Section 1: Basic Data

Awarding institution/body: **UWE**

Teaching institution: UWE

Faculty responsible for programme: FBE

Programme accredited by: CIOB

Highest award title: **BSc (Hons) Construction Commercial Management**

Default award title:

DipHE Construction Commercial Management

CertHE Construction Commercial Management

Interim award title: **BSc Built and Natural Environments**

Modular scheme title: UG Modular Scheme

UCAS codes: K220

QAA subject benchmarking group(s): **Building and Surveying**

Valid until:

Valid from: 2002

Authorised by: **UG Modular Scheme Director** Date:

Version code: 1 Version year: 2005

Section 2: Educational aims of the programme

The overall aims of the Award are to:

- 1. Motivate and equip graduates to play a leading role in meeting the challenges posed by changes in the construction industries, and to exploit the opportunities offered by the changes.
- 2. Develop students intellectual, analytical and problem solving skills and encourage the development of mature and independent judgement leading to effective decision making
- 3. Provide a forum for students to share their developing experience, knowledge and skills, in particular with students on other BE professional awards
- 4. Enable students to identify and evaluate research and innovation needs within the profession and provide support for research and project work
- 5. Give students an appreciation of the economic, social, political and technological factors which influence the evolution and development of the built environment.
- 6. Engender an attitude within students towards intellectual enquiry and learning which will encourage students to consider the award as only the first stage of a life long educational process, including the possibility of embarking on further studies at postgraduate level.

Section 3: Learning outcomes of the programme

A: Knowledge and understanding

By the end of the programme, the student should be able:

- 1. To identify the role of user requirements, functional requirements, performance standards and legislation in building design
- 2. To analyse the functional performance of the building fabric, its structure and environmental systems, and the design assumptions upon which they are based
- 3. To analyse in scientific terms the properties of building materials and components and assess their likely behaviour during construction, use and in the subsequent processes of disposal or recycling recognising the aims of sustainability
- 4. To identify the variable internal and external factors affecting production technologies, resources of production, buildability and the production process
- 5. To identify and understand management of health and safety in the construction context and how to fulfil responsibilities effectively
- 6. To identify the elements of contract and the obligations and responsibilities of the parties and the effect on the cost and administration of the project.
- 7. To identify and understand the economic factors that influence both design and production decisions.
- 8. To identify and evaluate contemporary construction procurement methods and their associated contractual arrangements.
- 9. To recognise the interdependence of design and production decisions including the area of health and safety
- 10. To examine the use of IT in the construction process and identify its growing strategic importance within the management of the construction process
- 11. To identify current management and business paradigms and strategies and examine their effectiveness in the context and culture of the construction industry.
- 12. To identify the elements of risk and value in various forms of contract and advise on alternative means of dispute avoidance and resolution
- 13. To explain how to undertake analysis of cost and quantities and determine the price for construction works at the design, tendering and final account stages of the works

Teaching/learning methods and strategies

Acquisition of these outcomes will primarily be through lectures and seminars/workshops and lab sessions designed to encourage interaction of the student and tutor.

Candidates will consolidate their knowledge and understanding through directed reading, site visits, field trips and other formative work and will be encouraged to share and develop that knowledge. IT applications and software will be used where appropriate in technical calculations, project management and students will have access to support materials for modules on the Faculty intranet.

Assessment

The knowledge base is tested by examination, oral presentations, experimental work in the lab and assessed coursework including project case studies.

By the end of the programme, the student should be able:

- 1. To analyse situations and problems critically, objectively and logically and subsequently postulate, justify and implement realistic solutions
- 2. To address a series of complex problems and develop appropriate solutions, even when contrary to accepted practices
- 3. To integrate information sources effectively and objectively interpret, analyse and communicate qualitative and quantitative data
- 4. To bring a broad professional and ethically informed perspective, including safety, environment and social awareness, to bear on issues relating to construction
- 5. To identify the requirements of construction industry clients and recognise the importance of time, cost, quality and value throughout the whole life cycle of projects
- 6. To examine the role and responsibilities of the members of the development team, within the UK and other European countries, and recognise and respect their obligations to each other and society
- 7. To recognise the role of value judgements in social, economic and technological decisions, and identify their source, effect and the necessity of arriving at realistic solutions
- 8. To demonstrate imagination and creativity in the resolution of problems and project management
- 9. To analyse information required for the effective economic and financial management of construction projects.
- 10. To apply knowledge of the legal principles of commercial law and of procurement, construction administration to a range of practical problems
- 11. Critically evaluate business and construction information to support innovation and decision making
- 12. To explain and justify solutions to clients and those concerned with the design and production of buildings.

