



UNIVERSITY OF  
PORTSMOUTH

## COURSE SPECIFICATION

### *BEng (Hons) Mechanical and Manufacturing Engineering (On-line distance learning top-up)*

Academic Standards, Quality and Partnerships  
Department of Student and Academic Administration

**November 2018**

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# COURSE SPECIFICATION

Please refer to the [Course Specification Guidance Notes](#) for guidance on completing this document.

<b>Course Title</b>	<b><i>Mechanical Engineering</i></b>
Final Award	<i>BEng (Hons) Mechanical and Manufacturing Engineering (On-line distance learning top-up)</i>
Exit Awards	<i>None</i>
Course Code / UCAS code (if applicable)	<i>C1892P (2 years) C2409P (3 years)</i>
Mode of study	<i>Part time</i>
Mode of delivery	<i>On-line distance learning top-up</i>
Normal length of course	<i>2 years, or 3 years</i>
Cohort(s) to which this course specification applies	<i>from September 2019 intake onwards</i>
Awarding Body	<i>University of Portsmouth</i>
Teaching Institution	<i>University of Portsmouth</i>
Faculty	<i>Faculty of Technology</i>
School/Department/Subject Group	<i>School of Mechanical and Design Engineering</i>
School/Department/Subject Group webpage	<i>None</i>
Course webpage including entry criteria	<i><a href="https://www.port.ac.uk/study/courses/beng-hons-mechanical-and-manufacturing-engineering-top-up">https://www.port.ac.uk/study/courses/beng-hons-mechanical-and-manufacturing-engineering-top-up</a></i>
Professional and/or Statutory Regulatory Body accreditations	<i>Not accredited</i>
<a href="#">Quality Assurance Agency Framework for Higher Education Qualifications (FHEQ) Level</a>	<i>level 6</i>

This course specification provides a summary of the main features of the course, identifies the aims and learning outcomes of the course, the teaching, learning and assessment methods used by teaching staff, and the reference points used to inform the curriculum.

This information is therefore useful to potential students to help them choose the right course of study, to current students on the course and to staff teaching and administering the course.

Further detailed information on the individual modules within the course may be found in the relevant module descriptors and the Course Handbook provided to students on enrolment.

Please refer to the [Module Web Search](#) for further information on the course structure and modules.

## Educational aims of the course

The course aims to equip students to work as professional incorporated mechanical engineers by building on existing Foundation Degree / HND or equivalent qualifications appropriate to mechanical engineering. This course offers 120 credits of study at level 6 by on-line learning and leads to a BEng (Hons) award. The current programme offers 2- and 3-year part-time study modes, with only a September entry point. The course should not take more than three years.

## Course Learning Outcomes and Learning, Teaching and Assessment Strategies

The [Quality Assurance Agency for Higher Education \(QAA\)](#) sets out a national framework of qualification levels, and the associated standards of achievement are found in their [Framework for Higher Education Qualifications](#) document.

The Course Learning Outcomes for this course are outlined in the tables below.

### A. Knowledge and understanding of:

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
A1	Relevant mathematics for engineering calculations	<i>Online tutorial and discussion</i>	<i>Exam</i>
A2	Application of the design process, selection of materials and manufacturing process appropriate to the application	<i>Online tutorial and discussion</i>	<i>Exam, coursework</i>
A3	The use and relevance of appropriate software	<i>Online tutorial and discussion</i>	<i>Coursework</i>
A4	The importance of ethics and impact on the environment; business, commerce and marketing and the significance of mechanical engineering in society	<i>Online tutorial and discussion</i>	<i>Exam, coursework</i>

### B. Cognitive (Intellectual or Thinking) skills, able to:

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
B1	Apply analytical and other problem-solving techniques to develop innovative solutions and use a holistic approach in solving problems, by applying judgement to criteria including risk, cost, safety and the environment	<i>Online tutorial and discussion</i>	<i>exams, coursework</i>
B2	Develop critical skills with regard to literature searching, appraising and evaluating from a variety of sources and synthesising the results	<i>Online tutorial and discussion</i>	<i>exams, coursework</i>
B3	Develop an awareness of the effects upon society of technological developments and develop a proper sense of professional conduct in relation to society's use of technology	<i>Online tutorial and discussion</i>	<i>coursework</i>
B4	Plan, execute and report on laboratory experiments and final year projects	<i>Online tutorial and discussion</i>	<i>coursework</i>

### C. Practical (Professional or Subject) skills, able to:

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
C1	Be rational and pragmatic, interested in the practical steps necessary for a concept to become reality	<i>Online tutorial and discussion</i>	<i>coursework</i>
C2	Mathematically model real engineering situations effectively and think creatively in order to develop design and sustainable analytical solutions	<i>Online tutorial and discussion</i>	<i>exams, coursework</i>
C3	Communicate technical information in a lucid manner to both management and technical staff	<i>Online tutorial and discussion</i>	<i>coursework</i>
C4	Be cost and value-conscious, and aware of the social, cultural, environmental, health and safety, and wider professional responsibilities they should display	<i>Online tutorial and discussion</i>	<i>coursework</i>

