

# Programme Specification H.N.C. in Construction

**Date issued: September 2009**

**NOTE:** This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if s/he takes advantage of the learning opportunities that are provided. More detail on the specific learning outcomes, indicative content and the teaching, learning and assessment methods of each unit can be found (1) at <http://moodle.bcu.ac.uk/tid/> (2) in the Unit Document and (3) in the Student Handbook.

The accuracy of the information contained in this document is reviewed by the University and may be checked within independent review processes undertaken by the Quality Assurance Agency.

<b>Awarding Institution / Body:</b>	<b>Birmingham City University</b>
<b>Teaching Institution:</b>	<b>Birmingham City University /South Birmingham College</b>
<b>Programme accredited by:</b>	<b>Edexcel/BTEC</b>
<b>Final Award:</b>	<b>Higher National Certificate in Construction</b>
<b>Programme Title:</b>	<b>HNC in Construction</b>
<b>Main fields of Study:</b>	<b>Construction Design /Technology /Services /Management /Health and Safety /Project /Science and Materials and Analytical Methods</b>
<b>Mode of Study:</b>	<b>Part Time</b>
<b>Language of Study:</b>	<b>English</b>
<b>UCAS Code:</b>	<b>Not applicable</b>

**Relevant subject benchmark statements and other external and internal reference points used to inform programme outcomes:**

**Construction Industry Council's National Occupational Standards 2006 Edition, (have been mapped against the HNC Units).**

**Construction Industry Council's Common Learning Outcomes, (have been mapped against the HNC Units).**

### **Programme philosophy and aims**

The programme is the bench mark for Higher Construction Technicians within the Building industry. It provides Core Knowledge and Supplementary studies for the wide range of roles found within the industry.

#### **Aims of the programme**

##### **The programme aims to provide learners with:**

- a vocational learning experience which is intellectually demanding, including a range of skills widely recognised by both employers and the professional institutions.
- core and specialist technical and management knowledge for their career pathway.
- knowledge and understanding which enables them to respond more effectively to opportunities and change in the construction industry.
- the development of critical evaluation and analytical skills in relation to technical, economic, environmental and social issues in the construction industry.
- a range of transferable skills and the opportunity to enhance the development of the students' interpersonal skills.
- the development of the students' competence in applying core and key skills appropriate to the construction industry and the wider spectrum of life.
- a contribution to the skills, knowledge and understanding required to underpin relevant CIC occupational standards and NVQs at level 4.
- a Personal Development Plan and skills mapped against the Construction Industry Council's Common Learning Outcomes.
- the opportunity for enhanced entry to a career pathway on one of the honours degree programmes offered by the School, subject to specific units of study.

**Intended learning outcomes and the means by which they are achieved and demonstrated:**

**Learning Outcomes**

**1. Knowledge and Understanding**

- KU1.** The construction process and types of construction methods used and the environmental, social and economic factors which influence changes in building design and usage for new build.
- KU2.** The alteration and maintenance of existing structures.
- KU3.** Scientific principles applied to construction for construction best practice and compliance with legislation such as building regulations.
- KU4.** How organisations are structured, the management techniques and management functions applied within the industry and the procurement of work from various sources.
- KU5.** The use of design, construction and management principles.
- KU6.** The relationship between feasibility, design, construction technology and management.
- KU7.** Preparation of estimated costs for specific elements and construction projects.
- KU8.** Resource scheduling and production of detailed construction programmes and specifications.
- KU9.** Health and safety legislation and its management and application to live projects.
- KU10.** Site evaluation, forms of foundation design and superstructure construction methods.
- KU11.** Control procedures for quality, budgets and production throughout the construction process.
- KU12.** Relevant legislation applicable to the construction industry including Health and
- KU13.** Safety and environmental issues, and how it affects the design, construction, management and maintenance of construction projects.

