

This table indicates the modules included in this course and the structure which they follow.

Should you require further information about the modules, please contact admissions@cem.ac.uk

4-4½ years (standard route).

A 3 year accelerated route is also available.

Please note:

Students can either start in October or April

Where considered necessary to do so at any stage, CEM may seek to make variations to programme content, entry requirements and methods of delivery, and to discontinue, merge or combine programmes. This is subject to consultation with relevant students and other stakeholders, setting out the reasons for the proposed amendment(s), and compliance with the requirements of the CEM Code of Practice on Programme Monitoring, Amendment, Review and Discontinuation. Should such an eventuality occur during the admissions and registration process, applicants will be informed immediately of any change and the alternative arrangements that have been put in place.

Yr	October Semester	April Semester
1	Legal Studies People & Organisational Management	Economics Building, Environment, Technology & Simple Construction
2	Financial & Resource Management Measurement & Quantification of Construction Work	Building, Environment, Technology & Framed Structures Economics of Property & Construction
3	Contract Procedures Construction Site Management	Building, Environment, Technology & Complex Projects Building Structures
4	Integrated Management Project	Construction Project Management
	Elective modules (choose one from): Commercial Management in Construction Construction Law	Elective modules (choose one from): Maintenance Management International Construction
4½	Project - This is a six month module which will be started in either the April or October semester	
	 Core Modules	 Elective Modules
	Standard route (part-time)	Accelerated route (full-time)

Year 1

Legal Studies (core)

Aims

This module aims to:

- provide an introduction to the English legal system, the courts and legal method
- demonstrate how a valid contract can be formed; the importance of contract clauses; how a contract can be breached and how it can be discharged; the consequences of discharge
- demonstrate the importance of the law of tort to the construction and property industry. Emphasis will be placed on: negligence, occupiers' liability, nuisance and trespass to land
- establish an analytical approach to legal problem solving.

Indicative Content

- | | |
|--|------------------------------|
| 1) Government and the law | 9) General liability in tort |
| 2) Classifications of the law and jurisdiction of the courts | 10) Trespass |
| 3) Legal method | 11) Nuisance |
| 4) Formation of a valid contract | 12) Negligence |
| 5) Factors that affect the validity of a contract | 13) Defective premises |
| 6) Contents of a contract | 14) Breach of statutory duty |
| 7) Discharge of a contract | 15) Strict liability |
| 8) Specific types of contract | |

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: coursework (2,500-3,000 words)	60%
	Pass mark: 40%

People and Organisational Management (core)

Aims

This module seeks to:

- explain the role and function of management within organisations in the construction, land and estate management industries, both public and private sectors
- explore the question “what is management?” and distinguish it from leadership
- consider the role of change as a central theme as organisations seek to come to terms with issues that are constantly impacting, both positively and negatively, on the people, management and the structures of businesses
- consider contemporary organisational behaviour as applied to the relevant sectors of industry.

Indicative Content

- 1) Defining organisations
- 2) Organisations and their business environment
- 3) Management
- 4) The development of management thinking
- 5) Perception and communication
- 6) Planning and organising
- 7) Decision making in organisations
- 8) People management
- 9) Groups and teams
- 10) Work motivation
- 11) Employment issues for international managers
- 12) Health and safety at work
- 13) Leadership

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Economics (core)

Aims

This module aims to:

- provide an introduction to the microeconomics of individual decision-making within the context of markets for goods, services and resources
- provide an introduction to the macroeconomics of the level of economic activity and the way in which governments can pursue economic objectives
- encourage competence in the analytical skills of measuring, predicting and explaining economic phenomena
- establish a theoretical and conceptual foundation for an understanding of economic behaviour and processes in property and construction contexts.

Indicative Content

- 1) The nature and relevance of economics
- 2) The economist's tool-kit
- 3) Demand and supply
- 4) Consumers
- 5) Producers
- 6) Competition and monopoly
- 7) People resources
- 8) Property resources
- 9) Measuring the economy
- 10) The level of economic activity
- 11) Sustainable growth
- 12) Money matters
- 13) Macro policy
- 14) Inflation and unemployment
- 15) The international dimension

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Building, Environment, Technology and Simple Construction (core)

Aims

This module provides an introduction to building, environment and technology based on simple construction. Simple building examples are included, such as traditional masonry construction and roof construction typical in buildings of up to three storeys. Perspectives such as sustainability are considered. The module aims to establish a foundation of building, technology and environment knowledge and understanding to be developed in other modules. It also develops students' competence in using essays, sketches and drawings to describe building, environment, technology and simple construction.

