

## Programme Specification for Undergraduate Programme

### Leading to:

### BEng (Honours) Mechanical Engineering

### (Delivered at North China University of Technology)

Applicable for all undergraduate students starting in September 2021

Version No.	Date	Notes – QUALITY ASSURANCE USE ONLY	QA
2021-22 v0.1	29 June 2021	New programme to be taught off campus at North China University of Technology (NCUT) considered at Design Review..	JP
2021-22 v0.2	4 August 2021	Design Review Panel consider conditions discharged and recommends programme to the College Education Committee.	JP
2021-22 v0.3	2 September 2021	Chair of College Education Committee recommends programme to Senate for a September 2021 start.	JP
2021-22 v0.4	2 September 2021	Vice Chancellor approves programme on behalf of Senate.	JP

Undergraduate Programme	
1. Awarding institution	Brunel University London
2. Teaching institution	Brunel University London, North China University of Technology
3. Home college/Department	College of Engineering, Design and Physical Sciences/ Mechanical and Aerospace Engineering
4. Contributing College/Department/Division/ Associated Institution	North China University of Technology (NCUT)
5. Programme accredited by	
6. Final award(s) and FHEQ Level of Award	BEng (Honours) Mechanical Engineering (FHEQ level 6)
7. Programme title	BEng Mechanical Engineering
8. Programme type (single honours/joint)	Single Honours, Double degree programme (BUL and NCUT)
9. Normal length of programme (in months) for each mode of study	48 months (Full time);
10. Maximum period of registration for each mode of study	Normal or standard duration plus 3 years
11. Variation(s) to September start	None
12. Modes of study	Full time
13. Modes of delivery	Standard, block mode (on campus)
14. Intermediate awards and titles with FHEQ Level of Award	CertHE Mechanical Engineering (FHEQ level 4) DipHE Mechanical Engineering (FHEQ level 5) BEng (Ord) Mechanical Engineering (FHEQ level 6)
15. UCAS Code	Not applicable
16. HECoS Code	100190 (Mechanical Engineering)
17. Route Code	TBC
18. Relevant subject benchmark statements and other external and internal reference points used to inform programme design.	<a href="#">UK Quality Code for Higher Education</a> <a href="#">QAA Subject Benchmark Statement</a> (Engineering) <a href="#">Brunel 2030</a>

	<p>Brunel Placement Learning Policy, as published under the 'Placements' section of the '<a href="#">Managing Higher Education Provision with Others</a>' page.</p> <p>Useful Pdf links:-</p> <p>the Engineering Benchmark Statement (<a href="http://www.gaa.ac.uk/en/Publications/Documents/Subject-benchmark-statement-Engineering-.pdf">http://www.gaa.ac.uk/en/Publications/Documents/Subject-benchmark-statement-Engineering-.pdf</a>)</p> <p>the Framework for Higher Education Qualifications (<a href="http://www.gaa.ac.uk/en/Publications/Documents/qualifications-frameworks.pdf">http://www.gaa.ac.uk/en/Publications/Documents/qualifications-frameworks.pdf</a>)</p> <p>Engineering Council: UK-Spec (<a href="https://www.engc.org.uk/ukspec">https://www.engc.org.uk/ukspec</a>)</p> <p>The Institution of Mechanical Engineers: Academic Accreditation Guidelines (<a href="https://www.imeche.org/docs/default-source/tapd/acd001-annex-1-academic-accreditation-guidelines.doc?sfvrsn=4">https://www.imeche.org/docs/default-source/tapd/acd001-annex-1-academic-accreditation-guidelines.doc?sfvrsn=4</a>)</p> <p>Brunel's Programme Approval Policy (<a href="http://www.brunel.ac.uk/about/quality-assurance/documents/pdf/Programme-Approval-Policy.pdf">http://www.brunel.ac.uk/about/quality-assurance/documents/pdf/Programme-Approval-Policy.pdf</a>)</p>
19. Admission Requirements	<p>Details of <a href="#">entry requirements</a> are provided on the University's and College website and on the NCUT website.</p> <p>Levels of English for non-native speakers are defined in terms of the English language component of the Chinese national College entrance examinations.</p> <p>The minimum requirement of English on admission is 100 out of 150 for English language component of the Chinese national College entrance examinations.</p>
20. Other relevant information (e.g. study abroad, additional information on placements)	<p><a href="#">None</a></p>
21. Programme regulations not specified in Senate Regulation 2. Any departure from regulations specified in Senate Regulation 2 must be stated here and approved by Senate.	<p>1. For the BEng Honours degree, the student must have achieved an IELTS score of 5.5 (on each component) or above or a Brunel English language test score of 55 or above to progress from FHEQ Level 5 to Level 6.</p> <p>2. Degree award rule for the BEng Honours degree:</p> <p>2.1 The student must have achieved an IELTS score of 6.0 (on each component) or above or a Brunel English language test score of 58 or above.</p> <p>2.2. A student cannot get a Brunel Honours degree if the student fails to meet NCUT's degree requirements.</p> <p>3. Degree award rule for the BEng. Ordinary degree:</p> <p>3.1 300 credits in total, including at least 100 credits in FHEQ Level 4, 100 in FHEQ Level 5 and 80 credits at FHEQ Level 6.</p>

