

**PROGRAMME SPECIFICATION**
**1. Overview/ factual information**

<b>Programme/award title(s)</b>	BEng (Hons) Engineering Technology (Top Up)
<b>Teaching Institution</b>	Hull College
<b>Awarding Institution</b>	The Open University
<b>Date of latest OU validation</b>	December 2017
<b>Next revalidation</b>	
<b>Credit points for the award</b>	Total Credit Value – 120 Credits
<b>UCAS Code</b>	H100
<b>Programme start date</b>	September 2018
<b>Underpinning QAA subject benchmark(s)</b>	Engineering (February 2015)
<b>Other external and internal reference points used to inform programme outcomes</b>	Engineering Council: UK-SPEC (January 2014) Engineering Council: AHEP (April 2014) QAA: The framework for higher education qualifications in England, Wales and Northern Ireland (November 2014)
<b>Professional/statutory recognition</b>	
<b>Duration of the programme for each mode of study (P/T, FT,DL)</b>	Part time 18 months
<b>Dual accreditation (if applicable)</b>	
<b>Date of production/revision of this specification</b>	6 <sup>th</sup> November 2017

## 2.1 Educational aims and objectives

It is the purpose of this programme to embrace the college mission of producing innovative and enterprising people enabling excellent learning for employability and social fulfilment. To this end the BEng (Hons) Engineering Technology (Top-up) will develop students with the knowledge and skills and systematic understanding to be creative and innovative in the development of economically viable and ethically sound sustainable solutions to engineering related problems.

The BEng (Hons) will build on the interpersonal and communications skills gained at levels 4 and 5, to develop the students organisational and management attributes expected of engineers at graduate level.

The aims of this award have been developed using the Engineering Council's UK-SPEC (January 2014)/ AHEP (April 2014), the Quality Assurance Agency's (QAA November 2014) qualification descriptor for Bachelor's degree with honours, the QAA engineering subject benchmark statement (2015), and the framework for higher education qualifications in England, Wales and Northern Ireland (FHEQ November 2014). The BEng (Hons) Engineering Technology (Top-up) core aims are contextualised and added to as follows (please note the alphabetic links to programme learning outcomes discussed in section 3):

- To develop lifelong, independent and reflective learners (C4);
- To provide curricula, informed by external reference points, which develop a range of technical, professional (D1, D2 and D3), vocational, employability (A2), transferable and key skills (C1, C2, C3 and C4);
- To enhance the employability and career prospects of learners;
- To provide students with a stimulating, challenging and supportive learning experience (B1 and B2);
- Widen participation (A2) in the areas of Engineering and also to increase access to higher education from under-represented groups in the local community;
- Provide a framework in which employers, employer bodies and providers can collaborate to develop the curriculum;
- Contribute to the skill base of Hull and the Humber region in the context of the rapid development of these industry sectors;
- Produce capable and well-rounded graduates who will make a contribution to the labour market needs of the local regional and national economies and have appropriate knowledge and skills (A1, B1 and C3);
- To respond to changes in the local Engineering industry and meet the needs of employers by closing the identified skills and knowledge gaps in a range of engineering environments (A1, A3 and D2);
- To deliver specialist related knowledge informed by a range of bodies and organisation including professional bodies (D3);
- To prepare learners for progression to higher levels of education and to further enhance their employability and career development and create opportunities for learners wishing to progress from professional courses and in employment (C2).

The key objectives of the programme are for students to have a creative way of approaching all engineering challenges. This is being seen increasingly as a '*way of thinking*' which is generic across all disciplines. In order to operate effectively, engineering graduates thus need to possess the following characteristics.

They will:

- be rational and pragmatic, by using the practical steps necessary for a concept to become reality (D1);
- want to achieve sustainable solutions to problems and have strategies for being creative, innovative and overcoming difficulties by employing their knowledge in a flexible manner (A2);
- be numerate and highly computer literate, and capable of attention to detail (B1);
- be cost and value-conscious, and aware of the social, cultural, environmental, health and safety, and wider professional responsibilities (B2);
- appreciate the international dimension to engineering, commerce and communication (C1);
- when faced with an ethical issue be able to formulate and operate within appropriate codes of conduct (A2);
- be professional in their outlook, capable of team working, effective communicators, and able to exercise responsibility (D2).

QAA Engineering Subject Benchmark (2015): section 3.1

The BEng (Hons) Engineering Technology (Top-up) has been designed to meet local needs (Yorkshire and Humber region); whilst addressing the objectives set by the Engineering Council's UK-SPEC (Dec 2011) / AHEP (Nov 2011) and within the QAA's 'The framework for higher education qualifications in England, Wales and Northern Ireland' (2014).