Indicative Content

- 1) The nature and relevance of the module together with communication methods, drawing and measurement
- 2) Building
- 3) Performance
- 4) Construction of buildings; sequence and production
- 5) Environment and form
- 6) Sustainability and the built environment
- 7) Construction technology science
- 8) Materials
- 9) Site works and foundations
- 10) Walls
- 11) Roofs
- 12) Floors
- 13) Components; windows, doors and finishes
- 14) Introduction to building services/ environmental studies
- 15) Provision for services in buildings; water, drainage

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: coursework (2,500-3,000 words)	60%
	Pass mark: 40%

Financial and Resource Management (core)

Aims

This module aims to:

- provide an overview of the way that organisations - and the people who comprise them - manage the diverse resources at their disposal in the achievement of specific, organisational objectives
- encourage an acquisition of the tools and techniques of resource management currently employed in the appropriate sector of industry and to employ these to the resolution of problems with precision and discernment
- encourage an understanding and critical evaluation of resource management theories, and schools of management thought, and recent developments in these areas
- provide an introduction to the manner in which finance is effectively managed within the organisation and reported externally to appropriate stakeholders
- provide an understanding of the purposes, skills and techniques of financial and cost accounting and how they are applied in the sector today.

Indicative Content

- 1) What is management?
- 2) Organisational design.
- 3) Controlling performance
- 4) Aspects of resource management
- 5) Functional management
- 6) Organisational costing and cost control
- 7) Budgeting
- 8) Standard costing
- 9) Contribution analysis
- 10) Capital investment appraisal
- 11) Business accounting
- 12) The need for finance
- 13) Financial accounts: analysis of financial performance
- 14) Making financial decisions
- 15) Risk in business

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Measurement and Quantification of Construction Works (core)

Aims

This module aims to:

- provide an understanding of the role of the quantity surveyor in the construction industry
- develop competence in measurement and quantification techniques for both basic and complex construction works
- develop the ability to utilise and apply appropriate standard methods of measurement in the preparation of contract pricing and tendering documentation.

Indicative content

- 1) The QS role within the construction industry
- 2) Introduction to measurement
- 3) Measurement of internal finishes, joinery, walls and partitions
- 4) Measurement of windows and doors
- 5) Measurement of roofs and upper floors
- 6) Measurement of reinforced concrete structures
- 7) Measurement of structural steelwork
- 8) Measurement of substructures - basic
- 9) Measurement of substructures - complex
- 10) Measurement of external works and drainage
- 11) Measurement of demolition and alteration works
- 12) Measurement of building services installations
- 13) Introduction to measurement of civil engineering works
- 14) Contract documentation: bill preparation
- 15) Information and communication technology (ICT) and bills of quantities

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: coursework (2,500-3,000 words)	60%
	Pass mark: 40%

Building, Environment, Technology and Framed Structures (core)

Aims

This module provides an introduction to building, environment and technology based on framed or similar construction. 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.

This module aims to:

- provide an introduction to framed or similar buildings
- develop knowledge and understanding of building, technology and environment theory and principles, including: components; design; construction techniques; simple services; pathology/surveys; maintenance, sustainability; legislation and fire safety
- develop students' ability to describe building, environment, technology and framed construction using a range of communication techniques.

Indicative Content

- 1) The nature and relevance of the module together with communication methods for framed buildings
- 2) Introduction to legislation, design and specification
- 3) Construction; sustainability, cost, planning, organisation, process
- 4) Substructure/basements
- 5) Framed structures and details
- 6) Cladding and roofing
- 7) Floors and walls
- 8) Stairs and ramps
- 9) Components; windows, doors and finishes
- 10) Fire
- 11) External works
- 12) Introduction to conservation, building pathology and surveys
- 13) Introduction to maintenance
- 14) Services; gas, oil and electrical; ventilation; heating;
- 15) Services; refuse; lighting; security

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: coursework (2,500-3,000 words)	60%
	Pass mark: 40%

Economics of Property and Construction (core)

Aims

This module aims to:

- provide a clear understanding of fundamental concepts and theories
- encourage a recognition of the relevance of economic analysis to property-related issues
- facilitate a command of the analytical skills used in property and construction economics
- establish an appreciation of the links between property and construction economics and the other subjects on the course.