Teaching/learning methods and strategies

Intellectual skills are developed through seminar discussions and individual tutoring. for example, of the dissertation and project modules.

Evaluation and problem solving skills are developed by using projects which use real life development sites or case studies with client briefs by considering spatial, structural and servicing design and management options to satisfy clients with tutors or in peer groups.

Students will be expected to engage in formative work and will receive feedback to enhance their intellectual skills individually and in groups.

Respect and awareness of the objectives and values of others are developed through the inter-professional modules which require students to work in groups of students drawn from across all the Faculty's professional programmes.

Assessment

A variety of assessment methods are used as above, but the use of oral presentation, research and project reports is the most common approach. Project and design reports may be based on the submission of portfolios. Analytical reports will be used as well as discursive questions in examinations.

Interdisciplinary projects are used to assess students' ability to integrate a variety of approaches and sources of information including oral presentations and an element of peer group assessment.

By the end of the programme, the student should be able:

- 1. To produce detailed calculations to support design solutions
- 2. To employ laboratory based experimental work to enhance the understanding of scientific concepts
- 3. To apply mathematical applications appropriate to the study of Construction
- 4. To produce well-proportioned sketches and undertake and interpret formal drawings.
- 5. To analyse structures using computer software
- 6. To select and use appropriate items of surveying equipment
- 7. To employ planning models to identify and schedule the types of resources needed for building operations
- 8. To develop safe systems of work which protect the environment and the health and safety of those affected by construction processes
- 9. To develop, present and analyse with confidence business and legal documentation affecting construction projects including financial management
- 10. To analyse cost and quantities and determine the price for construction works at the design, tendering and final account stages of the works
- 11. To design and execute research using a variety of data collection methods including drawing on the existing literature and using experimental methods.

Teaching/learning methods and strategies

Design calculations, experimental work and data analysis are taught in lectures, seminars and supervised lab sessions which often employ interactive software eg geotechnical and structural calculations. Sketches are tutored in small group seminars; finance and planning models eg cost planning and CPM in seminars to discuss case studies and also using proprietary software applications and simulations. Videos, slides and field trips and visiting speakers are used to illustrate techniques and management styles, H&S and problem solving. Practical workshops are used to learn the use of surveying equipment eg theodolite.

The ability to design and undertake research is introduced through the Inter-professional Development Project and consolidated and applied in the Dissertation of Project A at level 3.

The sandwich programme provides the opportunity to gain industry based experience. Field work provides similar opportunities to site visits, sometimes in a different cultural context.

Assessment

Reports and calculations are handed in for summative assessment, testing the application of formulae, providing discussion and interpretation of experimentation, data analysis and practical sessions. Statistical, financial and cost analysis and IT applications are used and applied to case study data.

Research skills are assessed through project work and finally through the Dissertation or Project module at level 3.

Industry based experience is on a pass fail basis and is assessed by analytical and reflective reports. An assessed analytical report of fieldwork is assessed against the project management module. H&S is assessed by portfolio & report.

By the end of the programme, the student should be able:

- 1. To demonstrate expertise in the application of IT in the context of the construction industry
- 2. To communicate information and ideas clearly, imaginatively and succinctly
- 3. To demonstrate effective oral and written presentation kills
- 4. To utilise and communicate information in quantitative terms and recognise the limits of error inherent in this approach
- 5. To demonstrate the qualities of versatility, enterprise, independence and self-reliance
- 6. To use management and interpersonal skills to deal with tensions and conflict and negotiate tasks
- 7. Work independently, or as part of a cognate or multi-discipline team demonstrating motivation and leadership
- 8. To work effectively with others in a range of contexts and with respect and understanding for the perspectives of others and an awareness of equal opportunities issues
- 9. To manage relationships at work in order to manage conflict.

