COURSE SPECIFICATION

MSc Electronic and Electrical Engineering

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

March 2018

COURSE SPECIFICATION

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

Course Title	MSc Electronic and Electrical Engineering
Final Award	MSc
Exit Awards	PGCert and PGDip
Course Code / UCAS code (if applicable)	C0129 F/P
Mode of study	full time & part time
Mode of delivery	Campus
Normal length of course	1 year full time (Sept intake), 3 years part-time (Sept intake) and 16 months full time (Jan intake)
Cohort(s) to which this course specification applies	From September 2019 intake onwards
Awarding Body	University of Portsmouth
Teaching Institution	University of Portsmouth
Faculty	Faculty of Technology
School/Department/Subject Group	School of Energy and Electronic Engineering
School/Department/Subject Group webpage	www2.port.ac.uk/school-of-engineering/
Course webpage including entry criteria	www.port.ac.uk/study/courses/msc-electronic-engineering
Professional and/or Statutory Regulatory Body accreditations	Institution of Engineering and Technology
[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 [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 engineers, at an advanced level, in the fields of electronic engineering, systems design, signal processing, microwave and high speed circuit design, electrical machines, electrical power systems and sensors technology. In addition, and more generally:

- Provide a challenging and stimulating study environment
- Develop a range of key skills by means of opportunities provided in the study modules
- Accommodate student needs in relation to maximising their career potential by enabling them to develop knowledge, understanding and skills in their chosen subject area

Being an MSc course, students are encouraged and expected to be able to reach a level of competence and professionalism where they can effectively integrate their technical and non-technical knowledge to solve a range of problems of complex nature.

The course also enables students to develop both analytical and design skills across the range of subjects. This is achieved through theoretical studies alongside practical design projects and laboratory experiments.

This course can either be studied full-time (September or January intakes) or part-time. The course consists of 20 credit point modules, where 20 credits represent 200 hours of study time and usually includes up to 48 hours of time-tabled activities. The course offers a total 180 credits for the MSc award and concludes with a 60 credit individual project. A Postgraduate Diploma exit award requires 120 credits. A Postgraduate Certificate exit award requires 60 credits from the taught modules. The individual project may be undertaken either at the University or possibly in a company based in the UK.

Full time students study 3 modules in each teaching block and then carry out the MSc project. Part time students study 3 units in each of the first two years of the course. The MSc project takes place in third year.

The course is accredited by the Institution of Engineering and Technology (IET). This MSc also qualifies, under the UK Engineering Council's Standard for Professional Engineering Competence (UK-SPEC), as the further learning required to register for Incorporated (IEng) or Chartered Engineer (CEng) status.

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	Digital signal processing, electrical machines and drives, microwave and high speed digital design, electrical power systems technology, sensors and measurement systems and materials for electronic products	Lectures, seminars, laboratory work, group work and simulations	Exams, courseworks and tests
A2	Appropriate mathematical methods	Lectures,	Exams,

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
		seminars, laboratory work and group work	courseworks and tests
A3	Practical design of electronic systems	Lectures, seminars, laboratory work and group work	Exams, courseworks and tests
A4	Professional and ethical responsibility	Practical work	Project Report

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
B1	Select and apply appropriate mathematical methods to model, analyse, plan or program electronic systems	Lectures, seminars, laboratory work and group work	Exams, courseworks and tests
B2	Plan, manage, undertake, evaluate, interpret and report on a significant project	Laboratory work and group work	courseworks
B3	Apply critically, knowledge and understanding of electronic engineering and system design creatively to generate practical products, systems and services	Lectures, seminars, laboratory work and group work	Exams, courseworks and tests
B4	Design, build and test systems and subsystems to meet specified sometimes conflicting requirements	Lectures, seminars, laboratory work and group work	Exams, courseworks and tests

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
C1	Use standard and specialist laboratory instruments, conduct experiments and report on them	Laboratory work, group work and simulations	Courseworks
C2	Apply relevant mathematical methods in developing solutions to problems	Lectures, seminars, laboratory work and group work	Exams, Courseworks and tests
C3	Design, construct, test and evaluate systems applicable to electronics	Lectures, seminars, laboratory work and group work	Exams, Courseworks and tests

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
D1	Work effectively as an individual and as part of a team to achieve goals	Laboratory work and group work	Courseworks
D2	Communicate effectively in writing and through graphical representations in professional and academic settings	Lectures and seminars	Courseworks and project report
D3	Analyse scientific and technical information in the solution of problems	Lectures, seminars, laboratory work and group work	Courseworks
D4	Use information technology to handle text and data and for simulation and design	Laboratory work and group work	Courseworks

Academic Regulations

The current University of Portsmouth Academic Regulations will apply to this course. However, this course is accredited by the IET and some deviations from the regulations will apply.

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:

• Extensive induction programme introduces students to the University and their course.

• Each student has a personal tutor, responsible for pastoral support and guidance.

• Subject lecturers offer drop-in tutorial sessions every week for students to seek further support and guidance with their work.

• The School offers excellent experimental up-to-date facilities that are also available to students for extracurricular activities. These include:

 o The Digital Electronics and Microprocessor Laboratory

 o The Analogue Electronics Laboratory

 o The Control Engineering Laboratory

 o The Telecommunications and Digital Signal Processing Laboratory

 o The Computer Suites (Linux and Windows)

• The School offers student led surgeries in the areas of electronics and computing.

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.

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Reference Points

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 Education Strategy 2016 - 2020](#)
- [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: The **Institution of Engineering and Technology**
- 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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Document details

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