Historically, the majority of HE students enrolled will work in the areas of design and manufacturing (often as project engineers), with others working on production lines and on maintenance operations.

Employers are normally keen for their engineers to be multi-skilled, so a general engineering curriculum, tailored to the local business needs, has been maintained.

## **2.2 Relationship to other programmes and awards**

The programme relates directly to the FD Engineering Technology / HND General Engineering, currently being offered at Hull college, and for similar awards elsewhere.

### 3. Programme outcomes

Intended learning outcomes are listed below.

<b>3A. Knowledge and understanding</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><b>A1.</b> Use your knowledge and understanding, acquired through study, of relevant engineering principles, analytical methods, modelling techniques, quantitative methods, current thinking and appropriate computer software to respond systematically to engineering challenges.</p> <p><b>A2.</b> Taking into account appropriate social, commercial, ethical/legal and management practices in contemporary engineering.</p> <p><b>A3.</b> Ability to analyse and interpret information relevant to your discipline and field of work</p>	<p>The programme outcomes were designed to match the objectives of the Engineering Council's UK-SPEC (January 2014), the QAA 's "Engineering subject benchmarks (2015)," and their "The framework for higher education qualifications in England, Wales and Northern Ireland (November 2014)," have also informed the programme development.</p> <p>The curriculum maps in Annexe 1, show how the level 4, 5 and 6 modules contribute to meeting the programme outcomes. The programme provides opportunities for students to develop and demonstrate knowledge and understanding, qualities, skills and other attributes in the following areas:</p> <p><b>Teaching styles:</b></p> <ul style="list-style-type: none"> <li>• Lectures</li> <li>• Workshops</li> <li>• Tutorials (group and individual)</li> </ul> <p><b>Learning activities:</b></p> <ul style="list-style-type: none"> <li>• Learning texts and other media;</li> <li>• Resource-based learning;</li> <li>• Self-reflection exercises.</li> </ul> <p><b>Assessment tasks</b></p> <ul style="list-style-type: none"> <li>• Examinations;</li> <li>• Written assignments, laboratory and other technical reports;</li> <li>• Oral presentations (group and individual);</li> <li>• Learning journal;</li> <li>• Portfolio</li> </ul>

<b>3B. Cognitive skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><b>B1.</b> Combine your acquired knowledge and understanding of underpinning scientific principles, mathematical methods and engineering practice, including their limitations, to analyse engineering problems, outside the context in which they were first studied and formulate solutions to them.</p> <p><b>B2.</b> Critically appraise designs where a user's needs and preferences are transformed into cost-effective, innovative engineered solutions that are demonstrably fit for purpose in terms of production, operation, maintenance and de-commissioning.</p>	<p><b>Assessment tasks</b></p> <ul style="list-style-type: none"> <li>• Examinations;</li> <li>• Written assignments, laboratory and other technical reports.</li> </ul>

<b>3C. Key/transferable skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p>C1. Communicate (individually and in groups), complex information, data, arguments, ideas and problems or solutions effectively and appropriately to your subject, purpose and audience.</p> <p>C2. Practise a range of transferable skills (including problem solving, working with others – especially team-working – IT skills, information retrieval, planning self-learning and career development, and reflection), all within the context of professional progression.</p> <p>C3. Critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete) to formulate judgements, and to frame appropriate questions to achieve a solution, or identify a range of solutions, to a problem.</p>	<p><b>Assessment tasks</b></p> <ul style="list-style-type: none"> <li>• Written assignments, laboratory and other technical reports;</li> <li>• Presentations both individual and group</li> <li>• Group problem solving tasks</li> <li>• Learning journal;</li> <li>• Portfolio.</li> <li>• PPD and CPD</li> </ul>

<b>3D. Practical and professional skills</b>	
<b>Learning outcomes:</b>	<b>Learning and teaching strategy/ assessment methods</b>
<p><b>D1.</b> Analyse and critically evaluate solutions to a set of end-user requirements which use a range of engineering skills (e.g. a working knowledge of particular materials, equipment (e.g., test), processes or products, workshop and laboratory skills, accessing technical literature and other information, reasoning under uncertainty, and take into account appropriate quality standards, codes of practice, industry standards, and intellectual property and contractual issues.</p> <p><b>D2.</b> Undertake engineering projects responsibly, professionally and ethically, with regard to environmental risk and sustainability, and the framework of relevant legal requirements (covering issues such as personnel, health, safety, etc.).</p> <p><b>D3.</b> Critically evaluate arguments assumptions, abstract concepts and data (that may be incomplete); to formulate judgements, and to frame appropriate questions to achieve a solution, or identify a range of solutions, to a problem.</p>	<p><b>Assessment tasks</b></p> <ul style="list-style-type: none"> <li>• Personal Development Plan</li> <li>• Written assignments, laboratory and other technical reports;</li> <li>• Learning journal;</li> <li>• Portfolio.</li> </ul>