Indicative Content

- 1) The property market
- 2) The derived demand for property use
- 3) The investment demand for property assets
- 4) The supply of new property: construction
- 5) Government intervention in property
- 6) Urban and regional issues
- 7) Fiscal intervention: property taxes
- 8) Monetary intervention: housing
- 9) The time value of money
- 10) Development and redevelopment decisions
- 11) Public interest and sustainability
- 12) Cyclical fluctuations
- 13) Location decisions
- 14) Spatial patterns of land use
- 15) Spatial patterns of rent

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Year 3

Contract Procedures (core)

Aims

This module aims to:

- provide students with the principles and practice associated with dealing with standard forms of construction contracts
- give the student contractual knowledge required to deal on behalf of all parties associated with construction contracts, from inception to completion
- set out the stages of the construction contract process by giving illustrated examples of good practice making clear the role and responsibilities of each of the parties to the contract and how these responsibilities are best delivered
- cover various standard forms of contracts and where possible to give international examples through the interaction with experts and providing further research and reading in this area.

Indicative content

- 1) Contract procurement strategy
- 2) Contractor selection
- 3) Standard forms of contract
- 4) Subcontractors
- 5) Setting up the contract
- 6) Insurances, bonds, guarantees and collateral warranties
- 7) Contract administration: payment
- 8) Contract administration: changing the contract
- 9) Contract administration: quality control
- 10) Contract administration: time
- 11) Contract administration: damages
- 12) Contract administration: insolvency
- 13) Contract administration: fluctuations
- 14) Introduction to dispute resolution
- 15) Capital allowances: an overview
- 16) Cost control: contractual aspects from a contractor's perspective

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Construction Site Management (core)

Aims

This module aims to:

- develop the managerial skills at site level with regard to personnel, plant and materials
- utilise research and theory and practise these in relation to site based scenarios
- link the overall needs of the construction organisation with those of the individual construction site
- establish the learning experience within the context of construction application, thus enabling the integration of theoretical knowledge and understanding with best industrial practice including health, safety and welfare and environmental sustainability.

Indicative Content

- 1) The construction site
- 2) The roles of personnel
- 3) The environment
- 4.) Site management
- 5) Communication
- 6) Planning and programming
- 7) Method statements/risk assessment
- 8) Health and safety management
- 9) Resource management
- 10) Quality assurance
- 11) Personnel management
- 12) Incentives
- 13) Method study
- 14) Cost control
- 15) Lean construction

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Building, Environment, Technology and Complex Projects (core)

Aims

This compulsory module builds upon students' previously developed knowledge in order that they may be better able to address building, technology and environment issues on complex projects.

This module aims to:

- provide an introduction to issues on complex projects
- develop building, technology and environment theory; principles; materials; regulation and legislation; civil engineering; services; construction techniques; construction; innovation; contamination/ hazardous situations and sustainability
- encourage competence in the skills of communicating; essays, sketching and drawing to address building, environment, technology and complex project matters
- build on a foundation of building, technology and environment knowledge and understanding, so that it can be developed further in other modules.

Indicative Content

- 1) The nature and relevance of the module together with sustainability; the built environment
- 2) Design, cost and maintenance
- 3) Innovation; value; speed; quality
- 4) Building regulations: guide to the regulations A - E
- 5) Building regulations: guide to the regulations F - J
- 6) Building regulations: guide to the regulations K - onwards
- 7) Construction legislation; hazardous environments
- 8) Hazardous building materials; contaminated land
- 9) Alterations and extensions to buildings; demolition; underpinning
- 10) Plant; temporary support systems
- 11) Civil engineering: earthworks; soil support
- 12) Civil engineering: materials; tunnels; marine
- 13) Building services: introduction; environmental considerations; sewage; large scale heating and electrical supplies;
- 14) Building services: transportation; air conditioning;
- 15) Building services: communications; lightning protection; fire; services maintenance

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Building Structures (core)

Aims

This compulsory module will enable students to analyse, interpret, apply and communicate information regarding the structural systems of buildings in a professional manner such as understanding design calculations for building control. The module will develop their skills in understanding buildings as mechanisms. The module aims to establish the learning experience within the context of construction application, thus enabling the integration of theoretical knowledge and understanding with best industrial practice.

