



Data Science and Analytics; (Taught); (MSc); 2625 September 2021 Intake

The purpose of this information sheet is to provide prospective students and applicants further information about the nature of the degree, in order to help you decide if it is the choice for you. Should you have any further questions, contact information is provided at the end of the flyer.

Section 1 – degree programme structure

| | |
|-------------------------------------|--------------------------------------|
| Awarding institution | Royal Holloway, University of London |
| Accreditation(s) (where applicable) | None |
| Standard length of degree | 1 year full-time |
| Available part-time | 2 years part-time |

The following table summarises the compulsory modules, which are referred to by Royal Holloway as mandatory course units offered on this degree programme, as well as a selection of optional course units that are likely to be available. Please note that although the College will keep changes to a minimum, new units may be offered or existing units may be withdrawn, for example, in response to a change in staff. You will be informed if any significant changes need to be made. This programme requires a minimum of 6 students to enable to College to run the course. Should this number not be reached and we are unable to run the programme we will offer an alternative or refund any deposit paid.

| Course unit name | Credits | Mandatory | Optional | Notes (please see below for description) |
|--|---------|-----------|----------|---|
| (CS5900) Ethics in Advanced Computing and Artificial Intelligence | 0 | Yes | | 3 |
| (CS5100) Data Analysis | 20 | Yes | | |
| (CS5800) Computation with Data | 10 | Yes | | 1 |
| (CS5810) Programming for Data Analysis | 10 | Yes | | |
| (CS5855) Databases | 10 | Yes | | 1 |
| (CS5234) Large-scale Data Storage and Processing | 20 | Yes | | |
| (CS5821) Individual Project | 60 | Yes | | |
| Optional courses are chosen to complete each term to a total of 60 credits. | | | | |
| (CS5920) Machine Learning | 10 | | Yes | 2 |
| (CS5930) Methods of Computational Finance | 10 | | Yes | 2 |
| (CS5580) Advanced Data Communications | 10 | | Yes | 2 |
| (CS5220) Fundamentals of Digital Sound and Music | 10 | | Yes | |
| (CS5940) Intelligent Agents and Multi-Agent Systems | 10 | | Yes | |

| | | | | |
|--|----|--|-----|---|
| (CS5200) On-line Machine Learning | 20 | | Yes | |
| (CS5950) Deep Learning | 20 | | Yes | |
| (CS5504) Business Intelligence Systems, Infrastructures and Technologies | 20 | | Yes | |
| (CS5110) Methods of Bioinformatics | 10 | | Yes | 2 |
| (CS5250) Visualisation and Exploratory Analysis | 20 | | Yes | 2 |
| (EC5333) Financial Econometrics | 20 | | Yes | |
| (EC5321) Investment and Portfolio Management | 20 | | Yes | |
| (EC5340) Fixed Income Securities and Derivatives | 20 | | Yes | |
| (EC5041) Microeconometrics | 20 | | Yes | |
| (EC5070) Decision Theory and Behaviour | 20 | | Yes | |
| (EC5360) Origins of the Financial Crisis | 20 | | Yes | |
| (EC5370) Private Equity | 20 | | Yes | |
| (MT5432) Inference | 20 | | Yes | |
| (MT5433) Topics in Applied Statistics | 20 | | Yes | |
| (MT5436) Applied Probability | 20 | | Yes | |
| (IY5522) Security Technologies | 20 | | Yes | |
| (IY5502) Introduction to Cryptography | 20 | | Yes | |
| (IY5511) Network Security | 20 | | Yes | |
| (IY5512) Computer Security | 20 | | Yes | |
| (IY5501) Security Management | 20 | | Yes | |
| (IY5606) Smart Cards, RFIDs and Embedded Systems Security | 20 | | Yes | |
| (IY5609) Digital Forensics | 20 | | Yes | |
| (IY5610) Security Testing | 20 | | Yes | |
| (IY5607) Software Security | 20 | | Yes | |
| (IY5604) Database Security | 20 | | Yes | * |
| (IY5612) Cyber Security | 20 | | Yes | |

Notes

- (1) Compulsory and available only for students who lack background in the corresponding area.
- (2) Cannot be taken by Royal Holloway graduates who took a similar course.
- (3) mandatory non-condonable zero weighted short module designed to enhance students' awareness of the many ethical implications of working with advanced technology, and to further develop their transferable and study skills.

(*) Only runs in block mode (normally one week in January).



Section 2 – degree programme costs

| | |
|------------------|------|
| Essential costs* | None |
|------------------|------|

* These estimated costs relate to studying this particular degree programme at Royal Holloway. Costs, such as accommodation, food, books and other learning materials and printing etc., have not been included, and further information regarding these can be found on our website.

Section 3 – useful vocabulary

We understand some of the terminology used in this document may be new to you, and may differ from that used by other universities. To help with this, we have provided a brief description for some of the most important terminology:

Degree programme – Also referred to as 'degree course' or simply 'course', these terms refer to the qualification you will be awarded upon successful completion of your studies.

Course unit – also referred to as 'module', this refers to the individual units you will study each year to complete your degree programme. Masters programmes consist of a number of taught course units – some mandatory, and some options – plus a dissertation/project to the value of 180 UK credits in total. On completion of a minimum of 120 UK credits a student may be awarded a Postgraduate Diploma, while on completion of a minimum of 60 credits a student may be awarded a Postgraduate Certificate. Some Masters programmes may have progression requirements (where they are offered over more than one year of study) or pass requirements for degree title if they are accredited by a professional body.

H/EU – Different categories of students pay different levels of tuition fees. H/EU stands for students with Home or European Union fee status.

Overseas – Non-EU students are liable to pay the overseas rate of tuition fees, and are sometimes also referred to as international students.

Section 4 – contact information

If you have any further questions, you can contact the Admissions team by email at study@royalholloway.ac.uk.

This information is final at the time of publication (05/11/2019) and supersedes any previous information provided in publications or on Royal Holloway's website.