



Programme Specification

Engineering {Top-Up}[Sep][PT][Frenchay][2yrs]

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Section 1: Key Programme Details

Part A: Programme Information

Programme title: Engineering {Top-Up}[Sep][PT][Frenchay][2yrs]

Highest award: BSc (Hons) Engineering

Interim award: BSc Engineering

Awarding institution: UWE Bristol

Affiliated institutions: Not applicable

Teaching institutions: UWE Bristol

Study abroad: No

Year abroad: No

Sandwich year: Yes

Credit recognition: No

Department responsible for the programme: FET Dept of Engineering Design & Mathematics, Faculty of Environment & Technology

Contributing departments: Not applicable

Professional, statutory or regulatory bodies: Not applicable

Apprenticeship: Not applicable

Mode of delivery: Part-time

Entry requirements: For the current entry requirements see the UWE public website

For implementation from: 01 September 2022

Programme code: H11A43-SEP-PT-FR-H110

Section 2: Programme Overview, Aims and Learning Outcomes

Part A: Programme Overview, Aims and Learning Outcomes

Overview: The programme seeks to provide a foundation for lifelong learning with a strong emphasis on the development of appropriate knowledge, skills and professional values essential to an engineer from any branch of industry.

It aims to develop technically competent, broad based individuals who think and communicate effectively and who have the basis for conducting inquiry, carrying out problem solving and undertaking critical analysis in a constantly changing industrial context. Consequently, many of the modules are project based; group or individual.

The programme will produce graduates with a wide range of expertise relevant to industry in general and, depending on the modules selected, also include skills related to mechanical design, electronics, manufacturing and business.

The programme covers a broad range of disciplines such as Mechanical Analysis, Mathematics, Electronics, Business and Manufacture. Evidence from local industries indicates a solid demand for graduates with a broad-based 'systems' approach to engineering problem solving. It is anticipated that graduates from the course will play a major role in the design, management and co-ordination of multi-disciplinary projects.

Educational Aims: The primary aim of the programme is to enable students from an engineering background with a FHEQ Level 5 qualification to achieve an Honours degree.

With great flexibility the programme draws modules from all of the BEng awards provided at UWE together with those from business. This flexibility allows students to build their study around prior knowledge, industrial requirements and personal interest.

The programme will develop a knowledge and understanding of current engineering practice and processes. Design is a significant component, especially in integrating a range of knowledge and understanding to design processes to meet defined needs

using current technology.

Qualified engineers are in great demand and an honours degree can open up a wide range of careers some of which will require a professional qualification. Study at degree level ensures graduating students are well on their way to demonstrating the necessary competencies, identified in the UK-SPEC, to achieve IEng status.

As a result of successful completion of this programme, a student will

1. be able to work as a graduate engineer across the engineering sector.
2. have acquired the knowledge and understanding of scientific principles and methods necessary to underpin an education in engineering. The programme will provide insight into, and practical skills in, the creation and maintenance of complex engineering products and will explore the environmental impact of engineering.
3. have demonstrated an ability to integrate their knowledge and understanding of core subject material in order to solve a substantial range of engineering problems, including ones of a complex nature.
4. have developed and demonstrated understanding of the competencies and social responsibilities required by a professional engineer in the workplace and society.
5. have the requisite academic knowledge, skills and preparation for progression to study for higher degrees in appropriate engineering disciplines.

Programme Learning Outcomes:

On successful completion of this programme graduates will achieve the following learning outcomes.

Programme Learning Outcomes

- PO1. Knowledge and understanding of scientific principles and mathematics together with an awareness of the statistical methods necessary to support application of key engineering principles
- PO2. Ability to apply an integrated or systems approach to engineering problems through know-how of the relevant technologies and their application
- PO3. Apply problem-solving skills, technical knowledge and understanding to create or adapt designs solutions that are fit for purpose including operation, maintenance, reliability etc.
- PO4. Knowledge and understanding of management techniques, including project management, that may be used to achieve engineering objectives
- PO5. Knowledge and understanding of management techniques, including project management, that may be used to achieve engineering objectives
- PO6. Understanding of and ability to use relevant materials, equipment, tools, processes, or products
- PO7. Awareness of team roles and the ability to work as a member of an engineering team
- PO8. Apply their skills in problem solving, communication, information retrieval, working with others and the effective use of general IT facilities