	<p>3.2 The student must have achieved an IELTS score of 6.0 (on each component) or above or a Brunel English language test score of 58 or above.</p> <p>3.3 To get a BEng Ordinary degree, a student needs to take all modules specified in the NCUT Chinese degree program specification.</p>
22. Further information about the programme is available from the College website.	<a href="#">BEng Mechanical Engineering</a>

### 23. EDUCATIONAL AIMS OF THE PROGRAMME

The Mechanical Engineering programme is part of the Brunel Engineering Curriculum portfolio. As such, its aim is to produce graduates that are creative, knowledgeable, have perspective and are professional in their approach.

The programme will produce graduates with knowledge and understanding of their subject and its applications. The graduates, equipped with analytical and computational skills, design, and transferable skills, will be able to play leading professional roles in mechanical engineering and related industries, show initiative, take responsibility and able to making decisions in complex and unpredictable situations. The programme also aims to develop new areas of teaching in response to the needs of industry and community.

### 24. PROGRAMME AND INTERMEDIATE LEARNING OUTCOMES

The programme provides opportunities for students to develop and demonstrate knowledge and understanding (K) cognitive (thinking) skills (C) and other skills and attributes (S) in the following areas:

Year and FHEQ level	Category (K = knowledge and understanding, C = cognitive (thinking) skills, S = other skills and attributes)	Learning Outcome	Associated Assessment Blocks Code(s)	Associated Study Blocks Code(s)	Associated Modular Blocks Code(s)
<b>Year 1 (English Language and Modules provided by NCUT) and Year 2 (Brunel Year 1) FHEQ Level 4</b>					
	K [SM3b]	Knowledge, understanding, skills gathering and comprehension of the specific engineering disciplines relevant to engineering or Civil engineering, including systems, mechanics and materials.			ME1620 BE1603a BE1603b BE1604 BE1606
	K/C [SM1b]	Knowledge of the fundamental scientific principles that underpin an education relevant to engineering and demonstrating their application (e.g. basic energy and mass balance and fundamentals of thermodynamics and fluid mechanics)			ME1620 BE1603a BE1603b
	K/C [SM2b]	Knowledge and understanding of the fundamental mathematical and statistical principles that underpin basic calculations in engineering			BE1601a BE1601b
	K/C [EA3b]	Apply a systems approach to identify the problems and apply core engineering principles to their analysis			BE1602 ME1620
	C [EA2, EA4b]	Ability to formulate basic problems, apply and demonstrate mathematical methods together with computational tools in the analysis of engineering problems			BE1601a BE1601b BE1602 BE1604 BE1606 ME1620
	C [EA1b]	Ability to apply and demonstrate scientific principles to relevant engineering applications, collect, manipulate and interpret data (e.g. labs)			BE1601a BE1601b BE1602 ME1620