#### 4. Programme Structure

Programme Structure - LEVEL 6			
Compulsory modules	Credit points	Optional modules	Credit points
Advanced Engineering Materials	20		
Operations Management	20		
Industrial Control Systems	20		
Computer Aided Design	20		
Engineering Project	40		

**BEng Ordinary degree: 300 credits**, the programme learning outcomes to be satisfied for this award, are fifty percent of the level 6 evaluation (60 credits, excluding the 40 credit Engineering Project module) type modules (A-D) as indicated in the Annexe 1 – Curriculum Map

**BEng with Honours: 360 credits**, the programme learning outcomes to be satisfied for this award, are fifty percent of the level 6 evaluation type modules (A-D) as indicated in the Annexe 1 – Curriculum Map



## 5. Distinctive features of the programme structure

The award is available on a part time basis, two semesters will be delivered in each academic year. The part time programme will take 18 months to complete.

## 6. Support for students and their learning

Students will be inducted at the beginning of the academic year through a thorough induction period that will provide opportunities for students to get to know their peers whilst also familiarising with both staff and the campus.

Students receive pastoral and academic support through the College Tutorial System which includes group and individual tutorial entitlements.

All students are allocated a named personal tutor. The tutorial process incorporates Personal Development Planning, including individual target setting, planning and progress review. Personal Development Planning is embedded in all Awards through a number of modules at the different levels of study.

Academic tutorials are provided for each module on a continual basis providing academic support. The Library staff provide support for learners during the induction period and throughout the programme.

### Support Staff

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<p><b>7. Criteria for admission</b></p>	
<p>This award subscribes to the admissions criteria and processes of Hull College Group. Students should have completed a level 5 qualification within the field of Engineering with an appropriate grade profile or a qualification in an equivalent subject and level of study.</p> <p>The programme actively supports claims for Accreditation of Prior Learning (APL) and Accreditation of Prior Experiential Learning (APEL).</p> <p>The programme conforms to the college procedures of prior learning.</p> <p>Admission criteria: 240 credit points (CATS) ; typically from a Foundation degree or HND</p> <p><b>Additional Requirements for Entry to the Programme:</b></p> <p>Entry to the BEng (Hons) Engineering Technology (Top-up) programme will require a successful interview.</p> <p><b>Recruitment and Marketing Strategy</b></p> <p>Direct marketing via employer engagement and partnership activity. The College has its own website that includes HE publicity identifying student life and a downloadable prospectus.</p> <p>Recruitment is also supported by HE open events, schools and colleges progression events.</p> <p><b>Projections</b></p> <p>The minimum cohort size is 10 students up to a maximum of 20 students.</p>	
<p><b>8. Language of study</b></p>	
<p>All programmes of study are conducted and assessed in the English language. Hence, applicants seeking admission may be required to provide evidence that they can communicate effectively in the English language, for example, by achieving a minimum of IELTS 6.5, or equivalent.</p>	

## 9. Information about assessment regulations

### A Summary of Assessment Requirements

The programme adopts in full the College Academic Principles and Regulations. Students will be provided with a copy of the College Assessment Regulations at the point of registration for their award.

### B External Examiners

External examiners are an essential part of the College's framework for quality assurance. All approved courses leading to an award of the College must have External Examiners.

The role of External Examiners is to assure the quality of the students' learning experience and ensure that they are assessed fairly in relation to other students on similar courses nationally. External Examiner/adviser reports are an integral part of the College's quality assurance processes, they form part of the requirements for course annual review and in all cases course teams must demonstrate how they have responded to the views and comments made by external examiners/advisers.

## 10. Methods for evaluating and improving the quality and standards of teaching and learning

This award is managed and operated in accordance with College regulations and procedures. This will include representation and input from employers who will contribute to curriculum development and review.

The following methods are used to evaluate and improve the quality and standards of teaching and learning:

- External examiners reports;
- Cohort statistics e.g. gender, ethnicity, age and disability;
- Student feedback;
- Module reviews;
- Curriculum planning ;
- Course team minutes and the Quality Enhancement Plan;
- Modifications of the course;
- National Student Survey and other surveys administered by the college;
- Peer Teaching observations.