Indicative Content

- 1) The nature and relevance of the module together with structural information and data
- 2) Loadings and forces
- 3) Structural materials
- 4) Design of structural elements
- 5) Structures as mechanisms
- 6) Practical application of structures
- 7) Sustainability of structures

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Year 4

Integrated Management Project (core)

Aims

This module aims to:

- challenge environmental issues, and methods of controlling production
- encourage an understanding and critical evaluation of aspects of construction management being carried out in practice, regardless of location
- work effectively as a member of a team, that team made up of individuals who will not necessarily meet face to face and be made of from different locations (world-wide) and cultures
- develop the integration of sustainable technologies and systems in the building design and production process.

Indicative Content

- 1) Procurement
- 2) Planning operations
- 3) Health and safety
- 4) Site security
- 5) Site operations
- 6) Communication
- 7) Management issues
- 8) Quality
- 9) Financial management
- 10) Legal aspects
- 11) Problem solving exercise 1
- 12) Problem solving exercise 2

Assessment

	Weighting
Assessment 1: project report	100%
	Pass mark: 40%

Commercial Management in Construction (elective)

Aims

This module aims to:

- provide knowledge, understanding and skills to solve a variety of problems in the area of construction commercial management
- develop commercial awareness in the management of construction organisations and projects
- develop understanding and the ability to critically evaluate the underlying concepts and theoretical principles in construction commercial management in a rigorous and robust manner
- cultivate intellectual curiosity and to be philosophically reflective in the subject matter consistent with this level of study.

Indicative Content

- 1) Introduction to commercial management
- 2) Commercial leadership including the importance of sustainability awareness
- 3) Principles of strategic management and marketing in construction
- 4) Corporate governance including corporate environmental sustainability vision
- 5) Culture, ethics and the management of international construction
- 6) Sources of finance and financial management
- 7) Tendering and risk/uncertainties
- 8) Overheads and profit
- 9) Tender settlement and bid submission
- 10) Bidding strategies
- 11) A clients' view of commercial management processes and how they satisfy the needs of clients
- 12) Budget, budgetary control and cash flow
- 13) Outsourcing/sub-contracting and supply chain management including sustainability considerations.
- 14) Risk management
- 15) Open book accounting

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Construction Law (elective)

Aims

This module aims to:

- provide an introduction to the principles of contract law as applied to construction projects with specific reference to common construction contract clauses
- analyse professional liability and evaluate method of extending/ limiting liability
- assess the extent of liability outside the contractual relationship with a specific focus on defects liability, neighbour issues and highways
- evaluate the processes commonly used for resolving disputes that arise during construction projects.

Indicative Content

- 1) The nature of construction contracts
- 2) Change
- 3) Time
- 4) Payment
- 5) Work by others
- 6) Ending the contract
- 7) Professional negligence
- 8) Contractual security
- 9) Defects liability
- 10) Neighbour issues
- 11) Highways
- 12) Alternative dispute resolution
- 13) Adjudication
- 14) Arbitration
- 15) Litigation

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Construction Project Management (core)

Aims

This module aims to:

- provide knowledge, understanding and skills to solve a variety of problems in the area of construction project management
- develop awareness of the nature and characteristics of project management generally and more specifically in the construction industry
- develop understanding and the ability to critically evaluate the underlying concepts and theoretical principles in project management and its application in construction in a rigorous and robust manner
- cultivate intellectual curiosity and to be philosophically reflective in the subject matter consistent with this level of study.