### D. Transferrable (Graduate and Employability) skills, able to:

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
D1	Communicate effectively in writing, speaking and in appropriate forms of presentation	<i>Online tutorial and discussion</i>	<i>coursework, exam</i>
D2	Read and understand documents related to engineering and software products and systems and use information technology to handle data, for simulation and to assist with design and testing	<i>Online tutorial and discussion</i>	<i>coursework, exam</i>
D3	Apply mathematical techniques in engineering design and professional practice and assess problem domains and formulate appropriate problem solving strategies	<i>Online tutorial and discussion</i>	<i>coursework, exam</i>
D4	Work in teams to achieve goals but nevertheless be distinctively individual; demonstrate productive capability in the placement setting where this is applicable	<i>Online tutorial and discussion</i>	<i>coursework, exam</i>

## Academic Regulations

The current University of Portsmouth [Academic Regulations](#) will apply to this course.

## Support for Student Learning

The University of Portsmouth provides a comprehensive range of support services for students throughout their course, details of which are available at the [MyPort](#) student portal.

In addition to these University support services this course also provides specialist laboratory facilities, support prior to, during and following the placement through Student Placement and Employability Centre (SPEC), including visit and advice from placement tutor, and learning resources that will be available to students whilst off-campus.

## Evaluation and Enhancement of Standards and Quality in Learning and Teaching

The University of Portsmouth undertakes comprehensive monitoring, review and evaluation of courses within clearly assigned staff responsibilities. Student feedback is a key feature in these evaluations, as represented in our [Policy for Listening to and Responding to the Student Voice](#) where you can also find further information.

### Reference Points

The major reference points were University of Portsmouth undergraduate curriculum, the designed with the QAA's engineering benchmark in mind.

The content of the course is broadly similar to IET accredited courses offered by the Department, although since the programme is equivalent to a one-year full-time programme, it may not be accredited by the IET. The proposed programme is compatible with similar courses offered in the department and other institutions within the UK. Students joining the course will already have studied material to level 2 threshold standards in their preceding FD, HND or equivalent qualifications.

University policy on key skills, subject benchmark statements, 'Framework for Higher Education Qualifications' (FHEQ), and QAA codes of practice. In particular the programme has been

The achievement of these prior learning outcomes will be verified through the standard arrangements for Advanced Standing as specified within the University of Portsmouth policy.

The core elements of the engineering benchmark, interpreted in the context of this course, are:

- Mathematics (M): Students will achieve an appropriate level of competence in relevant mathematical methods and will use these skills in analysing problems.
- Science (S): Students will be introduced to the relevant areas of engineering science so that they can develop engineering solutions to practical problems in mechanical engineering. They will use scientific principles in the modelling and analysis of engineering systems, processes and products. They will gain awareness of the environmental aspects, both legal and practical
- Design (D): Students will gain knowledge and understanding of the design process, in particular utilising a software package "Pro Engineer" and Creo.
- Business context (B): Business and management practices with a particular focus on project management, operations management and quality management
- Engineering practice (EP): solution of engineering problems to meet specified technical requirements as well as time and resource constraints. Project management methods, including planning, monitoring, control and reporting.

The course and outcomes have been developed taking account of:

*Insert additional reference points or delete as required*

- [University of Portsmouth Curriculum Framework Specification](#)
- [University of Portsmouth Strategy](#)
- [University of Portsmouth Code of Practice for Work-based and Placement Learning](#)
- [Quality Assurance Agency UK Quality Code for Higher Education](#)
- [Quality Assurance Agency Qualification Characteristic Statements](#)
- [Quality Assurance Agency Subject Benchmark Statement for Engineering](#)
- [Quality Assurance Agency Framework for Higher Education Qualifications](#)
- Requirements of Professional and/or Statutory Regulatory Bodies: **Institution of Engineering and Technology, Institution of Mechanical Engineering**

- Vocational and professional experience, scholarship and research expertise of the University of Portsmouth's academic members of staff
- National Occupational Standards

## Disclaimer

The University of Portsmouth has checked the information provided in this Course Specification and will endeavour to deliver this course in keeping with this Course Specification. However, changes to the course may sometimes be required arising from annual monitoring, student feedback, and the review and update of modules and courses.

Where this activity leads to significant changes to modules and courses there will be prior consultation with students and others, wherever possible, and the University of Portsmouth will take all reasonable steps to minimise disruption to students.

It is also possible that the University of Portsmouth may not be able to offer a module or course for reasons outside of its control, for example, due to the absence of a member of staff or low student registration numbers. Where this is the case, the University of Portsmouth will endeavour to inform applicants and students as soon as possible, and where appropriate, will facilitate the transfer of affected students to another suitable course.

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