Teaching/learning methods and strategies

IT applications are embedded throughout the programme starting with data analysis. IT teaching and tutorials takes place in labs with dedicated software applications many of which have been specifically written for the construction industry and others like cost planning, CAD, visualisation and project management software are applied to the industry.

People management skills and team working are taught in interactive seminars using indicators, role play and simulation as well as discussion to interpret outcomes. All Interdisciplinary and most projects have an element of group research, team working, negotiation and oral presentation.

Sandwich students have additional experience in working in the wider organisational context.

Assessment

Clarity of written presentation and ideas is assessed formally at level 1 as are other transferable skills such as oral presentations and report writing. At later stages the assessment of these skills is embedded in the assessment of other learning outcomes nad becomes steadily more rigorous at each level. Assessed oral presentations and team working are used at all levels particularly in project and interdisciplinary modules.

Section 4: Programme structure

FIGURE 1: AWARD STRUCTURE DIAGRAM							
BSc (HONS) CONSTRUCTION COMMERCIAL MANAGEMENT							
• •							
Recommended Routeway for FT Students							
YEAR 1	Business	Introduction	Davies	Environments	Construction	Process of	Data
SEM 1	Economics	to Law &	Design Project	&	Technology	Develop	&
	& Management for	Construction Contracts	(CM) UBCLBT-20-1	Construction Materials	A UBCLBX-20-1	ment UBIL75-10	Analysis UBCLBY-10-1
	Construction	UBCL7B-20-1	000251251	UBCLC5-20-1	0000011201	1	
SEM 2	UBIL6Y-20-1						
YEAR 2							
eru 4	Project	Construction	Project Planning	Construction	01	Building	1
SEM 1	Information & Measurement	Procurement & Contract	& Economics	Technology B	Shared Elective	Services Engin-	
	UBCLCQ-20-2	Administration E UBCLFT-20-2	UBCLCN-20-2	UBCLCF-20-2		eering	Interprofessional
SEM 2		OBOLF 1-20-2			Shared	UBCLCB-1	Development Project
					Elective		UBIL76-10-2
		•	•	•	•	•	
	OPTIONAL PLACES	MENT					
YEAR 3							
	Dissertation A	Financial	Project &	Strategic	Technological		Inter-disiplinary
SEM 1	UBILF3-20-3	& Human Resource	Conflict Management	Cost Planning	Innovation & Life Cycle	Strategies UBCL4F-	Issues UBIL4N-10-3
	OR	Management	UBCLDG-20-3	UBCL58-20-3	UBCLDF-20-3	10 3	00.0.11
SEM 2	Project A	UBCLD9-20-3					
	UBCL4L-20-3						

BSc(Hons) CONSTRUCTION COMMERCIAL MANAGEMENT					
Recommended Routeway for Part Time Day Release Students					
PT 1.1	Environments &	Construction 8	Denners of	Data &	1
SEM 1	Construction Materials UBCLC5-20-1	Construction & Technology A UBCLBX-20-1	Process of Development UBIL75-10-1		
SEM 2					
PT 1.2					_
SEM 1	Design Project (CM) UBCLBT-20-1	Business Economics & Management for Construction	Introduction to Construction UBCL7B-20-1	Contracts	
SEM 2		UBIL6Y-20-1			
PT 2.1	Construction	Construction	Drainet		Synaglapital
SEM 1	Construction Technology B UBCLCF-20-2	Construction Procurement & Contract Administration B UBCLFT-20-2	Information & Learning A Measurement (Decision N		Experiential Learning A (Decision Making) UBILJF-20-2
SEM 2		000EF 1-20-2			
PT 2.2	Technological	Project	Management	Building	Experiential
SEM 1	Innovation & Life Cycle UBCLDF-20-3	Planning & Economics UBCLCN-20-2	Strategles UBCL4F-10-3	Services Engineering	Learning B (CEME) UBCLPR-20-3
SEM 2					
YEAR 3	Strategic	Project &	Financial & H	uman	Dissertation A
SEM 1	Cost Planning UBCL58-20-3	Conflict Management UBCLDG-20-3	Resource Management UBILF3-20-3 UBCLD9-20-3 OR		UBILF3-20-3
SEM 2					Project A UBCL4L-20-3

