BSc in Building Construction and Management UCAS Code: K254

Awarding Institution	The University of Reading
Teaching Institution	The University of Reading
Relevant QAA benchmarking groups:	Building and Surveying
Faculty of Science	Programme length: 3 years
For students entering Part 1 in 2002	Date of specification: June 2002
Programme Director: Mr. K. Hutchinson	
Board of Studies:	
Accreditation: Chartered Institute of Building	

Summary of programme aims and learning outcomes

The BSc programmes in the Department of Construction Management & Engineering aims to provide the leaders and senior managers in the construction industry and related professions. The programme aims to produce graduates with the management skills and technical knowledge required for a diverse and complex industry. It is also a route to obtaining chartered status. The course aims to provide the graduate with the techniques of the site construction process and an understanding of how human and material resources can be effectively managed.

Transferable skills

The University's Strategy for Teaching and Learning has identified a number of generic transferable skills which all students are expected to develop by the end of their degree programme. In following this programme, students will have the opportunity to develop their skills relating to career management, communication (written, oral and graphical), information handling, numeracy, problem-solving, team working and information technology.

As part of the programme, students are expected to have gained experience and show competence in the following transferable skills: IT (word processing, spreadsheets, computer-aided design and planning software), report writing, oral and graphical presentation, team working, problem-solving, use of library resources, time-management, business awareness and career planning and management.

Programme Content

The Degree is divided into three parts. The first part of the programme covers the fundamental principles of economics, law and management and the scientific and technical principles of building design and construction. The second part builds on these modules with greater emphasis on their application to the construction industry. In the third part students take a combination of subjects relevant to the professional pathway they wish to follow.

Part 1 (three terms)

Compulsory modules		*Credits*	*Level*
CE1CCT	Construction Technology	20	1
CE1CCM	Construction Industry and Materials	20	1
EC103	Economics for Construction and Engineering	10	1
CE1CBS	Building Science and Services	20	1
CE1CIC	Information and Communication	10	1

CE1CES	Empirical Studies	10	1
LW1A05	General Introduction to Law	10	1
CE1CM1	Management 1	10	1
CE1CSD	Structural Design	10	1

Part 2 (three terms)

Compulsory modules		*Credits*	*Level*
CE2CBP	Building Pathology	10	2
CE2CAD	Computer-aided Design	10	2
CE2CCL	Construction Contract Law and Management	20	2
CE2CCE	Construction Economics	10	2
CE2CCS	Construction Systems	10	2
CE2CES	Environmental Systems	10	2
CE2CM2	Management 2	10	2
CE2CPR	Projects	20	2
CE2CRM	Research Methods	10	2
CE2CS1	Sustainability 1	10	2

Part 3 (three terms)

Compulsory Modules (70 credits)		*Credits*	*Level*
CE3CDS	Dissertation	20	3
CE3CMP	Major Project	20	3
CE3CBM	Business Organisation and Management	10	3
CE3CHM	Human Resources Management	10	3
CE3CMC	Management of Construction Projects	10	3

plus Optional Units amounting to 50 credits

Optional modules

The optional modules available to students from year to year may vary, but are likely to include:

CE3CBC	Building Conservation	20	3
CE3CCE	Civil Engineering	10	3
CE3CCP	Critical Perspectives on Construction Management	10	3
CE3CDE	Design Cost Evaluation	10	3
CE3CDR	Design for Rehabilitation	20	3
CE3CDL	Dilapidations	10	3
CE3CEC	Environmental Control	10	3
CE3CFM	Facilities Management	10	3
CE3CHF	Human Factors	10	3
CE3CIE	Inclusive Environments	10	3
CE3CIT	Information Technology	10	3
CE3CIB	Intelligent Buildings	10	3
CE3CIC	International Construction	10	3
LW1A06	Introduction to Business Law	10	1
LW101F	Introduction to Property Law	10	1
Various	Language Programme	20	3

CE3CMM	Maintenance Management	10	3
CE3CMV	Measurement and Valuation	20	3
CM3CPL	Planning Law	10	3
CE3CSM	Supply Chain Management	10	3
CE3CS2	Sustainability 2	10	3

Progression Requirements
In order to progress from Part 1 to Part 2 and from Part 2 to Part 3 of a Bachelor's programme, a student shall normally be required to:

- Achieve an overall average of 40% in 120 credits (12 modules in the current system) taken in Part 1; and
- Achieve not less than 30% in modules taken in Part 1 (or 2), except that marks of less than 30% in a total of 20 credits (2 modules) may be condoned provided that the candidate has pursued the course for the module with reasonable diligence and has not been absent from the examination without reasonable cause.