	K/S [P2]	Knowledge and understanding in the use of computer tools in solving basic engineering problems			BE1602
	S [EL3b]	Basic knowledge of management, entrepreneurship and safety culture			BE1602 ME1620
	S [D6,G1]	Effective communication of technical material, ethics demonstration, in the form of written reports and oral presentations			BE1602 ME1620 BE1604 BE1606
	S [P11b]	Working effectively as a member of a team; managing time and resources to given constraints			BE1602
	S [D3b, P3, P8]	Safely operate laboratory and workshop equipment, obtain data and assess measurement error			BE1602 ME1620 BE1603a BE1603b BE1604 BE1606
<b>Year 3 (Brunel Year 2) and FHEQ Level 5</b>					
	K [SM1b]	A comprehensive synthesis and systematic understanding of the principles, concepts and theories underpinning the study of mechanical engineering.			ME2610 ME2611 ME2613 ME2614 ME2616 ME2617
	K [SM2b]	Comprehensive knowledge and critical understanding of fundamentals of mathematical and statistical methods underpinning the education in mechanical engineering.			ME2610 ME2613 ME2616
	K [SM3b]	Ability to use other engineering disciplines and evaluate critically the appropriateness of different approaches in order to support the study for mechanical engineering.			ME2610 ME2614 ME2616 ME2617
	K, C [EA1b]	Systematic understanding of engineering principles and the ability to apply them to undertake critical analysis of key mechanical engineering processes.			ME2611 ME2614 ME2616 ME2617
	C [EA2]	Ability to use analytical methods and modelling techniques for the understanding and assessment of systems in mechanical engineering.			ME2610 ME2611 ME2616 ME2617
	C [EA3b]	Ability to apply quantitative and computational methods for the analysis and modelling of systems and structures for mechanical engineering.			ME2610 ME2613 ME2614 ME2617
	K, C [EA4b]	Systematic understanding of, and the ability to apply, an integrated or systems approach to solving complex mechanical engineering problems.			ME2610 ME2611 ME2613 ME2616
	K, C [D2]	Systematic understanding and appraisal of the mechanical engineering problem using a review of related literature and technical reports, including quality, environmental, health and safety issues. Evaluation and simplification of the problem and validation of the results.			ME2611 ME2615
	S	Critical assessment and analysis of results with appreciation of uncertainty, ambiguity			ME2611 ME2614

	[D3b]	and limits of knowledge in mechanical engineering projects.			ME2615 ME2617
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K, C [D4]	Apply advanced problem-solving skills, technical knowledge and understanding, to establish rigorous and creative solutions that are fit for purpose for all aspects of the problem including production, operation,			ME2611 ME2615
C [D5]	Systematic planning and management of the design process, including cost drivers, and evaluate outcomes.			ME2611 ME2615
S [D6]	Effective communication of technical material, in the form of written reports and oral presentations, and time management.			ME2610 ME2613 ME2614 ME2615 ME2617
K [EL1]	Understanding of the need for a high level of professional and ethical conduct in engineering and a knowledge of professional codes of conduct.			ME2612 ME2614
K [EL2]	Knowledge and understanding of the commercial, economic and social context of engineering processes.			ME2612
K [EL3b,EL6]	Knowledge and understanding of management techniques, including project management, that may be used to achieve engineering objectives. Knowledge and understanding of risk issues, including health and safety, environmental and commercial risk, and of risk assessment and risk management techniques			ME2612
K [EL4]	Understanding of the requirement for engineering activities to promote sustainable development and ability to apply quantitative techniques where appropriate.			ME2612 ME2616
K, C [P2]	Comprehensive understanding of the characteristics of materials and processes for mechanical engineering.			ME2611 ME2614
C, S [P3]	Ability to apply relevant practical and laboratory skills, including data acquisition and interpretation of experimental data.			ME2610 ME2613 ME2614 ME2615 ME2616 ME2617
K, C [P4]	Understanding of the use of technical literature and other information sources for design.			ME2612
K,S [P6]	Understanding of appropriate codes of practice and industry standards			ME2611 ME2612
C [P8]	Ability to work with technical uncertainty.			ME2612 ME2615
C [P11]	Understanding of, and the ability to work in, different roles within an engineering team.			ME2612 ME2616
S [G1]	Plan the project with identifiable objectives/milestones and timescale, and complete the project under given time and resource constraints. Effectively communicate the ideas and results within a written report and/or oral form.			ME2610 ME2612 ME2615