**2. Intellectual Skills**

- IS1.** Application of the necessary skills needed for academic study and enquiry.
- IS2.** Apply learning study skills to new situations and fields of the programme discipline.
- IS3.** Utilise problem-solving and decision making skills to a variety of construction situations, both as an individual and as part of a team.
- IS4.** Apply strategies for the selection of research data from a wide source of material.
- IS5.** Synthesise data from a number of sources in order to gain a coherent understanding of construction theory and practice.
- IS6.** Make critical judgements about the merits of differing points of view.
- IS7.** Evaluate appropriate design and construction solutions, make and present a reasoned choice between them and offer alternatives.

**3. Practical Skills**

Higher level skills and abilities are embedded within the subject units.

- PS1.** Communicate effectively, both orally and in writing/sketching/drawing with individuals and groups including professionals within the work place to establish an effective working relationship.

- PS2.** Contribute through a variety of methods to group discussions and problem solving decisions.
- PS3.** Critically appraise by peer assessment the oral and written/sketch presentation of an individual.
- PS4.** Read and understand construction drawings
- PS5.** Correct referencing of researched text using the “Harvard” method.
- PS6.** Take charge of ones own learning goals and plan to undertake tasks, including working to deadlines and accepting accountability for ones own learning decisions.
- PS7.** Reflect on and appraise ones learning needs and adopt the appropriate learning strategies.
- PS8.** Identify accurately and proficiently any issues requiring research.
- PS9.** Collect relevant data, assimilate knowledge, put forward a coherent and rational argument and relate theory and practice.
- PS10.** Effectively and safely apply transferable skills to self-management, with continual analysis and evaluation of outcome and appropriate modification or intervention.

#### **4. Transferable/Key Skills**

Higher level skills and abilities are embedded within the units in addition to the Construction Industry Council’s Common Learning Outcomes (CLO’s) which are mapped against units of study and will include for:

- TS1.** Communicate effectively with a diverse range of individuals and groups using a variety of methods; including verbal, graphical, written, manipulation of numerical data and presentation skills.
- TS2.** Evaluate his/her own academic, professional and technical performance.
- TS3.** Understand career opportunities and challenges ahead and begin to plan a career path.
- TS4.** Utilise problem-solving and decision making skills in a variety of theoretical and practical situations including routine and non routine.
- TS5.** Manage change effectively and respond to changing demands in technology, etc.
- TS6.** Manage time effectively and prioritise workloads.
- TS7.** Demonstrate use of ICT applications across a wide range of situations.
- TS8.** Work effectively as a team member and team leader, making a valid contribution to the group dynamics for the completion of own and group tasks.
- TS9.** Recognise the moral and ethical issues of construction, sustainability, the environment, scientific enquiry and experimentation.
- TS10.** Appreciate the need for ethical standards and professional codes of conduct and apply insight and judgement in relation to the margins and consequences of error

## **Learning Teaching, and assessment methods used**

### **1. Knowledge and Understanding**

Knowledge and understanding are acquired through formal lectures including presentations, seminars, tutorials, hands-on experience, learning sets and problem based scenarios, backed up by guest speakers, visits to construction sites, manufacturers and exhibitions when appropriate. High emphasis is given to student directed and student centred learning.

Knowledge and understanding is assessed formatively by work based learning and problem solving, in-class tasks, seminar work, peer assessment and learning sets.

Summative assessment is by way of assignments, projects, presentations, time-controlled assignments and end examinations, where appropriate to the unit.

Methods of summative assessment are accurately defined within each unit document. The matrix of assessment (Appendix A) gives an indicative overview.

Assessment criteria defined for a Pass are described within the unit documents, clearly defined criteria for a Merit and Distinction are issued with the assessment tasks.

### **2. Intellectual Skills**

Use of real and scenario based case studies, self-directed learning facilitated by, problem-based learning scenarios and surveying, design, construction, budget, health & safety and management projects based upon a real site and its inherent problems.

Assessment includes, seminar and tutorial work, assignments, time controlled tasks, work based evidence and end of unit examination.

Common Learning Outcome skills are evidenced in a variety of situations such as assignments, seminar and tutorial work, workplace vocational performance file/logbook/diary and group presentations.