The Construction Commercial Management Award is offered in a range of modes as follows:

- 1. Full-time in a minimum of three years.
- 2. Sandwich including a year in placement employment.
- 3. A part-time day release routeway suitable for completion over a minimum of five years.

The first year of the programme is common with Construction Management and Construction and Property Management. Students may therefore, subject to the achievement of appropriate entry requirements, automatically transfer into the second year of these three awards from any of these.

Students completing 200 credits are eligible to spend up to a year in placement employment. On successful completion they will receive placement credit.

The awards include a number of core themes which can be tracked throughout the three levels of study.

3.1 The Core Themes

The central core of the curriculum is designed to provide a blend of technical and management modules, the combination of which reflects the context of contemporary construction management, commercial management and which matches the evolving framework of professional bodies.

There are number of important themes which are embraced by the core modules. These include the following:

Technical and Technological Aspects

Students address the nature of technology in general and the technical and technological aspects of construction and the performance aspects of buildings in particular. Through the analysis of building performance they challenge design decisions, including the choice of materials and structural and environmental systems, and investigate the inter-dependent nature of technical choice through the critical appraisal of current design practice and production processes.

The properties of materials and the performance of structural and environmental systems are analysed, both during construction and in service. This is necessary in order to specify, or to interpret the specification of, suitable materials, and to appreciate the long-term effects of decisions made during the construction process. These effects will be on the technical and economic performance of the building not only in the context of the building itself but also in the wider context of the environment to ensure sustainable construction.

This `technical' material is also broadened in the Construction Technology modules to embrace wider technological considerations such the requirements of the user, problem solving heuristics, the development process, health and safety, the context of the site and conflicts in design.

Economics and Financial Management

In the `economics' and `financial management' aspects of the curriculum the students will gain an understanding of those macro-economic factors which condition construction activity, the structure of the construction industry, the structure of their markets and the environment in which they operate.

Students will develop an understanding of the economic and corporate behaviour of individual construction firms and their clients, as well as the procedures and responsibilities involved in the financial management of a construction project. This involves an understanding of the dynamics of change in the construction industry.

Management

The development of the theme is structured to develop an understanding of the complex sets of issues involved in the management of human enterprise in general, and the construction process in particular. Initially, the principles of management are introduced in order to develop an appreciation of the context of construction business and project management.

The theme continues by introducing planning and organisational concepts and examining the scope, use and limitations of quantitative models with particular reference to their use in the construction industry. The main objective is to develop the students' understanding of human organisational factors involved in managing the building process. The modules explore the techniques for planning and controlling the use of resources, environmental considerations, occupational health and safety requirements and risk assessment.

Law

The award includes modules dealing with the legal aspects of construction contracts and the management of built assets as required to meet the award learning outcomes. It is increasingly important for graduates to able to advise the client on setting up and effectively operating a growing range of procurement methods and contractual procedures to suit the characteristics of each project. They must also be familiar with the regulations governing the design, construction and use of buildings including workplace regulations, building regulations, construction design and management and health and safety regulations which occur as a direct consequence of legislation.

The legal aspects will be extended to consider in detail the documentation and administration of the contract as well as the specific aspects of dispute avoidance and resolution.

Sustainability

Sustainability is examined with the aim of avoiding too narrow a definition of the term while providing the students with a coherent framework related to these issues to underpin their learning on the award.

Early on sustainability issues are related to the selection of materials and technologies, energy efficiency and design criteria. These are put into the context of development processes at a micro-level and also related to the economic climate in a broader context. This continues with a consideration of sustainable construction, resource and business planning.