	S [G2]	Self-awareness of one's own skills as a coach or mentor and how these may be improved, thus understanding the employability qualities necessary for work requiring the exercise of initiative, professionalism and personal responsibility.			ME2612
	S [G3b]	Plan the project with identifiable objectives/milestones and timescale and complete the project under given time and resource constraints. Effectively communicate the ideas and results within a written report and/or oral form.			ME2612
	S [G4]	Effectively and professionally manage the design process as part of a team.			ME2612 ME2615
	S	Adapt to the change in expectations and environments found during an industrial placement. ('with Placement' awards)			ME2555
<b>Year 4 (Brunel Year 3) and FHEQ Level 6</b>					
	K, C [SM1b]	A comprehensive synthesis and understanding of the principles, concepts and theories underpinning the study of mechanical engineering.			ME3620 ME3621 ME3618 ME3622 ME3623 ME3624
	K, C [SM2b]	Fundamentals of mathematical and statistical methods underpinning the education in mechanical engineering.			ME3620 ME3621 ME3618 ME3619 ME3623 ME3624
	K [SM3b]	Ability to apply and integrate knowledge and understanding of other engineering disciplines to support study of their own engineering discipline and the ability to evaluate them critically and to apply them effectively.			ME3618 ME3622 ME3623 ME3624
	K, C [EA1b]	Understanding of engineering principles and the ability to apply them to undertake critical analysis of key mechanical engineering processes.			ME3620 ME3621 ME3623 ME3624
	K, S [EA2]	Ability to use analytical methods and modelling techniques for the understanding and assessment of systems in mechanical engineering.			ME3620 ME3621 ME3622 ME3623
	K, C, S [EA3b]	Use of alternative approaches, with understanding of their limitations, for the quantitative analysis and modelling of systems and structures for mechanical engineering.			ME3621 ME3618 ME3622 ME3624

	C [EA4b]	Systematic application of appropriate techniques that may include theories, formulae, data, and experimental and/or numerical techniques to solve in an integrated manner mechanical engineering problems presented by the project.			ME3620
	C [EA6]	Ability to extract and evaluate pertinent data and to apply engineering analysis techniques in the solution of unfamiliar problems.			ME3620
	K [D1]	Systematic understanding the multi-disciplinary nature of sustainability and stakeholder dynamics.			ME3619 ME3623
	K, S [D2]	Systematic understanding and appraisal of the mechanical engineering problems using a review of related literature and technical reports, including quality, environmental, health and safety issues.			ME3620 ME3619 ME3623
	C [D3b]	Critical assessment and analysis of results with appreciation of uncertainty, ambiguity and limits of knowledge in mechanical engineering projects.			ME3620 ME3621 ME3622 ME3623
	K, C, S [D4]	Comprehensive knowledge of principles in the engineering design process, including objectives and methods to identify design requirements and apply formulae, data and experimental and/or numerical techniques for design problems.			ME3620 ME3619 ME3624
	C, S [D6]	Effective communication of technical material, in the form of written reports and oral presentations, and time management.			ME3620 ME3621 ME3622 ME3619 ME3623 ME3624
	K [EL1]	Systematic understanding of the need for a high level of professional and ethical conduct in engineering and knowledge of professional codes of conduct.			ME3619 ME3624
	K [EL2]	Comprehensive knowledge of environmental, quality, health and safety issues and relevant regulations in engineering business and appreciate the multi-disciplinary nature of sustainability and stakeholder dynamics, to ensure ethical and professional conduct as practicing engineers.			ME3621 ME3619



