Programme Specification

MSc Data Science and Advanced Computing (full-time)	PFTZDATSACHM
MSc Data Science and Advanced Computing (part-time)	PPTZDATSACHM

For students entering in 2021/22

This document sets out key information about your Programme and forms part of your Terms and Conditions with the University of Reading.

Awarding Institution	University of Reading
Teaching Institution	University of Reading
Length of Programme	MSc Data Science and Advanced Computing (full-time) - 12 months MSc Data Science and Advanced Computing (part-time) - 24 months
Accreditation	British Computer Society (BCS)
Programme Start Dates	September

Programme information and content
The programme is intended for computer science graduates and computer professionals who wish to broaden and deepen their understanding of computer science and in particular, of Data Science and Big Data Analytics. A prior programming experience is required. This programme offers a challenging, flexible scheme of study invigorated by the research interests and expertise of our academics and the unique location of Reading at the heart of the ‘Silicon Valley of Europe'. The programme provides a unique opportunity to develop leading-edge in-depth knowledge of specific computer science disciplines for the analysis of data and covers topics such as modern programming paradigms (e.g., Cloud computing), data-driven knowledge discovery (Big Data, Data Mining and Predictive Analytics) and interdisciplinary applicative domains (Computer Vision, Virtual Reality , etc.). The programme aims to provide students with: An in-depth understanding of modern computing and programming paradigms, such as Distributed Computing (Cloud Computing, MapReduce/Apache Hadoop) and High Performance Computing; An in-depth understanding machine learning and data mining algorithms and practical experience with data analytics tools; A broad training in, and hands-on experience of, knowledge discovery process, machine learning, advanced predictive analytics, Big Data, applications in computer vision and in interdisciplinary domains such as digital marketing; An opportunity to carry out an interdisciplinary research project. The proposed model will be cosupervision of two researchers, one from the Department of Computer Science for the computing aspects and one from another School/Department of the University for a specific application domain; An easier choice for the next step in their career. Students can either continue onto a PhD programme, if they wish to, or join the IT industry immediately after graduation.

Module information
The programme comprises of 180 compulsory credits. These modules are listed.

Compulsory modules

Module	Name	Credits	Level
CSMAD21	Applied Data Science with Python	20	M
CSMAI21	Artificial Intelligence and Machine Learning	20	M
CSMBD21	Big Data and Cloud Computing	20	M
CSMDE21	Data Security and Ethics	10	M
CSMDM21	Data Analytics and Mining	20	M
CSMMA21	Mathematics and Statistics for Data Science	20	M
CSMPR21	MSc Project	60	M
CSMRS16	Research Studies	10	M

Part-time or flexible modular arrangements

Part-time students will be able to take the taught elements of the MSc in the Autumn and Spring terms over two consecutive academic years. The MSc project for part-time students will start in April of the first year of registration and will end in September of the second year of registration

Additional costs of the programme

For textbooks and similar learning resources, we recommend that you budget up to £100, depending on your preference to have your own books rather than borrow from the library. Some books may be available second-hand, which will reduce costs. A range of resources to support your curriculum, including textbooks and electronic resources, are available through the library. Reading lists and module specific costs are listed on the individual module descriptions.

Costs are indicative and may vary according to optional modules chosen and are subject to inflation and other price fluctuations.

The estimates were calculated in 2020.

Optional modules

N/A

Placement opportunities

The University of Reading offers opportunities for multi-disciplinary research projects, industrial internships (http://www.reading.ac.uk/careers/RIS/), and the Erasmus programme enables students to undertake project work at a number of European Universities.

Study abroad opportunities

N/A

Teaching and learning delivery

You will be taught through lectures, tutorials, and computer laboratory classes. Assessment takes a variety of formats depending on the module: some are 100% continuous assessment, some are 100% end of module/year examination (class test), and others are a mixture.

Total study hours for your programme will be 1800 hours. The contact hours for your programme is typically 220 hours. In addition to your scheduled contact hours, you will be expected to undertake guided independent study. Information about module contact hours and the amount of independent study which a student is normally expected to undertake for a module is indicated in the relevant module description.

Accreditation details

Accredited by BCS, The Chartered Institute for IT for the purposes of partially meeting the academic requirement for registration as a Chartered IT Professional, and accredited by BCS, The Chartered Institute for IT on behalf of the Engineering Council for the purposes of partially meeting the academic requirement for registration as a Chartered Engineer.

Assessment

Most modules are assessed by a mixture of coursework and formal examination. Some modules are assessed only as coursework. Details are given in the relevant module description.

Progression

N/A

Classification

Classification

The University’s taught postgraduate marks classification is as follows:

Mark Interpretation

70 - 100% Distinction

60 - 69% Merit

50 - 59% Good standard (Pass)

Failing categories:

40 - 49% Work below threshold standard

0 - 39% Unsatisfactory Work

For Masters Degree

To qualify for **Distinction**, students must

i. gain an overall average of 70 or more over 180 credits; and

ii. a mark of 60 or more for the dissertation; and

iii. the total credit value of all modules marked below 50 must not exceed 55 credits; and

iv. students must not have any mark below 40.

To qualify for **Merit**, students must

i. gain an overall average of 60 or more over 180 credits; and

ii. a mark of 50 or more for the dissertation; and

iii. the total credit value of all modules marked below 50 must not exceed 55 credits; and

iv. students must not have any mark below 40.

To qualify for **Passed**, students must

i. gain an overall average of 50 or more over 180 credits; and

ii. a mark of 50 or more for the dissertation; and

iii. the total credit value of all modules marked below 50 must not exceed 55 credits; and

iv. the total credit value of all modules marked below 40 must not exceed 30 credits.

For PG Diploma

To qualify for **Distinction**, students must

i. gain an overall average of 70 or more over 120 credits; and

ii. In addition, the total credit value of all modules marked below 50 must not exceed 55 credits; and

iii. students must not have any mark below 40.

To qualify for **Merit**, students must

i. gain an overall average of 60 or more over 120 credits; and

ii. the total credit value of all modules marked below 50 must not exceed 55 credits; and

iii. students must not have any mark below 40.

To qualify for **Passed**, students must

i. gain an overall average of 50 or more over 120 credits; and

ii. the total credit value of all modules marked below 50 must not exceed 55 credits; and

iii. the total credit value of all modules marked below 40 must not exceed 30 credits.

For PG Certificate

To qualify for a **Postgraduate Certificate**, students must

i. gain an overall average of 50 or more over 60 credits; and

ii. the total credit value of all modules marked below 40 must not exceed 10 credits.

For further information about your Programme please refer to the Programme Handbook and the relevant module descriptions, which are available at http://www.reading.ac.uk/module/. The Programme Handbook and the relevant module descriptions do not form part of your Terms and Conditions with the University of Reading.

MSc Data Science and Advanced Computing (full-time) for students entering in session 2021/22
20 October 2020
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