Summary of teaching and assessment
In Parts 1 and 2 teaching is through lectures with supporting tutorial classes of up to fifteen students. Tutorials encourage students to examine the material covered in the lectures and discuss and debate relevant issues. Supervised projects, undertaken in groups, are used as learning programmes in construction and building technology.

Information and Communication provides a practical element at Part 1 and in Part 2 group project work is an integral part of the programme. In Part 3 there is a greater emphasis on positive individual participation in the course with seminars and individual project work. A wide variety of assessment methods is used throughout the programme, including unseen written examinations, essays. reports and projects, with oral and pin board presentations. In Part 3 students must undertake a dissertation

A wide variety of assessment methods is used throughout the programme, including unseen written examinations, essays, reports, oral and graphical presentations, and projects.

Part 2 contributes one third of the final assessment and Part 3 the remaining two thirds.

Admission requirements
Entrants to this programme are normally required to have obtained:
Grade C or better in English and Mathematics at GCSE
UCAS tariff: 260 points from 3 A-levels or 280 points from 3 A-levels and 1 AS-level.
Subjects and levels: There are no required subjects although Economics, Business Studies, Mathematics or Geography are all relevant.
AS: 2 AS grades are accepted as 1 A level
Irish Leaving Certificate: BBBCC at Higher Level
International Baccalaureate: 30 points

BTEC ONC and OND with 2 distinctions and 4 merits at Level III
HNC and HND with 1 distinction and 4 merits at Levels IV and V.

Applications are welcome from international applicants, mature students and from those coming from other educational routes.

Second Year Entry is considered for those applicants with higher qualifications than those required for Year 1 entry. Applicants with BTEC HND with 2 distinctions and 4 merits will be considered for advanced entry.

Admissions Tutor: Mr. Keith Hutchinson

Support for students and their learning
University support for students and their learning falls into two categories. Learning support includes IT Services, which has several hundred computers, ant the University Library, which across its three sites holds over a million volumes, subscribes to around 4,000 current periodicals, has a range of electronic sources of information and houses the Student Access to Independent Learning **(S@il)** computer-based teaching and learning facilities. Threre are languatge laboratory facilities both for those students studying on a language degree and for those taking modules provided by the Institution-wide Language Programme. Students guidance and welfare is provided by Personal Tutors, the Careers Advisory Service, the University's Special Needs Advisor, Study Advisors, Hall Wardens and the Students' Union.

The Department's Resources Room contains a variety of information sources relevant to construction and surveying related courses. It has a wide ranging reference collection of textbooks, journals, videos and information from companies in the construction and development industries. The Department has its own computer laboratory which contains software relevant to construction and surveying including AutoCAD for computer-aided design.

Career prospects
Sudents have been regularly employed by the largest and most prestigious contractors including Bovis, Carillion, Keir, Costain, Taylor Woodrow and Wates and project management consultants Schal and Mace. Surveying companies E.C.Harris and Citex also employ graduates in Building Construction and Management.

Many of these companies are willing to offer sponsorship in terms of work in the summer vacations or for year-out placements.

Opportunities for year in industry
Students may, with permission from the Dean, suspend their studies for a year in order to undertake an industrial or professional placement.

Opportunities to study abroad
Due to the need to meet the requirements of professional accreditation, students cannot study abroad, as part of their degree. Students may be permitted to undertake a Socrates or other study visit as part of an approved 'gap' year between Part 2 and Part 3 of the programme.

Educational aims of the programme
The overall aim of the programme is to give a broad education in the academic disciplines related to the management of property, construction procurement and construction operations and to prepare graduates for a career leading to a senior management position in related vocational disciplines. The programme will provide a

coherent, academic course of study which is relevant to the needs of employers in these disciplines.