	K, S [EL3]	Knowledge and understanding of management techniques, including project and change management, that may be used to achieve engineering objectives, their limitations, and how they may be applied appropriately.			ME3620 ME3619 ME3623
	K, S [EL4]	Systematic application of methods in the analysis, planning, resourcing, progressing, monitoring and control of mechanical engineering projects in a sustainable and, if possible, in a quantitative way.			ME3619
	K, S [EL5]	Systematic understanding and appraisal of the role of mechanical engineering in industry and commerce, including legal, health and safety requirements, quality issues as well as the role of the professional mechanical engineer and regulatory bodies.			ME3619
	C [EL6]	Systematic understanding of the role of mechanical engineering in industry and commerce, including legal, health and safety requirements, as well as risk assessment and risk management techniques.			ME3620 ME3619
	K, S [P1]	Systematic understanding of the background to the problem using a review of related literature and technical reports. Appreciation of the context in which engineering knowledge is applied.			ME3620
	K [P2]	Comprehensive knowledge of characteristics of particular equipment, processes or products, with extensive knowledge and understanding of a wide range of engineering materials and components.			ME3622 ME3620
	C, S [P3]	Ability to apply relevant practical and laboratory skills, including data acquisition and interpretation of experimental data.			ME3621 ME3624
	K [P4]	Systematic understanding of the background to the problem using a review of related literature and technical reports.			ME3620 ME3618 ME3619
	K, S [P6]	Systematic understanding of the role of mechanical engineering in industry and commerce, including legal, health and safety requirements, quality issues as well as the role of the professional mechanical engineer and regulatory bodies.			ME3620 ME3622 ME3619
	C [P7]	Awareness of quality issues and their application to continuous improvement.			ME3619
	C [P8]	Critical assessment, analysis and interpretation of results for mechanical engineering projects.			ME3620 ME3621 ME3619

	K, C [P11b]	Systematic understanding the roles within an engineering team and the ability to exercise initiative and personal responsibility, which may be as a team member or leader.			ME3619 ME3624
	S [G1]	Apply their skills in problem solving, communication, information retrieval, working with others and the effective use of general IT facilities.			ME3620 ME3621 ME3619
	S [G2]	Self-awareness of one's own skills and how these may be improved, thus understanding the employability qualities necessary for work requiring the exercise of initiative, professionalism, and personal responsibility.			ME3620 ME3618 ME3623
	S [G3b]	Comprehensive project planning with identifiable objectives/milestones and time scale, and complete the project under given time and resource constraints. Effectively communicate the ideas and results within a written report and/or oral form.			ME3620 ME3621
	S [G4]	Exercise initiative and personal responsibility, which may be as a team member or leader.			ME3620 ME3619

**Learning/teaching strategies and methods** to enable learning outcomes to be achieved, including formative assessments

This joint programme aims to bring together the strengths of NCUT and BUL in the fields of mechanics to produce mechanical engineers with the skills and knowledge to go into careers in engineering.

All teaching on the programme is in English, and to enable students to develop the English language skills required, the programme is delivered over four years. This allows time to include teaching focussed exclusively on developing students' command of English to a professional level, practising the four core skills of listening, speaking, reading, and writing. The English language blocks do not carry credits towards the BUL degree award but are essential for students to successfully complete assessments in English. The way in which English is used in a real-world context is introduced early in the programme with the 40 credits of project and professional skills blocks at FHEQ Level 4. Those are followed by a similar number of credits at FHEQ Levels 5 and 6.

**Study**

Students will be introduced to subject material, including key concepts, information, and approaches, through a mixture of standard lectures, tutorials and seminars, laboratory practical, field work, self-study and individual research reports. Supporting material will be provided via the University's e-Learning platform. The aim is to challenge students and inspire them to expand their own knowledge and understanding.