The second and final year inter-professional modules address this issue at a local and global level respectively and place the particular perspective of the Award into the broader context of sustainability of the Built Environment.

Health and Safety

There has been a growing concern and increasing legislation relating to both these issues in recent years and they are addressed in a number of ways within the Award. The teaching commences by focusing on the development of the principles relating to these issues and then relating them to the best practice on site in both the technology and management modules in the second year.

In the final year these subjects are addressed in both terms of policy and at a strategic level in the technology and management modules.

3.2 Industrial/Professional Placement

Students must complete 200 credits from the first two years of the full-time/sandwich programme before being eligible to undertake a placement.

3.3 Field Visits

A range of site visits and field courses supplements students college based learning. Field visits form an important part of the student experience. They include a residential field visit, normally held in a continental European country.

Core modules

Level 1

UBIL6Y-20-1: Business Economics & Management for Construction (20)

UBCLBX-20-1: Construction Technology A (20)

UBCLBY-10-1: Data and Analysis (10)

UBCLBT-20-1: Design Project (CM) (20)

UBCLC5-20-1: Environments and Construction Materials (20)

UBCL7B-20-1: Introduction to Law and Construction Contracts (20)

UBIL75-10-1: The Process of Development (10)

Level 2

UBCLCB-10-2: Building Services Engineering (10)

UBCLFT-20-2: Construction Procurement and Contract Administration B (20)

UBCLCF-20-2: Construction Technology B (20)

UBCLCQ-20-2: Project Information & Measurement (20)

UBCLCN-20-2: Project Planning and Economics (20)

Level 3

UBCLD9-20-3: Financial and Human Resource Management (20)

UBCL4F-10-3: Management Strategies (10)

UBCLDG-20-3: Project and Conflict Management (20)

UBCL58-20-3: Strategic Cost Planning (20)

UBCLDF-20-3: Technological Innovation and Life Cycle (20)

Optional modules

Students must select 40 credits from the following modules. NOTE Experiential modules can only be taken by students in relevant employment.

20 Credits Shared Electives

UBILJF-20-2: Experiential Learning A (Decision Making) (20)

UBCLPR-20-3: Experiential Learning B (CEME) (20)

UBIL76-10-2: Interprofessional: Development Project (10)

UBIL4N-10-3: Interdisciplinary Issues (10)

Students must select one of the following 20 modules:

UBILF3-20-3: Dissertation A (20)

UBCL4L-20-3: Project A (20)

Placement

120 P credits

Placements

Target Award

BSc (Hons) Construction Commercial Management

360 credits with at least 100 at level 3, a further 100 at level 2 or above and a further 140 at level 1 or above

Default Award

Interim Awards

BSc Built and Natural Environments

300 credits of which 60 are at level 3 or above, a further 100 at level 2 or above and a further 120 credits at level 1 or above

CertHE Construction Commercial Management

120 credits of which 100 must be at level 1 or above

DipHE Construction Commercial Management

240 credits with at least 100 credits at level 2 plus a further 120 credits at level 1 or above

Section 5: Entry requirements

Applicants must have passed Maths and English GCSE at Grade C or above or have obtained an equivalent qualification.

Credit will be given to students with A, AS or equivalent qualifications in Maths and/or Physics.

Candidates with a cognate HNC may be given AL credit for Level 1 modules and admitted directly into Level 2.

See also the Standard faculty entry requirements apply.

Section 6: Assessment Regulations

The programme is assessed under the University's Modular Assessment Regulations.

Section 7: Student learning: distinctive features and support

1. Breadth of focus

The Construction Commercial Management award is a development of the Construction Management award with much the same philosophy but a stronger emphasis on the legal and financial management of construction required for commercial management. The award structure has been designed in response to the increasing demand for graduates to carry out both the traditional quantity surveying functions associated with contract administration and the specialist commercial management function within the broader context of construction projects.

