COURSE SPECIFICATION

MSc Data Analytics

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

March 2018

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COURSE SPECIFICATION

Please refer to the Course Specification Guidance Notes for guidance on completing this document.

Course Title	*MSc Data Analytics*
Final Award	MSc
Exit Awards	CertHE
Course Code / UCAS code (if applicable)	C2685F / C2685P
Mode of study	Full time / Part time
Mode of delivery	Campus
Normal length of course	1 year
Cohort(s) to which this course specification applies	September 2019 intake onwards
Awarding Body	University of Portsmouth
Teaching Institution	University of Portsmouth
Faculty	Faculty of Technology
School/Department/Subject Group	Computing
School/Department/Subject Group webpage	www.port.ac.uk/computing
Course webpage including entry criteria	https://www.port.ac.uk/study/courses/msc-data-analytics
Professional and/or Statutory Regulatory Body accreditations	none
Quality Assurance Agency Framework for Higher Education Qualifications (FHEQ) 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

This specialist MSc course in Data Analytics has been designed to meet the need of students with a numerate background, and basic or advanced computing skills (e.g. a degree in Mathematics, Business Information Systems, Psychology, Computer Science) as well as students professional background. This programme enables you to master the latest technology and techniques associated with extracting valuable information from large data sets that may have a variety of mixed attributes.

You will reinforce your background with specialist knowledge on these new techniques and technologies and you will apply this to data sets from our internationally recognised research in cosmology, health informatics and cybersecurity. On this course you can:

- Apply your skills to real-life practical problems with real-world data sets.
- Enhance your existing knowledge by developing solutions that use our supercomputers and networked computer clusters.
- Manage and understand the business value that can be extracted from data sets.

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	tools for data analytics and ability to develop innovative and ethical methods of addressing data challenges, together with the social, ethical and legal constraints within which organisations have to follow in general, and when dealing with data in particular.	*Lectures, practical work, workshops, guest lectures, demos and supervision meetings.*	*Coursework, dissertation, portfolio, exams and presentations.*
A2	In depth of the data mining methods for structured, unstructured and text datasets.	*Lectures, practical work, workshops and demos.*	*Coursework, portfolio and presentations.*
A3	business and financial environments, including role of data analytics in their operations and decision making.	*Lectures, practical work, workshops and guest lectures.*	*Coursework and exams.*
A4	data analytics methodologies and the processing of large and complex datasets and their business applications.	*Lectures, practical work, workshops, guest lectures and demos.*	*Coursework, portfolio and presentations.*
A5	modern data database and management techniques.	*Lectures, practical work and workshops.*	*Coursework.*

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
B1	with critical awareness, select and apply appropriate knowledge of the data analytics and data mining to design and implement data and software solutions.	*Lectures, practical work, workshops, guest lectures, demos and supervision meetings.*	*Coursework, dissertation, portfolio, exams and presentations.*
B2	develop general abilities of an intellectual, analytical problem-solving nature related to data analytics.	*Lectures, practical work and workshops.*	*Coursework, portfolio & exams.*
B3	apply conceptual understanding that will allow him/her to critically evaluate research, advanced scholarship and methodologies and argue alternative data and business analytics approaches and frameworks.	*Lectures, practical work, workshops and guest lectures.*	*Coursework, portfolio, exams & presentations.*
B4	with critical understanding, evaluate and select Big Data frameworks.	*Lectures, practical work and workshops.*	*Coursework, portfolio & presentations.*

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
C1	independently select or create appropriate, effective and productive methods and tools for the successful construction and timely delivery of reliable, secure and usable data applications and business information systems.	*Lectures, practical work, workshops, guest lectures, demos and supervision meetings.*	*Coursework, dissertation, portfolio, exams and presentations.*
C2	Competently and critically assess, analyse and use current and future technologies in the main data analytics and mining aspects.	*Lectures, practical work, workshops, guest lectures, demos and supervision meetings.*	*Coursework, dissertation, portfolio, exams and presentations.*
C3	deal with complex and large data sets for building business and enterprise solutions.	*Lectures, practical work and workshops.*	*Coursework, portfolio & presentations.*
C4	apply professional codes of conduct and appreciate the ethical considerations that underpin them.	*Lectures, workshops and supervision meetings.*	*Coursework, dissertation & portfolio.*

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

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
D1	communicate effectively in writing, speaking and in other appropriate forms of presentation.	*Lectures, workshops and supervision meetings.*	*Coursework, dissertation, portfolio and presentations.*
D2	read and understand documents related to software specification and business data.	*Lectures, practical work and workshops.*	*Coursework, dissertation and exam.*
D3	use information technology to handle data,	*Lectures, practical*	*Coursework,*

LO number	Learning outcome	Learning and Teaching methods	Assessment methods
	simulation and assist with decision making.	*work, workshops, guest lectures and demos.*	*dissertation and portfolio.*
D4	apply reflective techniques in appraising one's own performance.	*Lectures, practical work, workshops, personal tutoring and supervision meetings.*	*Coursework, dissertation and portfolio.*
D5	assess problem domains and devise appropriate problem-solving strategies.	*Lectures, practical work, workshops, guest lectures, demos and supervision meetings.*	*Coursework, dissertation, portfolio and presentations.*

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.

In addition to these University support services this course also provides:

Data Analytics related support services:

- Have access and training in our new SAP Next-Gen Lab
- Work on our supercomputer, SCIAMA, which has 3,702 computer cores and networked clusters that offer more processing power than most commercial platforms
- Several general-purpose computer laboratories and special-purpose laboratories including a Networking Lab, Mobile Application Development Lab, Big Data Lab and Human Computer Interaction Lab.
- Apply your analytical abilities to practical problems and real-world datasets, such as our research in cosmology, health information and cyber security
- A library of devices loanable to students for project work (including smart watches, tablets, sensors, smart-home devices, eye trackers) and lockers of laptops for student loan.

General support services:

- Flexible teaching and study facilities including multiple areas ideal for individual and group study.
- An induction programme that introduces the student to the University and their course.
- A Course Leader who manages the course and provides students with course-specific advice and guidance.
- A Personal Tutor, responsible for student pastoral support and guidance.
- Course specification for MSc Data Analytics.
- A Faculty Learning Support Tutor (Computing) who provides additional subject-specific one-to one support.
- A Faculty Student Placement and Employability Centre (SPEC) to support students finding
- placements, a Placement Co-ordinator to manage placements for Computing students, and a
- Placement Tutor who visits students whilst on placement and provides additional support.

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
- 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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Minimum student registration numbers	*15FT; 10 for PT version of the course*