This award will be evaluated against the following criteria:

### Benchmark alignment:

The award will be reviewed against appropriate benchmarks and professional frameworks. Namely:

- QAA subject benchmark for Engineering (February 2015)
- QAA: The framework for higher education qualifications in England, Wales and Northern Ireland (November 2014) Engineering Council: UK-SPEC (January 2014)
- Engineering Council: AHEP (April 2014)

**Student Perceptions**

The award will be subject to Student Consultation Meetings, module evaluations and National Student Survey. Student representation will be encouraged on all Award Committees, at a cross college level and through student representation on Course Team Meetings, HE Committee and Academic Board.

**Recruitment Retention and Achievement**

The award will be measured against annually agreed college targets.

## Annexe 1 – Curriculum Map

Indicates which study modules assume responsibility for developing (shaded), assessing (●), taught (x) particular programme learning outcomes.

		Level 6 / BEng(Hons) / Ordinary Degree				
	Modules	A. E. M.	O. M.	I. C. S.	C. A. D.	E. P.
<b>A</b>	<b>Knowledge &amp; Understanding</b>					
<b>A1</b>	Use your knowledge and understanding, acquired through study, of relevant engineering principles, analytical methods, modelling techniques, quantitative methods, current thinking and appropriate computer software to respond systematically to engineering challenges.	●x		●x	●x	●
<b>A2</b>	Taking into account appropriate social, commercial, ethical/legal and management practices in contemporary engineering.	●x	●		●	●
<b>A3</b>	Ability to analyse and interpret information relevant to your discipline and field of work					●

Indicates which study modules assume responsibility for developing (shaded), assessing (●), taught (x) particular programme learning outcomes.

		Level 6 / BEng(Hons) / Ordinary Degree				
Modules		A. E. M.	O. M.	I. C. S.	C. A. D.	E. P.
<b>B1</b>	Combine your acquired knowledge and understanding of underpinning scientific principles, mathematical methods and engineering practice, including their limitations, to analyse engineering problems, outside the context in which they were first studied and formulate solutions to them.	●	x	●	●	●
<b>B2</b>	Critically appraise designs where a user's needs and preferences are transformed into cost-effective, innovative engineered solutions that are demonstrably fit for purpose in terms of production, operation, maintenance and de-commissioning.		x	●x	●x	●x

Indicates which study modules assume responsibility for developing (shaded), assessing (●), taught (x) particular programme learning outcomes.

		Level 6 / BEng(Hons) / Ordinary Degree				
	Modules	A. E. M.	O. M.	I. C. S.	C. A. D.	E. P.
<b>C</b>	<b>Key Skills</b>					
<b>C1</b>	Communicate complex information, (individually and in groups), data, arguments, ideas and problems or solutions effectively and appropriately to your subject, purpose and audience.	●	●x	●	●	●
<b>C2</b>	Practise a range of transferable skills (including problem solving, working with others – especially team-working – IT skills, information retrieval, planning self-learning and career development, and reflection), all within the context of professional progression.	●	●x		●	●
<b>C3</b>	Critically evaluate arguments, assumptions, abstract concepts and data (that may be incomplete) to formulate judgements, and to frame appropriate questions to achieve a solution, or identify a range of solutions, to a problem.	●x	●x	●		●x

Indicates which study modules assume responsibility for developing (shaded), assessing (●), taught (x) particular programme learning outcomes.

		<b>Level 6 / BEng(Hons) / Ordinary Degree</b>				
<b>Modules</b>		A. E. M.	O. M.	I. C. S.	C. A. D.	E. P.
<b>D1</b>	Analyse and critically evaluate solutions to a set of end-user requirements which use a range of engineering skills (e.g. a working knowledge of particular materials, equipment (e.g., test), processes or products, workshop and laboratory skills, accessing technical literature and other information, reasoning under uncertainty), and take into account appropriate quality standards, codes of practice, industry standards, and intellectual property and contractual issues.	●	●x	●	●	●x
<b>D2</b>	Undertake engineering projects responsibly, professionally and ethically, with regard to environmental risk and sustainability, and the framework of relevant legal requirements (covering issues such as personnel, health, safety, etc.).	●x	x			●x



## Annexe 2 Assessment maps

<b>Annexe 2 – Assessment Map Level 6</b> (all modules 20 credit (exception is Engineering Project 40 credits) all durations 1 semester )					
<b>Assessment Method</b>	<b>Advanced Engineering Materials</b>	<b>Operations Management</b>	<b>Industrial Control Systems</b>	<b>Computer Aided Design</b>	<b>Engineering Project</b>
Unseen examinations / tests			<b>May Sem 2</b>		
Fieldwork / Labwork Reports					
Oral Presentations	<b>Dec Sem 1</b>	<b>Dec Sem 1</b>			<b>Jan Sem 3</b>
Scientific paper / report	<b>Jan Sem 1</b>	<b>Jan Sem 1</b>		<b>May Sem 2</b>	<b>Jan Sem 3</b>