

**PROGRAMME SPECIFICATION DOCUMENT**

<b>1. Qualification</b> BEng (Hons)	<b>2. Programme Title</b> Mechanical Engineering	<b>3. UCAS Code</b> H300	<b>4. Programme Type</b> Full-time Part-time
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**5. Main Purposes and Distinctive Features of the Programme**

Main Purpose

- To produce Mechanical Engineering graduates equipped to play key roles in industry, and public services.
- To have developed an understanding of the engineering principles and practices needed by a Professional Engineer, and to have applied them to Mechanical Engineering situations.
- To have developed environmental awareness, transferable skills and awareness of business in students.

Specific Feature

- To have a significant level of subject matter directly applicable to Mechanical Engineering.

**6. What a graduate should know and be able to do on completion of the programme**

The programme provides opportunities for students to develop and demonstrate knowledge, understanding and application in the following areas:

Knowledge and understanding in the context of the subject(s)

- *Basic Analytical and Scientific principles relevant to Engineering.*
- *Business and management methods relevant to Engineering.*
- *The role of the Engineer in modern society.*
- *Detailed knowledge and understanding of Mechanical Engineering Analysis.*

Cognitive skills in the context of the subject(s)

- *Analysis, definition and solution of engineering problems.*
- *Planning, execution and reporting of original work.*
- *Integration and evaluation of data from a variety of sources.*

Subject-specific practical/professional skills

- *Execution and analysis of experiments in a range of subjects.*
- *Preparation of technical drawings and communication of Engineering design solutions.*
- *Use relevant software in technical and business applications.*

Other skills (e.g. key/transferable) developed in subject or other contexts

- *Ability to work as part of a team.*
- *Capacity to learn and investigate.*
- *Communicate effectively via different media.*
- *Manage resources and time.*

**7. Qualities, Skills & Capabilities Profile**

The educational aims of the programme seek to develop and demonstrate the following capabilities, and qualities in its graduates.

<b>A Cognitive</b>	<b>B Practical</b>	<b>C Personal &amp; Social</b>	<b>D Other</b>
Problem solving	Experimental skills	Leadership	Application to general Engineering
Critical reasoning	Processing of Information	Teamwork	Scientific Analysis
Planning and Execution	Drawing skills	Environmental Awareness	Professional Awareness

**8. Duration and Structure of Programme/Modes of Study/Credit Volume of Study Units**  
 (3 Years full-time; 4½-5 years part-time). Honours Degree = 360 credits; Intermediate Awards of Diploma of Higher Education and Certificate of Higher Education available at 240 and 120 credits respectively. All Honours degrees must include the study of 120 credits at Level H3.

**Part II** *Students take 4 (Minor), 6 (Joint), 8 (Major) 10 (Single) Modules*

<p>H3 Honours Modules</p>	<p><u>Core Modules</u></p> <p>Engineering Design &amp; Project (40)</p> <p>Structures &amp; Materials (20)</p> <p>Engineering Systems 3 (20)</p> <p>Finite Element &amp; Difference Solutions (20)</p>	<p><u>Options</u> (normally 20 credits each)</p> <p>Commercial Environment (20)</p> <p>Computer Aided Manufacture (20)</p>	<p><u>Project</u> (20 credits)</p> <p>Mechanical Engineering Design and Project (40)</p>
<p>H2 Honours Modules</p>	<p>Engineering Systems 2 (20)</p> <p>Materials &amp; Manufacturing 2 (20)</p> <p>Design Studies 2 (20)</p> <p>Engineering Science 2 (20)</p> <p>Engineering Analysis 2 (20)</p> <p>Manufacturing Systems &amp; Automation (20)</p>	<p>None</p>	<p>Dip HE (240 cr)</p>
<p><b>Part I (Level 1)</b> <i>Students take 2 (Minor), 3 (Joint), 4 (Major), 5 (Single) Modules</i> Cert HE (120 cr)</p>			
<p>First Year Part-Time Equivalent</p>	<p>Thermo-fluids (20)</p> <p>Materials &amp; Manufacturing 1 (20)</p> <p>The Engineering Environment (20)</p> <p>Design &amp; Applications (20)</p> <p>Engineering Science 1 (includes electronic principles) (20)</p> <p>Applied Analytical &amp; Comp Methods (20)</p>		

<p><b>9. Learning, Teaching and Assessment Strategy</b></p> <p><u>Learning and Teaching Methods</u></p> <p>Lecture, tutorial, laboratory, design, workshop, library skills</p> <p><u>Assessment Methods</u></p> <p>Examinations, Phase Tests and Continuous Assessment through assignments</p> <p><u>Assessment Classification System</u></p> <p>100% continuous assessment 50% exam, 50% assessment 75% exam, 25% assessment</p> <p>Final Degree Award based on aggregated performance of 25% of level 2 modules, 75% of level 3, and profile for marginal candidates.</p> <p><u>Honours Classification Bands</u></p> <p>I &gt;70% 2(I) 60 – 69% 2(II) 50 – 59% III 40 – 49% Pass 35 – 39%</p>	<p><b>10. Other Information</b> (including compliance with relevant Institute policies)</p> <p><u>Date programme first offered</u></p> <p>Originally – 1991, Revised – 1994 and 1996, Major Revisions – 2000 and 2008</p> <p><u>Admissions Criteria</u> <i>Standard Requirements</i></p> <p>2 x 'A' Levels minimum – normally 200 points. National Diploma (EDEXCEL), approved Foundation Scheme</p> <p><i>Non Standard Entry</i></p> <p>GNVQ Advanced Overseas Qualifications</p> <p><u>Indicators of Quality and Standards</u></p> <p>TQA Visit – 1995 – satisfactory, with areas of good practice.</p> <p>IMechE Accreditation – 1995 to 1999 entry students.</p> <p>Favourable comments from external moderators. Prof Bradshaw – Lancaster, Dr James – UMIST, Prof Crolla – Leeds University, Dr Webb – Sunderland, Dr. P. Brooks (Leeds University)</p> <p>Currently 1 external moderator – Dr. P. Brooks, Leeds University</p> <p><u>Review</u> 2000, 2009</p>
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