### **3. Practical Skills**

Practical demonstration work, seminar and tutorial work, applying work related experience to various in-lecture problems, use of ICT as a visual tool, problem-based scenarios and group project work.

Students are encouraged to plan their own work schedules, manage their time and extend their presentational skills in the application of their learning as they should be doing when working in industry.

Assessment methods include the use of ICT to demonstrate hands-on experience, formal drawing techniques, practical surveying exercises and group project work.

Formative assessment of peers through reviewing work in teamwork, written articles for reflection in learning sets or presentations.

Self evaluation of learning styles will be conducted through the course induction

programme when reviewing the university electronic moodle web pages.

Self appraisal of performance and the production of a Personal Development Plan which is produced at the induction stage of the course and reviewed within the second year so as to evaluate the student's present and life long learning strategy.

#### **4. Transferable/Key Skills**

Examples of teaching and learning strategies include: lectures, seminars and tutorials, self-directed learning facilitated by study packs and where appropriate the use of work based learning and research-based teaching materials and methods, also problem-based learning scenarios in small teams and larger groups.

Communication, team building skills, ICT and professional awareness within the industry are paramount to all subjects and will be demonstrated by the student within the framework of the course and across all subjects being studied.

Transferable/key skills are generally incorporated within the units and are related to various assessments as appropriate.

Students are required to produce a portfolio of evidence for these CLO's.

Production of evidence include seminars, learning sets, group work and presentations.

This evidence may be compiled through the subjects being studied or through work based learning in the main, but is not restricted to these alone. Evidence may be developed through external activities including work experience, student representative work and social and cultural activities.

## Programme structure and requirements, levels, units, credits and awards

The structure of the course, the units, levels, credit ratings, and the awards which can be gained are shown below.

The HNC in Construction is a two-year part-time unitised course for higher technicians/technologists and is specific in delivering units which will aid the student in their work role as being either 'Design' or 'Production'.

The course is also offered through our franchised institution South Birmingham College. They offer the course as, both a two year part time day course, or three year part time evenings only course.

The Design stream consists of Architectural, Building Control, Building Surveying and Property & Construction students. The Production stream consists of Quantity Surveying and Construction Management students. Students will be advised on enrolment of the units to study which will assist them in their career pathway.

There are six CORE units and four SPECIALIST units for the award of HNC.

HNC Year one consists of three core units and two specialist (recommended) units.

HNC Year two consists of three core units and two specialist (recommended) units.

A portfolio of evidence for the Common Learning Outcomes has to be produced by the student.

Those students who wish to gain advanced entry onto one of the degree programmes offered by the school must undertake the units identified from the matrix of units in Appendix B and thus will be required to study more units than those students who do not intend to progress on to one of the degrees. (Six units of study in the first year and six units of study in the second year).

### Year 1 Level 4

Unit number	Unit name	Credit
40040 (core)	Design Principles & Application (H1) ( <i>all</i> )	15
40041 (core)	Science & Materials (H1) ( <i>all</i> )	15
40042 (core)	Analytical Methods (H1) ( <i>all</i> )	15
40046 (specialist)	Technology A (H1) ( <i>all</i> )	15
40048 (specialist)	Law and Contract (H1) ( <i>AT/BS/QS/CME</i> )	15

### Year 2 Level 4

Unit number	Unit name	Credit
40043 (core)	Management Principles & Application (H2) ( <i>all</i> )	15
40044 (core)	Group Project (H2) ( <i>all</i> )	15
40045 (core)	Health, Safety & Welfare (H2) ( <i>all</i> )	15
40046 (specialist)	Site Surveying Procedures (H2) ( <i>all</i> )	15
40054 (specialist)	Individual Student Project (H2) ( <i>Design stream only, AT/BS</i> )	15
	or	
40063 (specialist)	Measurement B (H2) ( <i>Production stream only, QS/CME</i> )	15

**Award: HNC in Construction** (150 credits)

**Certificate of Achievement** for single units above the required 10 HNC units

**Common Learning Outcome portfolio of evidence**

The following units may be made available as alternative Specialist study units but the number of students must be sufficient for an economic group size and resources are available.