**Work**

Preparation for work will be achieved through the development of 'soft' skills such as communication, planning, management and teamwork. This will be supported by the University's central services, principally the Library and ASK teams. In addition, guest speakers from industry will provide a valuable insight into the real world of mechanical engineering.

**Play**

Many of the practical activities in which the students engage develop into enjoyable experiences, for example working in teams for laboratory work. Various engineering and technology societies, run by the students (with staff support) form the focus for many extra-curricular activities for all students within the Mechanical and Aerospace Engineering Department.

**Grow**

Students are encouraged to develop personal responsibility throughout the course. Many elements of coursework involve, and reward, the use of initiative and imagination. Students are guided into this through the use of one-to-one tutorials. This aids them in developing reflective skills. Students on the Professional Development route record their personal development as part of the placement assessment, and are assisted in this by their industrial placement tutor and employer.

The opportunity to think creatively, including producing novel designs, will be given at all levels, particularly:

FHEQ L4: Engineering Practice; Mechanical Engineering Science

FHEQ L5: Elements of Engineering Design Project  
FHEQ L6: Major Individual Project; Mechatronics and Control Engineering;

### Summative assessment strategies and methods to enable learning outcomes to be demonstrated

To ensure any course related documentation is flexible all assessments will be specified on module outlines as one of the following three:

- *Coursework*
- *In-person assessment*
- *Examination*

Every assessment type falls within these three categories. In using only these three categories, the assessment can be altered within a category.

#### Coursework

For example

- Essays – to develop skills in research (collecting, managing and interpreting evidence)
- Laboratory reports – to develop skills in interpretation of experimental, theoretical and computational findings and skills in communicating a systematic process and results
- Assignment to develop transferable skills
- Design labs – to develop and assess engineering design skills (including basic information, technology and computer aided design skills) and visual and written communication
- Individual major report - to develop advanced abilities in research and communication, further develop engineering design, development and/or analysis skills and assess knowledge and understanding
- Group reports – to develop team skills and assess understanding of the interactions between engineering design, development and analysis processes
- Project portfolios - to develop skills in gathering, integrating, evaluating and presenting information and data from a variety of sources

#### In-person assessment

Any assessment where the actions (verbal or non-verbal) of the student are being assessed in their presence and thus for which the student must be in attendance.

- Oral presentations – to develop and assess verbal presentation skills.

## 25. Programme Structure, progression and award requirements

Programme structures and features: levels, assessment blocks, credit and progression and award requirements

- **Compulsory block:** one which all students registered for the award are required to take as part of their programme of study. These will be listed in the left hand column;
- **Optional block:** one which students choose from an 'option range'. These will be listed in the right hand column;
- A **core assessment** is an assessment identified within an assessment block or modular block (either compulsory or optional) which must be passed (at grade D- or better) in order to be eligible to progress and to be eligible for the final award. All core assessments must be specified on the programme specification next to the appropriate assessment or modular block:

Where students are expected to pass the block at D- or better, but not necessarily all elements, then the block itself is core.

e.g. AB3000 Project (40)

Core: Block

Where only some elements of assessments are required to be passed at D- or better, these will be identified by listing each element that is core

e.g. ABXXX1 Title (XX credits)

Core: 1 & 4

Where students are expected to pass all assessments in a block then this will be identified. By setting the assessment this way, students are also required to pass the block by default. This will be identified thus:

e.g. ABXXXX Title (XX credits)

Core: All, Block

- A **non-core assessment** does not have to be passed at grade D- or better, but must be better than a grade F, in order to progress and to be eligible for the final award.