With respect to the specific disciplines of the programme, the course will provide:

- A knowledge and understanding of the design, construction and maintenance of buildings and built facilities and the management techniques used for these processes.
- A knowledge and understanding of the techniques of or construction operations, planning and management.
- The development of IT, drawing, written and oral skills in the communication of design, technical and analytical information.

Programme Outcomes

Knowledge and Understanding

Knowledge and understanding of	**Teaching and Learning Methods and Strategies**
1. The nature, roles and structure of the property development and construction industries. 2. The processes of design, construction and servicing of buildings. 3. The environmental, legal, economic and managerial principles of property development in market economy economies. 4. The techniques required for the procurement, planning, management and costing of building development. 5. The techniques of construction operation programming, planning and management.	Core knowledge and understanding is acquired through lectures, tutorials, computer-aided instruction, laboratory practical work, group projects, site visits and guided independent study. Knowledge is further developed through feedback on non-assessed work during tutorial and practical exercises. Whilst basic facts are obtained in lectures and guided reading, this knowledge is applied through the specialist modules and the practical application of the principles and skills in project work throughout the course and in on-site, building inspections and individual, specialist project working in Year 3. Deeper knowledge and understanding in the chosen specialisms is also obtained by research in a related subject area and the writing of a dissertation under supervision. Specialist options at Year 3 also provide students with an element of choice enabling them to develop subject areas relevant to the Department's research, their own interests and career aspirations. **Assessment** Knowledge and understanding in Years 1 and 2 is assessed primarily by unseen examinations and a by an element of laboratory and project coursework, in groups and individually. The balance of assessment methods in Year 3 varies depends upon the options selected but include essays, individual project reports, unseen examination papers and the assessment of a dissertation.

Skills and other attributes

B Intellectual Skills - able to: 1. Think systematically, comprehensively, logically and imaginatively 2. Identify, analyse and solve problems. 3. Plan, organise and manage tasks. 4. Transfer appropriate knowledge and methods across subject modules 5. Rapidly assimilate, evaluate and communicate graphical and written information 6. Plan, conduct research and write a report.	**Teaching and Learning Methods and Strategies** These skills are developed through the general teaching methods of the course and particularly in laboratory practical work, essay production and undertaking of project based assignments. Knowledge and understanding are developed by lectures, guided reading and tutorial discussion appropriate to the subject content of the module and through application of the knowledge in project work, which includes group project work in Years 1 and 2 and individual specialist project work and a dissertations in Year 3. **Assessment** Skills in Year 1 are assessed by laboratory reports, tutorial presentations, essays and unseen examination papers In years 2 and 3, these skills are assessed by group project working, individual project reports and a dissertation.
C Practical skills - able to: 1. Communicate design and specification information in drawn and written form by hand and by using computer aided techniques 2. Undertake simple structural calculations. 3. Carry out land and building surveys. 4. Programme and plan construction operations from design information.	**Teaching and Learning Methods and Strategies** These skills are promoted through practical class work in Years 1 and 2 and are further developed by group projects and practical surveying exercises on campus. In year 3, students apply these skills in the specific vocational modules and during a number of site visits and in designed practical project tasks in order to produce specific, developed skill potential. **Assessment** Assessment of practical skills is via coursework and the submission of project reports. Unseen examinations are also used where students are encouraged to display knowledge of techniques and skills. Level 3 projects are designed to test students' competence in exercising practical skills.

D Transferable skills

1. Communicate effectively by oral, written and graphical means
2. Data collection and manipulation
3. Apply numerical skills to financial information
4. Work effectively independently or in a group situation
5. Career management

Teaching and Learning Methods and Strategies

These skills are communicated generally throughout the course through the teaching and learning processes and class activities used in modules.
Specifically:
Skills 1 and 4 are required in the project work undertaken and in the presentations that form an integral part of all project work.
Skills 2 and 3 are part of the application aspects in the economic and financial modules of Years 1 and 2 and the laboratory work.
Skill 5, is a continual theme of the course in its industrial and professional practice aspects and in the application of these at Year 3 in project work.
Students are provided with the facility to become aware of and study the practices and techniques of professional practitioners and firms through guest lectures and recruitment visits of these organisations as part of course activities and career selection.

Assessment

Transferable skills 1-4 are assessed through coursework and presentations.