Substitution of a unit can only be for the Specialist units and then on an equal level basis. i.e. an H1 unit may be changed for an alternative H1 unit and likewise for level H2.

<b>Unit number</b>	<b>Unit name</b>	<b>Credit</b>
40050 (specialist)	Contractual Procedures (H2)	15
40051 (specialist)	Refurbishment and Adaptation (H2)	15
40055 (specialist)	Production Management (H2)	15
40056 (specialist)	Tendering and Estimating (H1)	15
40057 (specialist)	Project Management (H2)	15
40059 (specialist)	Building Control and Inspection (H2)	15
40060 (specialist)	Supply Chain Management (H2)	15
40061 (specialist)	Technology C (H2)	15
40062 (specialist)	Specification and Contract Documentation (H1)	15
40064 (specialist)	Structural Behaviour and Detailing (H1)	15
40066 (specialist)	Design Technology (H2)	15
40067 (specialist)	Materials Properties and Performance (H2)	15
40069 (specialist)	IT Applications - General (H1)*	7.5
40070 (specialist)	IT Applications - Surveying and Measuring (H2)*	7.5
40071 (specialist)	IT Applications - Computer Aided Design (H1)*	7.5
40072 (specialist)	IT Applications - Project Management (H2)*	7.5
40073 (specialist)	Work-based Learning A (H2)	15
40074 (specialist)	Work-based Learning B (H2)	15
* half unit		

### **13 Support for Learning, including Personal Development Planning (PDP)**

Students are encouraged to identify and, with guidance, to reflect on their own learning needs and are offered the following support as appropriate to those needs:

- induction day for orientation (campus layout, Edge building, library, Faculty learning resources centre, Faculty office), study skills, library, web based learning provision and advice on the quality of work to be produced.
- student handbook and unit documents
- yearly calendar of critical dates.
- daily timetable
- personal tutor/year tutor to support the student through their studies
- online access to course materials through moodle
- access to student services which provides assistance and support in the learning environment
- each student at induction will be tasked with producing their own Personal Development Plan. This will be reviewed and updated in the second year of the course within the Management Principles and Application unit.



**Criteria for admission**

Candidates must satisfy the general admission requirements of the programme.  
The current admission requirements can be found under the "Entry Requirements" tab of the web page for this course.

## **Methods for evaluation and improvement of quality and standards of learning**

### **Committees:**

- Board of Studies
- Examination Board
- Faculty Academic Standards and Quality Enhancement Committee
- Learning and Teaching Committee
- Student Experience Committee
- Faculty Board
- Senate

### **Mechanisms for review and evaluation:**

- Review and re-validation panels.
- Consultation with professional bodies.
- Consultation with employers.
- Annual unit review by tutor and students
- Annual Monitoring Report.
- Annual staff appraisals.
- External Examiner's visits and Reports.
- Course team meetings.
- Student feedback questionnaires.
- National Student Experience Survey

