on the construction.

Modern procurement methods within construction.

Sustainability.

LO4 **Analyse how the construction industry has developed suitable collaboration strategies in support of greater recognition of health & safety**

Key stakeholders in the construction process.

BIM and collaboration.

Health & safety within the construction industry:

Pre-construction regulations and legislation.

Site safety.

Learning Outcomes and Assessment Criteria

Pass	Merit	Distinction
<p>LO1 Describe the construction industry with reference to company structures and other activities</p>		<p>D1 Critically evaluate how construction companies have developed their structure and business ethos.</p>
<p>P1 Explain how the construction industry has developed and encompassed professionalism within its structures.</p> <p>P2 Demonstrate the scope and linkage between all parties within a construction organisation.</p> <p>P3 Identify the type of contractual work tendered by contractors</p>	<p>M1 Analyse how the construction industry has developed overall in terms of company structures, it's employees and contracted work.</p>	
<p>LO2 Explain different types of construction companies within the market and their relationships within the tendering process</p>		<p>D2 Compare the main factors which differentiate between construction companies, contracts and tendering.</p>
<p>P4 Identify the different types of construction companies in the market.</p> <p>P5 Explain the relationship between different construction organisations</p>	<p>M2 Analyse the catalyst which connects construction companies, including contracts and tendering.</p>	
<p>LO3 Discuss the key stages in a construction project, and how Building Information Modelling informs the different stages</p>		<p>D3 Provide a detailed analysis of how the construction industry has evolved in terms of innovative construction methods and contracts.</p>
<p>P6 Identify, with examples, modern construction processes and sequences used within today's industry, highlighting the way they respond to sustainability needs.</p> <p>P7 Explain contract planning techniques used within micro and macro projects.</p> <p>P8 Identify where BIM impacts upon operations and construction companies.</p>	<p>M3 Analyse how construction has developed in terms of innovation, designs, and within contracts for micro and macro projects, and the interrelationship with BIM.</p>	

Pass	Merit	Distinction
<p>LO4 Analyse how the construction industry has developed suitable collaboration strategies in support of greater recognition of health & safety</p>		
<p>P9 Explain how health & safety has now become an integrated part of the construction process.</p> <p>P10 Describe the government legislation which has benchmarked health & safety within construction.</p> <p>P11 Discuss the role of collaboration and communication in ensuring safe working practices.</p>	<p>M4 Demonstrate how the construction industry has benefited through changes in health & safety legislation.</p>	<p>D4 Evaluate the impact of health & safety legislation, how it has evolved the drivers for it, and its advantages or weaknesses within construction.</p>

Recommended Resources

Textbooks

GRIFFITH, A. and WATSON, P. (2003) *Construction management: Principles and practice*. Hampshire: Palgrave Macmillan.

HARRIS, F. and McCaffer, R. (2013) *Modern construction management*. Chichester: Wiley Blackwell.

KYMMELL, W. (2007) *Building information modeling: Planning and managing construction projects*. New York: McGraw Hill Professional.

OTTOSSON, H. (2012) *Practical project management for building and construction*. Boca Raton: CRC Press.

Websites

www.ciob.org.uk

Chartered Institute of Building
(General Reference)

www.rics.org

Royal Institute of Chartered Surveyors
(General Reference)

Links

This unit links to the following related units:

Unit 12: Financial Management and Business Practices in Construction

Unit 13: Tender & Procurement

Unit 23: Contracts & Management

Unit 24: Project Management

Unit 25: Management for Complex Buildings

Unit 38: Personal Professional Development

Unit 45: Maintenance & Operations

Unit 47: Construction Data Management