Indicative Content

- 1) Introduction to project management and its strategic functions
- 2) Briefing for project managers including the importance of sustainability awareness
- 3) Project strategy and principles of strategic procurement
- 4) Structuring frameworks and methodologies for the management of projects
- 5) A project manager's guide to development strategy and the property development process including environmental sustainability considerations
- 6) Construction legislations
- 7) Pre-contract stages
- 8) Post-contract management
- 9) Management of change, innovation and creativity in construction including the importance of environmental sustainable solutions
- 10) Liability of the project manager and client care
- 11) Project management under some selected forms of contract
- 12) Partnering and supply chain management
- 13) Principles of integrated risk and value management including sustainability considerations
- 14) Benchmarking
- 15) Culture, ethics and international construction

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Maintenance Management (elective)

Aims

This module aims to:

- provide an overview of the way that maintenance organisations are structured and the needs of that structure to manage the maintenance of buildings
- develop existing knowledge in building construction, services and materials focusing on the maintenance and the management of buildings in the global environment
- integrate sustainable technologies and systems within the maintenance of buildings
- provide a foundation for the maintenance of the historic environment together with conserving that environment for future generations in the international arena.

Indicative Content

- 1) Building maintenance management 1: reasons for maintaining buildings.
- 2) Building maintenance management 2: maintenance organisation
- 3) Building maintenance management 3: maintenance in practice.
- 4) Common building defects 1: causes of decay and deterioration
- 5) Common building defects 2: external walls, foundations and structural damage
- 6) Building defects in modern industrial buildings
- 7) Structural failures in traditionally built domestic buildings
- 8) Structures
- 9) Operational maintenance
- 10) Cleaning buildings
- 11) Introduction to conservation
- 12) Conservation plans and maintenance plans in connection with facilities management of historic buildings
- 13) Maintenance of a historic estate
- 14) Dilapidations
- 15) Statistics

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

International Construction (elective)

Aims

This module aims to:

- provide an overview of the global construction market and the different ways in which construction professionals deal with building in particular regions of the world
- explore the issues related to the management of international joint ventures, including potential problem areas for project managers
- investigate the international players, companies and clients, covering those areas which international construction managers find themselves involved in on a day to day basis
- provide an introduction to the design construction and resource management of the international construction manager
- integrate theoretical knowledge and understanding with best industrial practice, including health and safety and environmental sustainability.

Indicative Content

- 1) What is international construction?
- 2) Tools of the trade
- 3) The international cultural challenge
- 4) International management culture
- 5) The worldwide construction market
- 6) Marketing, competitive advantage and procurement
- 7) Project funding
- 8) Project managing international construction
- 9) International human resource management
- 10) International design and construction
- 11) Construction plant and building materials
- 12) Case studies
- 13) Future horizons
- 14) Communication

Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	40%
Assessment 2: examination (2 hours)	60%
	Pass mark: 40%

Project (core)

Aims

This module will give the students an opportunity to:

- apply their skills and knowledge gained whilst on the course to the resolution of an industry based problem or to address a specific industry based issue during a prolonged period of independent study
- use time, space and resources for reflective thinking concerning their studies and their professional and educational development
- acquire new and relevant research and analytical skills and techniques
- further develop specific technical knowledge and professional skills.

Indicative Content

- | | |
|---|--|
| <ol style="list-style-type: none"> 1) Project management - aims, objectives and techniques, assessment 2) Time management 3) Project document 1 - what will it look like, how is it structured 4) You and your supervisor, the process and what to expect 5) Project topic - sources of inspiration, past titles and approaches 6) Literature review - rationale 7) Data sources for construction, estate management etc - librarian role, hard and soft data, critical reading and appraisal 8) What is research? - approaches to inquiry, strategy, types (qualitative, quantitative) | <ol style="list-style-type: none"> 9) Data collection 10) Surveys/questionnaire 11) Use of IT in the project - techniques to help with all aspects of the project - research bibliographies, social media, on line survey tools 12) Data analysis 1 - statistics and their uses 13) Data analysis 2 - how to deal with the data - qualitative, quantitative, descriptive statistics 14) Data analysis 3 - inferential statistics - bivariate statistical analysis, parametric and non-parametric testing (chi squared, correlation) 15) Data presentation - frequency distributions 16) Structuring and writing the project document |
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Assessment

	Weighting
Assessment 1: coursework (2,500-3,000 words)	15%
Assessment 2: coursework (2,500-3,000 words)	15%
Assessment 3: fully referenced research report (8,000-10,000 words)	70%
Pass mark: 40%	