

**HNC Civil Engineering STUDIES**  
**Programme Specification Document July 2010**

1. Qualification Higher National Certificate	2. Programme Title Civil Engineering Studies	3. UCAS Code	4. Programme Type Modular, Part Time
<p><b>5. Main Purposes and Distinctive Features of the Programme</b></p> <ol style="list-style-type: none"> <li>1. Understanding and application of core civil engineering subjects</li> <li>2. Development of the fundamental skills of engineering analysis and design</li> <li>3. Foundation for leadership, social and business awareness</li> <li>4. Appreciation of environmental, health and safety and political issues</li> </ol>			
<p><b>6. What a graduate should know and be able to do on completion of the programme</b>            (objectives and learning outcomes)</p> <p>To gain the qualification the learner will have demonstrated: i) subject knowledge and understanding ii) cognitive skills iii) discipline-related practical and professional skills and iv) other general skills and capabilities (e.g. key/transferable/common) as specified in the learning objectives/outcomes for approved modules in the programme. Further details of module outcomes can be found in the programme document.</p> <p><i>A: Knowledge and understanding in the context of the subject(s)</i></p> <p>Knowledge and understanding of:-</p> <ol style="list-style-type: none"> <li>1. the scientific principles underpinning relevant current technologies, and their evolution.</li> <li>2. mathematics necessary to support application of key engineering principles.</li> <li>3. commercial and economic context of engineering processes.</li> <li>4. management techniques which may be used to achieve engineering objectives within that context.</li> <li>5. the requirement for Civil Engineering activities to promote sustainable development and the impact on all life and the environment.</li> <li>6. ICT, fieldwork and laboratory practice.</li> <li>7. contexts in which Civil Engineering knowledge can be applied (eg operations and management, application and development of technology etc).</li> <li>8. the principles of managing engineering processes.</li> </ol> <p><i>B: Cognitive skills in the context of the subject(s)</i></p> <p>Ability to:-</p> <ol style="list-style-type: none"> <li>1. apply quantitative methods and computer software relevant to Civil Engineering design and technology.</li> <li>2. apply critical reasoning and analysis.</li> <li>3. use the results of analysis to solve engineering problems, apply technology and implement engineering processes.</li> <li>4. apply a systems approach to engineering problems through know-how of the application of the relevant technologies.</li> <li>5. define a problem and identify constraints.</li> <li>6. use and apply information from technical literature.</li> <li>7. use appropriate codes of practice and industry standards.</li> </ol> <p><i>C: Professional and Vocational Skills:</i></p> <p>Be able to:-</p> <ol style="list-style-type: none"> <li>1. produce or adapt design solutions according to customer and user needs.</li> <li>2. ensure fitness for purpose (including operation, maintenance, reliability etc).</li> <li>3. be aware of the framework of relevant legal requirements governing Civil Engineering activities, including personnel, health, safety, and risk (including environment risk) issues.</li> <li>4. understand the need for a high level of professional and ethical conduct in civil engineering.</li> <li>5. understand and have the ability to use relevant materials, equipment, processes, etc.</li> <li>6. be aware of quality issues and their application to continuous improvement.</li> </ol> <p><i>D: Other skills (e.g. key/transferable) developed in subject or other contexts</i></p> <ol style="list-style-type: none"> <li>1. Capacity to research, investigate, work with contradictory information and to learn</li> <li>2. Communicate effectively, orally, through calculations in writing and through drawings</li> <li>3. Numerical, manipulative and quantitative skills appropriate to engineering</li> <li>4. Competent in the use of information technology tools</li> <li>5. Ability to manage resources and time, to lead and to work within a team</li> <li>6. Social and political awareness</li> <li>7. Capacity to plan and monitor personal development (PDP)</li> </ol>			

<b>7. Qualities, Skills &amp; Capabilities Profile</b>			
The educational and training goals of the programme seek to develop and demonstrate the following qualities, skills, capabilities and values in its graduates			
A Cognitive	B Practical	C Personal & Social	D Other
Power of quantitative and qualitative analysis	Writing skills	Self-motivation, PDP	
Flexibility of approach	Information processing	Organisation & time management	
Critical reasoning	Ability to get the job done	Teamwork	
Application of management theories		Recognition of environmental and H&S issues	
<b>8. Subjects Studied, Levels, Credits &amp; Qualifications</b>			
Duration and structure of programme/modes of study/credit volume of study units) 2 years part-time. Level 1; 4 No 10 credit modules and 4 No 20 credit modules. Level 2; 4 No 10 credit modules.			
Core Modules		Optional Modules	
Level 2	Management of Construction Activities (10)	Structural Design (10) Mathematics B (10) Water Engineering (10) Transport Engineering (10) Group Project (10)	<i>HNC</i> <i>160 Credits</i>
Level 1	Communications & IT (10) Materials (10) Hydraulics (20) Mathematics A (20) Soil Mechanics (20) Structural Analysis (20) Surveying (10)	Construction (10)  Professional Development (20)	<i>Cert HE</i> <i>120 Credits</i>

<b>9. Learning, Teaching and Assessment Strategy</b>	<b>10. Other Information</b>
<p><u>Learning and Teaching Methods</u> Active learning is promoted through lectures, tutorials, laboratory and fieldwork, library and guided study</p> <p><u>Assessment Methods</u> Assessment tasks are linked to the learning outcomes of each module: Essays, Writing up of Laboratory work, Analytical or Design assignments, Research assignments, Design submissions, Project.</p> <p><u>Assessment Classification System</u> Pass mark for a module 40% with at least 35% in each components of assessment. Merit mark for a module 60% with at least 35% in each components of assessment. Distinction mark for a module 75% with at least 35% in each components of assessment.</p>	<p><u>Date programme first offered</u> 1975</p> <p><u>Admissions Criteria</u> <i>Normal Requirements</i></p> <p>An AVCE, totalling 12 units, a minimum of 80 UCAS tariff points.</p> <p>A Levels accumulating to a minimum of 80 UCAS tariff points. The total may include points from AS Levels.</p> <p>EDEXCEL (BTEC) Qualifications - Pass National Certificate/Diploma.</p> <p>GNVQ - Pass Advanced GNVQ.</p> <p>NVQ - Pass NVQ Level 3</p> <p><i>Non Standard Entry</i> Cases dealt with by admissions tutor on individual basis</p> <p><u>Indicators of Quality and Standards</u> Validated by panel with external panel members.</p>