<b>Year 1 (NCUT) and FHEQ Level 4</b>	
<b>Compulsory assessment block codes, titles and credit</b>	<b>Optional assessment block codes, titles and credits</b>
<b>Compulsory study block codes, titles and credit volume</b>	<b>Optional Study block codes, titles and credit volume</b>
<b>Compulsory modular block codes, titles and credits</b>  <b>All blocks are 0 credits unless otherwise stated</b>  MA1601 English for Academic Purposes (FHEQ Level 4) MA1602 English for Communication Scientific Purposes (FHEQ Level 4)	
<b>Year 2 (Brunel Year 1) and FHEQ Level 4</b>	
<b>Compulsory assessment block codes, titles and credit</b>	<b>Optional assessment block codes, titles and credits</b>
<b>Compulsory study block codes, titles and credit volume</b>	<b>Optional Study block codes, titles and credit volume</b>
<b>Compulsory modular block codes, titles and credits</b>  All assessment blocks are 15 credits unless otherwise specified MA2601 Intensive English Training I (0 credits, FHEQ Level 5) MA2602 Intensive English Training II (0 credits, FHEQ Level 5)  BE1601a Engineering Mathematics and Programming I (Core) BE1602 Engineering Practice (Core) BE1603a Engineering Systems and Energy I BE1604 Engineering Mechanics - Statics BE1601b Engineering Mathematics and Programming II (Core) BE1603b Engineering Systems and Energy II BE1606 Rigid body dynamics ME1620 Mechanical Engineering Science  MA2601 Intensive English Training I (0 credits) MA2602 Intensive English Training II (0 credits)	<b>Optional modular block codes, titles and credits</b>
<b>Year 2 and FHEQ Level 4 Progression and Award Requirements</b>	
<b>As per <a href="#">Senate Regulation 2</a></b>	

<b>Year 3 (Brunel Year 2) and FHEQ Level 5</b>	
<b>Compulsory assessment block codes, titles and credits</b>	<b>Optional assessment block codes, titles and credits</b>
<b>Compulsory study block codes, titles and credit volume</b>	<b>Optional Study block codes, titles and credit volume</b>
<b>Compulsory modular block codes, titles and credits</b>  15 Credit Blocks: ME2610 Engineering Mathematics and Programming ME2611 Design Process for Machine Elements, Manufacturing Processes, Materials and CAD ME2612 Engineering Business <b>Core: Block</b> ME2613 Fluid Mechanics ME2614 Solid Mechanics and Intro to FEA ME2615 Elements of Engineering Design Project ME2616 Thermodynamics and Heat Transfer ME2617 Dynamics of Machines	<b>Optional modular block codes, titles and credits</b>  None

#### **Year 3 (Brunel Year 2) and FHEQ Level 5 Progression and Award Requirements**

##### **As per [Senate Regulation 2](#)**

The student must have achieved an IELTS score of 5.5 (on each component) or above or a Brunel English language test score of 55 or above to progress from FHEQ Level 5 to Level 6.

<b>Year 4 (Brunel Year 3) and FHEQ Level 6</b>	
<b>Compulsory assessment block codes, titles and credits</b>	<b>Optional assessment block codes, titles and credits</b>
<b>Compulsory study block codes, titles and credit volume</b>	<b>Optional study block codes, titles and credit volume</b>
<b>Compulsory modular block codes, titles and credits</b>  All assessment blocks are 15 credits unless otherwise specified  ME3620 Major Individual Project (30) <b>Core: 1 and 3</b> ME3621 Applied Fluid Mechanics ME3618 Mechatronics and Control Engineering ME3622 Mechanical Engineering Structures ME3619 Sustainable Engineering Management and Practice <b>Core: Block</b> ME3623 Design of Engineering Systems ME3624 Intro to AI Applications in Engineering	<b>Optional modular block codes, titles and credits</b>

#### **Year 4 and FHEQ Level 6 Progression and Award Requirements**

##### **As per [Senate Regulation 2](#)**

To get the award, the student must have achieved an IELTS score of 6.0 (on each component) or above or a Brunel English language test score of 58 or above.

Please note: this specification provides a concise summary of the main features of the programme and the learning outcomes that a student might reasonably be expected to achieve and demonstrate if he/she takes full advantage of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods can be found in the modular block, assessment and study block outlines and other programme and block information. The accuracy of the information contained in this document is reviewed by the University from time to time and whenever a modification occurs.