



UNIVERSITY OF  
PORTSMOUTH

# COURSE SPECIFICATION

## *MMath Mathematics*

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

**March 2018**

### **Copyright**

The contents of this document 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.

# COURSE SPECIFICATION

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

<b>Course Title</b>	<b><i>MMath Mathematics</i></b>
Final Award	<i>MMath</i>
Exit Awards	<i>CertHE, DipHE, BSc</i>
Course Code / UCAS code (if applicable)	<i>U2684S, UCAS: G100</i>
Mode of study	Full Time
Mode of delivery	<i>Campus</i>
Normal length of course	<i>4 years, 5 years with placement</i>
Cohort(s) to which this course specification applies	<i>from September 2020 intake onwards</i>
Awarding Body	<i>University of Portsmouth</i>
Teaching Institution	<i>University of Portsmouth</i>
Faculty	<i>Technology</i>
School/Department/Subject Group	<i>Mathematics and Physics</i>
School/Department/Subject Group webpage	<i><a href="http://www.port.ac.uk/department-of-mathematics/">http://www.port.ac.uk/department-of-mathematics/</a></i>
Course webpage including entry criteria	<i><a href="http://www.port.ac.uk/courses/mathematics-and-physics/mmath-mathematics/">http://www.port.ac.uk/courses/mathematics-and-physics/mmath-mathematics/</a></i>
Professional and/or Statutory Regulatory Body accreditations	<i>Institute of Mathematics and its Applications (IMA)</i>
<a href="#">Quality Assurance Agency Framework for Higher Education Qualifications (FHEQ) Level</a>	<i>Level 4, 5, 6, 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 [Module Web Search](#) for further information on the course structure and modules.

Note: Due to the Covid-19 lockdown, some of the events referred to in this document such as “lectures” and “tutorials” may take place online.

## Educational aims of the course

The [Course Specification Guidance Notes](#) include advice on what to include in this section.

The course aims to equip students for work as professional mathematicians. In addition, and more generally, the course aims to:

- Maintain the quality of mathematics teaching expected from a TEF gold-rated university (awarded June 2017)
- Provide a challenging, stimulating and self-rewarding study environment.
- Provide a framework whereby individual study paths may be forged based on choice from a range of options.
- Enable students to broaden their studies by selecting a language as a substitute for a degree option choice at level 5.
- Develop a range of key skills by means of opportunities provided in the study units.
- Accommodate student needs in relation to maximising their career potential by enabling them to develop knowledge, understanding and skills in their chosen subject area.
- Promote career enhancing activities and aspirations by developing “soft skills” also known as “graduate skills”.
- Achieve a high level of employability

This course will interest students seeking mathematically based careers in a variety of sectors, and there are opportunities for students to develop interests in additional scientific and business subjects. It is expected that students graduating from this course will be well placed to enter careers in industry, commerce, applied research and education

## 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	General principles and techniques in Mathematics, Statistics, Operational Research, including differential equations, linear algebra, continuum mechanics, modelling, numerical methods, and pure mathematics (MSOR 3.6, 3.7, 3.8, 3.13, 3.15, 3.17, 3.18).	<i>Lectures tutorials computer labs</i>	<i>Essays, case studies examination computer modelling</i>
A2	Computing principles, software processes and computer packages (MSOR 3.16).	<i>Computer labs</i>	<i>Computer modelling, exam</i>
A3	Codes of Practice and the ethical conventions that underpin practice (MSOR 3.24)	<i>Lectures</i>	<i>Essays</i>

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
B1	Develop general and critical abilities of an intellectual, analytical, creative and problem-solving nature <i>in mathematical context</i> .	Lectures, tutorials, computer labs	Computer modelling, exam dissertation
B2	Develop critical skills with regard to literature searching, appraising and evaluating from a variety of sources and synthesising the results.	Lectures, personal supervision	Essays, dissertation
B3	Plan and execute a significant project and report on it.	Lectures, personal supervision	Dissertation, individual presentation

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
C1	Reflectively formulate mathematical models for the resolution of problem or requirement specifications, and give model-based critical advice.	Lectures, tutorials, computer labs	Computer modelling, exam
C2	Use computer packages, and exercise judgement in the selection of industry standard software, to solve problems in Statistics, Finance, Operational Research or Mathematics.	Lectures, Computer labs	Computer modelling Examination Dissertation
C3	Create statistical models and selectively process data against selected inferential tests.	Lectures	Reports/essays

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
D1	Use information technology to handle data for simulation and analysis.	Lectures, group work	Group presentation, individual presentation
D2	Use information technology to handle data for simulation and analysis <i>emphasising application of number in the understanding and interpretation of data before and after processing</i> .	Lectures, Computer labs	Computer modelling, dissertation
D3	Use problem-solving techniques to formulate appropriate problem solving strategies.	Lectures, tutorials, group sessions	Exam, dissertation, Group reports
D4	Work with others to achieve goals but nevertheless be distinctively individual.	Lectures, group work	Group reports, presentation

## 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:

*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 **enter the relevant statement for this course**
- [Quality Assurance Agency Framework for Higher Education Qualifications](#)
- Requirements of Professional and/or Statutory Regulatory Bodies: **add name(s) of PSRB(s)**
- 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.

## 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

Author	<i>Dr Thomas Waters</i>
Date of production and version number	<i>15<sup>th</sup> May 2020 [Version number 1]</i>
Date of update and version number	<i>8<sup>th</sup> June 2020 [Version number 1.1]</i>
Minimum student registration numbers	5