



UNIVERSITY OF  
PORTSMOUTH

# COURSE SPECIFICATION

## *MSc Mechanical Engineering*

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

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## COURSE SPECIFICATION

<b>Course Title</b>	<b><i>MSc Mechanical Engineering</i></b>
Final Award	<i>MSc</i>
Exit Awards	<i>PGDip, PGCert</i>
Course Code / UCAS code (if applicable)	<i>P1706FTC/ P1706PTC</i>
Mode of study	<i>Full time / Part time</i>
Mode of delivery	<i>Campus</i>
Normal length of course	<i>1 year / 3 years</i>
Cohort(s) to which this course specification applies	<i>From September 2020 intake onwards</i>
Awarding Body	<i>Usually 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	<a href="https://www.port.ac.uk/about-us/structure-and-governance/organisational-structure/our-academic-structure/faculty-of-technology/school-of-mechanical-and-design-engineering">https://www.port.ac.uk/about-us/structure-and-governance/organisational-structure/our-academic-structure/faculty-of-technology/school-of-mechanical-and-design-engineering</a>
Course webpage including entry criteria	<a href="https://www.port.ac.uk/study/courses/msc-mechanical-engineering">https://www.port.ac.uk/study/courses/msc-mechanical-engineering</a>
Professional and/or Statutory Regulatory Body accreditations	<i>Institution of Mechanical Engineers (IMechE),</i>
<a href="#">Quality Assurance Agency Framework for Higher Education Qualifications (FHEQ) Level</a>	<i>Level 7</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 [Course and Module Catalogue](#) for further information on the course structure and modules.

## Educational aims of the course

The course aims to equip students to work as mechanical engineers, for roles in management, research, design and development in a broad spectrum of mechanical engineering activity. In addition, and more generally, the course aims to:

- Provide a challenging, stimulating and self-rewarding study environment
- Develop a range of key skills by means of opportunities provided in the study units
- To appreciate and understand the ethical, economic, legal, social and environmental context in which a Chartered Mechanical Engineer will work to achieve sustainable engineering solutions for future prosperity and quality of life
- Accommodate student needs in relation to maximising their career potential by enabling them to develop knowledge, understanding and skills in their chosen subject area

## 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	<i>Relevant mathematical, analytical, modelling, computational and simulation techniques for resolving mechanical engineering problems</i>	<i>Lectures, tutorials, laboratory activities, simulation</i>	<i>Coursework, exam presentation, report</i>
A2	<i>Mechanical engineering related project formulation, plan, management, implementation, presentation and dissemination</i>	<i>Lectures, tutorials, laboratory activities, simulation, group work</i>	<i>Presentation, report</i>

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
B1	<i>Critically apply knowledge and understanding of mechanical engineering to design and generate practical components, structures, systems and services</i>	<i>Lectures, tutorials, simulation</i>	<i>Coursework, exam, report</i>
B2	<i>Select and evaluate appropriate methods and techniques for modelling, simulation, analysis and testing in order to formulate a design imperative</i>	<i>Lectures, tutorials, laboratory activities, simulation</i>	<i>Coursework, exam presentation, report</i>
B3	<i>Critically manage and disseminate information relevant to the design, analysis, modelling, simulation, prototyping, experimentation, optimisation and materials</i>	<i>Lectures, tutorials, laboratory activities,</i>	<i>Coursework, exam presentation, report</i>

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
		<i>simulation, group work</i>	

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
C1	<i>Generate, collect, analyse and evaluate relevant data using appropriate tools and techniques</i>	<i>Lectures, tutorials, laboratory activities, simulation, group work</i>	<i>Coursework, presentation, report</i>
C2	<i>Conceptualise and develop models for the analysis of mechanical engineering problems</i>	<i>Lectures, tutorials, simulation</i>	<i>Coursework, exam presentation, report</i>
C3	<i>Reflects on and understand the mechanical engineering related design, materials and management in economic, social, ethical and environmental context</i>	<i>Lectures, laboratory activities, group work</i>	<i>Coursework, presentation, report</i>

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
D1	<i>Conduct appropriate research, read and understand complex engineering documentation and undertake design and development of innovative engineering solutions</i>	<i>Lectures, group work</i>	<i>Coursework, , report</i>
D2	<i>Communicate effectively in writing and other viable and appropriate forms of presentation</i>	<i>Lectures, laboratory activities, group work</i>	<i>Coursework, , report</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.

## 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 course and outcomes have been developed taking account of:

- [University of Portsmouth Curriculum Framework Specification](#)
- [University of Portsmouth Vision 2030 and Strategy 2025](#)
- [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 Mechanical Engineers (IMechE)
- 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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