It will however provide a curriculum that is more closely tailored to the needs of those involved in the legal and financial aspects of the construction process. This is a traditional role required in construction companies as well as in professional practice and this function will provide employment for the graduate from this award. With and increasing variety of procurement method with their implication for both the legal and financial implication the need for a member of the construction team to contribute to decision making at design, and pre and post contract stages is now more acute.

2. Professional accreditation

This award is accredited by the Chartered Institute of Building with respect to Function B Commercial Management. The CIOB has a strong contingent of Quantity Surveying professionals who serve the contracting and commercial sector.

3. Placement opportunities

Students are encouraged to take the sandwich option and take a year out in an approved placement to achieve placement credit. It also contributes to the 3 years of experience required for full membership of the CIOB.

4. Part-time day release routeway

Students may study this programme on a part-time day release basis; it is possible to transfer between full and part-time modes of study.

5. Inter-professional ethos

There is an inter-profession theme running through all three years of the programme which promotes understanding and cooperation between the full range of built environment professionals. It uses group work and interdisciplinary themes to encourage more productive project relationships

6. Student choice

Two shared electives offer students a wide range of choice for 20 credits of their programme. They may select from more than 30 credits of electives, including a European language, GIS, Effective Media Presentations, Historic Buildings and many others.

7. Experiential Learning

There is an opportunity for part-time students in relevant employment to take 40 credits of experiential learning reflecting on their learning at work and to count this towards the programme.

Section 8: Reference points/benchmarks

1. QAA subject benchmark statement for Building and Surveying

The learning outcomes for the BSc (Hons) Construction Commercial Management reflect the subject specific guidance found on pages 2-3 of the building and surveying benchmark statement, namely

- i. The key concepts, theories and principles as relevant to construction commercial management, including legal principles, economic theory and applied economics, design aspects, construction technology, performance of buildings, resource management, environmental awareness, health and safety management and the application of management theories
- ii. The in depth knowledge of legal aspects of the contract and the measurement and evaluation of both quantitatively
- iii. The context in which commercial management and quantity surveying operates
- iv. The linkages and inter relationships between the elements of construction management and the relationships between the discipline in other related built environment disciplines. This is particularly evidenced through the application of the inter-disciplinary modules at each level of the programme
- v. Specialist knowledge in construction technology, financial and production management and human-building interaction
- vi. Understanding and knowledge of the professions and industries allied to building and surveying including, supply and design
- vii. A knowledge of the professional ethics, their impact on the operation of the professions and their influence on the society, communities and the stakeholders with whom they have contact

In addition the programme specification has demonstrated its coverage of the subject, cognitive (intellectual) and practical skills which are indicated by the benchmark. These are specifically embedded in the modules and explicit in the learning outcomes of these modules. Skills are taught and/or assessed through the shared or specific programme modules.

The learning, teaching and assessment strategies adopted in the programme are consistent with the benchmarking statement. and the programme as well as being updated regularly to include recent research, examples of best practice, including case studies and site visits and academic debate. It embeds the research interests of its lecturing staff in modules, by using team teaching as reflected in a broad spectrum of building and surveying specialisms. Also students choose dissertation topics and are individually tutored by specialist staff. Part time students in relevant employment are also taught with full time students and sandwich students to enrich discussion by reference to experience in seminars and project work.

Formative assessment is now a strong feature of all undergraduate programme modules and these together enrich the student experience. This leads to reinforcement of learning opportunities, by feedback, for both weak and strong students. Summative assessment is formally fed back by academic staff and counselling opportunities are regularly provided. These also provide the material for performance indicators which are fed back into module and programme reports.

- 2. CIOB guidance on their requirements for accreditation
- 3. University and Faculty Strategies for Teaching, Learning and assessment
- 4. Research, Consultancy and Professional Practice

Staff are active researchers in the areas of PFI evaluation, operations management, risk and value management, partnering and supply chain management, geotechnical sciences, acoustic engineering,

and concrete repair technology. A number are also engaged in research into work-based and flexible learning.

The Faculty has been actively engageed in educational innovation, funded by the DfEE innovation fund. This has lead to development of a range of learning resources to supplement face to face contact with staff.