COURSE SPECIFICATION

MSc Mechanical Engineering

COURSE SPECIFICATION

Course Title	MSc Mechanical Engineering
Final Award	MSc
Exit Awards	PGDip, PGCert
Course Code / UCAS code (if applicable)	P1706FTC/ P1706PTC
Mode of study	Full time / Part time
Mode of delivery	Campus
Normal length of course	1 year / 3 years
Cohort(s) to which this course specification applies	From September 2026 intake onwards
Awarding Body	Usually University of Portsmouth
Teaching Institution	University of Portsmouth
Faculty	Faculty of Technology
School/Department/Subject Group	School of Electrical and Mechanical Engineering
School/Department/Subject Group webpage	https://www.port.ac.uk/about-us/structure-and-governance/organisational-structure/our-academic-structure/faculty-of-technology/school-of-electrical-and-mechanical-engineering
Course webpage including entry criteria	https://www.port.ac.uk/study/courses/postgraduate-taught/msc-mechanical-engineering
Professional and/or Statutory Regulatory Body accreditations	Institution of Mechanical Engineers (IMechE), Institute of Engineering and Technology (IET)
Office for Students Conditions of Registration	https://www.officeforstudents.org.uk/for-providers/registering-with-the-ofs/registration-with-the-ofs-a-guide/conditions-of-registration/
Quality Assurance Agency Framework for Higher Education Qualifications (FHEQ) Level	Level 7

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.

Office for Students - Conditions of Registration

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 mathematical, analytical, modelling, computational and simulation techniques for resolving mechanical engineering problems.	Lectures, Tutorials, Laboratory activities, Simulation.	Coursework, Exam, Presentation, Report.
A2	Mechanical engineering related project formulation, plan, management, implementation, presentation and dissemination.	Lectures, tutorials, laboratory activities, simulation, group work	Presentation, Report.

B. Cognitive (Intellectual or Thinking) skills, able to:			
LO number	**Learning outcome**	**Learning and Teaching methods**	**Assessment methods**
B1	Critically apply knowledge and understanding of mechanical engineering to design and generate practical components, structures, systems and services.	Lectures, Tutorials, Simulation.	Coursework, Exam, Report.
B2	Select and evaluate appropriate methods and techniques for modelling, simulation, analysis and testing in order to formulate a design imperative.	Lectures, Tutorials, Laboratory activities, Simulation.	Coursework, Exam, Presentation, Report.
B3	Critically manage and disseminate information relevant to the design, analysis, modelling, simulation, prototyping, experimentation, optimisation and materials.	Lectures, Tutorials, Laboratory activities, Simulation, Group work.	Coursework, Exam, Presentation, Report.

C. Practical (Professional or Subject) skills, able to:			
LO number	**Learning outcome**	**Learning and Teaching methods**	**Assessment methods**
C1	Generate, collect, analyse and evaluate relevant data using appropriate tools and techniques.	Lectures, Tutorials, Laboratory activities, Simulation, Group work.	Coursework, Presentation, Report.
C2	Conceptualise and develop models for the analysis of mechanical engineering problems.	Lectures, tutorials, simulation	Coursework, Exam, Presentation, Report.
C3	Reflect on and understand the mechanical engineering related design, materials and management in economic, social, ethical and environmental context.	Lectures, laboratory activities, group work	Coursework, Presentation, Report.

D. Transferrable (Graduate and Employability) skills, able to:			
LO number	**Learning outcome**	**Learning and Teaching methods**	**Assessment methods**
D1	Conduct appropriate research, read and understand complex engineering documentation and undertake design and development of innovative engineering solutions	Lectures, Group work.	Coursework, Report.
D2	Communicate effectively in writing and other viable and appropriate forms of presentation	Lectures, Laboratory activities, Group work.	Coursework, Report.

Academic Regulations

The current University of Portsmouth Academic Regulations: Examination & Assessment Regulations will apply to this course. Approved course exemptions can be found here.

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 Connected Curriculum
- University of Portsmouth Vision
- Office for Students Conditions of Registration
- 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
- Quality Assurance Agency Framework for Higher Education Qualifications
- Requirements of Professional and/or Statutory Regulatory Bodies: **Institution of Mechanical Engineers (IMechE), Institution of Engineering and Technology (IET)**
- AHEP4 Learning Outcomes as documented in the Output Standards Matrix, to be considered in conjunction with the information in the Module Specification documents
- Vocational and professional experience, scholarship and research expertise of the University of Portsmouth's academic members of staff
- National Occupational Standards

Changes to your course/modules

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.

Copyright

The contents of this Course Specification are the copyright of the University of Portsmouth and all rights are reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, such as electronic, mechanical, photocopied, recorded or otherwise, without the prior consent of the University of Portsmouth.

Document Details	
CSD Template date	*July 2025*
Author	Dr Zhongyi Zhang
Date of production and version number	5th July 2018 v1
Date of update and version number	06/03/2026 v9.1
Minimum student registration numbers	15