COURSE SPECIFICATION

BSc (Hons) Mathematics with Statistics

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Course Title	BSc (Hons) Mathematics with Statistics
Final Award	BSc (Hons)
Exit Awards	CertHE, DipHE, BSc
Course Code / UCAS code (if applicable)	U1504PYC/ GG13
Mode of study	Full time
Mode of delivery	Campus
Normal length of course	3 years, 4 years with placement
Cohort(s) to which this course specification applies	September 2023 onwards
Awarding Body	University of Portsmouth
Teaching Institution	University of Portsmouth
Faculty	Technology
School/Department/Subject Group	Mathematics and Physics
School/Department/Subject Group webpage	School of Mathematics and Physics
Course webpage including entry criteria	http://www.port.ac.uk/courses/mathematics-and-physics/bsc-hons-mathematics-with-statistics/
Professional and/or Statutory Regulatory Body accreditations	Institute of Mathematics and its Applications (IMA)
Quality Assurance Agency Framework for Higher Education Qualifications (FHEQ) Level	Level 4, 5, 6

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 professional mathematicians or statisticians, particularly in environments where competence in applicable mathematics and the use complex software is required. In addition, and more generally, the course aims to:

- Maintain the quality of 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”.
- Maintain a high level of employability (100% in work/study 15/16 DLHE statistics)

This course will interest any students currently studying mathematics who are seeking a career in a variety of sectors in industry, commerce and elsewhere in which statistics plays a significant role. Typical subject mixes might thus involve mathematics and statistics with an additional scientific or business subject.

It is expected that when students graduate from this course they will find employment in industries (e,g, pharmaceutical) or areas of the public sector (e.g. ONS) with a need for advanced statistical analysis, although graduates will be well placed to enter a variety of other careers in finance, 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, and Operational Research including numerical approximations, probability principles, and applications of statistics (MSOR 2.23, 2.25, 3.8, 3.16).	Lectures, Tutorials, Computer labs.	Coursework, In-class test/CBT written exam.
A2	Probability principles and distributions for inferential and descriptive statistics (MSOR 2.23)	Lectures, Computer labs.	Coursework, Written exam.
A3	Probability and non-probability sampling and testing of significance including multi-dimensional scaling (MSOR 2.23, 2.24).	Lectures, Computer labs.	Coursework, Written exam.
A4	Codes of Practice and the ethical conventions that underpin practice (MSOR 3.27)	Tutorials.	Presentation.

MSOR = Mathematics, Statistics and Operations QAA Subject Benchmark Statement
http://www.qaa.ac.uk/en/Publications/Documents/SBS-Mathematics-15.pdf

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 in statistics context.	Lectures, Tutorials, Computer labs, Projects.	Coursework, Written exam, Dissertation, Presentation.
B2	Develop critical skills with regard to literature searching, appraising and evaluating from a variety of sources and synthesising the results.	Supervised project, Seminars.	Dissertation, Courseworks.
B3	Plan and execute a significant piece of independent study at final year level and report on it.	Supervised project, Seminars.	Dissertation, Courseworks.

In alignment with MSOR Benchmark 3.25

C. Practical (Professional or Subject) skills, able to:			
LO number	**Learning outcome**	**Learning and Teaching methods**	**Assessment methods**
C1	Reflectively formulate statistical models of reality.	Lectures, Tutorials.	Coursework, Written exam.
C2	Use computer packages and industry standard software to solve problems in MSOR.	Lectures, Computer labs.	Coursework.
C3	Critically define sampling frames and generate a statistically valid sample to answer a research question.	Lectures, Computer labs.	Coursework, Dissertation.
C4	Reflectively decide on a test of significance based on a data specification and a well-defined research question.	Lectures, Computer labs.	Coursework, Dissertation.
C5	Critically process and decide how best to display and present data.	Lectures, Computer labs.	Poster, Dissertation.

In alignment with MSOR 3.18, 3.19 and 3.23.

D. Transferrable (Graduate and Employability) skills, able to:			
LO number	**Learning outcome**	**Learning and Teaching methods**	**Assessment methods**
D1	Communicate effectively in appropriate forms of presentation.	Tutorials, Group problem solving.	Individual/group presentations.
D2	Use information technology to handle data for simulation and in the analysis and design of statistical models, emphasising application of number in the understanding and interpretation of data before and after processing.	Lectures, Computer labs.	Coursework, Dissertation.
D3	Use problem-solving techniques to formulate appropriate problem-solving strategies.	Lectures, Tutorials, Group sessions.	Written exam, Presentations.
D4	Work with others to achieve goals but nevertheless be distinctively individual.	Group problem solving.	Group reports, Presentation, Coursework.
D5	Demonstrate productive capability in the placement setting (placement students only)	placement supervision	written report

In alignment with MSOR Benchmark 3.25 – 3.27

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. Maths Café 1-1

drop-in support is run by the School of Mathematics and Physics; further support is available from the maths learning support tutor.

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 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 for ***Mathematics, Statistics and Operational Research (MSOR)***
- Quality Assurance Agency Framework for Higher Education Qualifications
- Accreditation requirements of Institute of Mathematics and its Applications (IMA)
- 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.

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