Part B: Programme Structure

Electronic Route

Year 1

Year 1 Electronic Route Recommended Modules

To ensure day release, one-day-per-week, attendance of the following groups of modules is recommended

Module Code	Module Title	Credit
UFMFV8-15-3	Group Design and Integration Project 2022-23	15
UFMFST-30-3	Power Electronics and Energy Systems 2022-23	30
UFMFNQ-15-3	Professionalism for Engineers 2022-23	15

Year 2**Year 2 Compulsory Modules**

In addition to the compulsory project module 30 credits from any level modules from the BEng Programmes plus International Business in Emerging Markets (UFSD7W-15-3) and Competing Through Quality (UMMD7N-15-3) may be selected.

Module Code	Module Title	Credit
UFMF8-30-3	Engineering Project 2023-24	30

General Route**Year 2****Year 2 Compulsory Modules**

In addition to the compulsory project module 30 credits from any level modules from the BEng Programmes plus International Business in Emerging Markets (UFSD7W-15-3) and Competing Through Quality (UMMD7N-15-3) may be selected.

Module Code	Module Title	Credit
UFMF8-30-3	Engineering Project 2023-24	30

Manufacturing Route**Year 1****Year 1 Manufacturing Route Recommended Modules**

To ensure day release, one-day-per-week, attendance of the following groups of modules is recommended .

Module Code	Module Title	Credit
UFMFYS-15-3	Advanced Manufacturing Technology 2022-23	15
UFMFV8-15-3	Group Design and Integration Project 2022-23	15
UFMF7K-15-3	Materials and Structures for Special Applications 2022-23	15

UFMFNQ-15-3	Professionalism for Engineers 2022-23	15
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Year 2

Year 2 Compulsory Modules

In addition to the compulsory project module 30 credits from any level modules from the BEng Programmes plus International Business in Emerging Markets (UFSD7W-15-3) and Competing Through Quality (UMMD7N-15-3) may be selected.

Module Code	Module Title	Credit
UFMFX8-30-3	Engineering Project 2023-24	30

Mechanical Route

Year 1

Year 1 Mechanical Route Recommended Modules

To ensure day release, one-day-per-week, attendance of the following groups of modules is recommended.

Module Code	Module Title	Credit
UFMFV8-15-3	Group Design and Integration Project 2022-23	15
UFMF7K-15-3	Materials and Structures for Special Applications 2022-23	15
UFMFP9-15-3	Mechanics of Materials 2022-23	15
UFMFNQ-15-3	Professionalism for Engineers 2022-23	15

Year 2

Year 2 Compulsory Modules

In addition to the compulsory project module 30 credits from any level modules from the BEng Programmes plus International Business in Emerging Markets (UFSD7W-15-3) and Competing Through Quality (UMMD7N-15-3) may be selected.

Module Code	Module Title	Credit
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Part C: Higher Education Achievement Record (HEAR) Synopsis

This qualification complies with the UK framework for Higher Education Qualifications (FHEQ). The programme objectives have been aligned with those set by the Engineering Council (AHEP) and on successful completion of the course graduating students are well on their way to demonstrating the necessary competencies, identified in the UK-SPEC, to achieve IEng status.

Students build on their FHEQ Level 5 knowledge learning through project work both individually and in teams. Practical skills are enhanced by the experimental work undertaken in our excellent laboratories and workshops. Industry standard software is used throughout the course.

Part D: External Reference Points and Benchmarks

This programme has been prepared with reference to a number of external benchmarks, including the QAA Subject Benchmark Statement for Engineering, the QAA Framework for HE Qualifications, the university's Learning and Teaching strategy, and a number of more specialised publications relating to motorsport education as referenced below.

This programme has been prepared with reference to a number of external benchmarks, including the QAA Subject Benchmark Statement for Engineering, the QAA Framework for HE Qualifications, the university's Learning & Teaching Strategy. In addition the Engineering Council sets the overall requirements for the Accreditation of Higher Education Programmes (AHEP) in engineering, in line with the UK Standard for Professional Engineering Competence (UK-SPEC).

UK-SPEC describes the competence and commitment requirements that have to be met for professional registration; accredited programmes provide some or all of the educational element for eventual registration as IEng.

The Programme outcomes directly link to these competencies and hence we have confidence that the programme is in accordance with the precepts of the QAA framework, AHEP3 and UK-SPEC.

Part E: Regulations

Approved to University Regulations and Procedures.