## Appendix A

### Matrix of Assessment

Units of study		BCU No.  Prefix with LM	Assignments	Projects	Time Controlled Assignments	Examinations	Presentations
<b>Design Principles and Application (H1)</b>	<b>CORE UNITS</b>	40040	•		•		
<b>Science and Materials (H1)</b>		40041	•		•		
<b>Analytical Methods (H1)</b>		40042	•		•		
<b>Management Principles and Application (H2)</b>		40043	•			•	
<b>Group Project (H2)</b>		40044		•			•
<b>Health, Safety and Welfare (H2)</b>		40045	•				
Technology A (H1)	<b>SPECIALIST UNITS</b>	40046	•				
Technology B (H2)		40047	•			•	
Law and Contract (H1)		40048	•				
Building Services Engineering Technology (H1)		40049	•				
Contractual Procedures (H2)		40050	•			•	
Refurbishment and Adaptation (H2)		40051	•			•	
Environment (H1)		40052		•	•		
Construction Economics (H2)		40053	•			•	
Individual Student Project (H2)		40054		•			•
Production Management (H2)		40055	•	•			
Tendering and Estimating (H1)		40056	•		•		
Project Management (H2)		40057	•		•		
Measurement A (H1)		40058	•		•		
Building Control and Inspection (H2)		40059	•				
Supply Chain Management (H2)		40060	•		•		
Technology C (H2)		40061	•			•	
Specification and Contract Documentation (H1)		40062	•	•			
Measurement B (H2)		40063	•			•	
Structural Behaviour and Detailing (H1)		40064	•		•		
Design Procedures (H1)		40065	•	•			
Design Technology (H2)		40066	•		•		
Materials Properties and Performance (H2)		40067	•		•		
Site Surveying Procedures (H2)		40068	•				
IT Applications - General (H1)*		40069	•				
IT Applications - Surveying and Measuring (H2)*		40070	•				
IT Applications - Computer Aided Design (H1)*		40071	•	•			
IT Applications - Project Management (H2)*		40072	•	•			
Work-based Learning A (H2)		40073		•			
Work-based Learning B (H2)		40074		•			
<b>N.B. IT Applications are 0.5 unit value</b>							

## Appendix B

### Matrix of Units

			Progression Pathways					
Units of study		BCU No. (Prefix with LM)	HNC in Construction (10)	BSc AT (10)	BSc BS (12)	BSc QS (12)	BSc CME (12)	
<b>5 level H1 units and 5 level H2 units are required for the award of HNC</b>								
<b>Design Principles and Application (H1)</b>	<b>EDEXCEL CORE UNITS</b>	40040	•	•	•	•	•	
<b>Science and Materials (H1)</b>		40041	•	•	•	•	•	
<b>Analytical Methods (H1)</b>		40042	•	•	•	•	•	
<b>Management Principles and Application (H2)</b>		40043	•	•	•	•	•	
<b>Group Project (H2)</b>		40044	•	•	•	•	•	
<b>Health, Safety and Welfare (H2)</b>		40045	•	•	•	•	•	
Technology A (H1)	<b>EDEXCEL SPECIALIST UNITS</b>	40046	•	•	•	•	•	
Technology B (H2)		40047						
Law and Contract (H1)		40048		•	•	•	•	
Building Services Engineering Technology (H1)		40049	•		•	•	•	
Contractual Procedures (H2)		40050						
Refurbishment and Adaptation (H2)		40051						
Environment (H1)		40052		•	•			
Construction Economics (H2)		40053		•	•	•	•	
Individual Student Project (H2)		40054						
Production Management (H2)		40055						
Tendering and Estimating (H1)		40056						
Project Management (H2)		40057						
Measurement A (H1)		40058				•	•	
Building Control and Inspection (H2)		40059						
Supply Chain Management (H2)		40060						
Technology C (H2)		40061						
Specification and Contract Documentation (H1)		40062						
Measurement B (H2)		40063						
Structural Behaviour and Detailing (H1)		40064						
Design Procedures (H1)		40065		•				
Design Technology (H2)		40066						
Materials Properties and Performance (H2)		40067						
Site Surveying Procedures (H2)		40068	•	•	•	•	•	
IT Applications - General (H1)*		40069						
IT Applications - Surveying and Measuring (H2)*		40070						
IT Applications - Computer Aided Design (H1)*		40071						
IT Applications - Project Management (H2)*		40072						
Work-based Learning A (H2)		40073						
Work-based Learning B (H2)		40074						
<i>* N.B. IT Applications have 0.5 unit value</i>								
BSc entry requirements number of Merits at H2		Merits		Pass	5	5	Pass	
Number of units studied for each programme		Units	10	10	12	12	10	

BSc Courses also offered in Real Estate and Planning & Development. Students with 5 H2 Merits can be allowed entry at the discretion of Course Leaders

## Entry and progression flow diagram

## Appendix C

