



## Machine Learning with a Year in Industry; (Taught); (MSc); 2629 September 2019 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	2 years full-time
Available part-time	No

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Please note that although the College will keep changes to a minimum, new units may be offered or existing units may be withdrawn, for example, in response to a change in staff.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	0	Yes		
(CS5100) Data Analysis	20	Yes		
(CS5810) Programming for Data Analysis	10	Yes		
(CS5920) Machine Learning	10	Yes		2
(CS5200) On-line Machine Learning	20	Yes		
(CS5950) Deep Learning	20	Yes		
(CS5822) Individual Project	60	Yes		
<b>Optional courses are chosen to complete each term to a total of 60 credits.</b>				
(CS5855) Databases	10		Yes	1
(CS5234) Large-scale Data Storage and Processing	20		Yes	
(CS5930) Methods of Computational Finance	10		Yes	2
(CS5580 Advanced Data Communications)	10		Yes	2
(CS5220) Fundamentals of Digital Sound and Music	10		Yes	

(CS5945) Intelligent Agents and Multi-Agent Systems	10		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
(CS5800) Computation with Data	10		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	
(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	

The second year of this degree programme will be spent on a work placement. Students are supported by their academic department and the Royal Holloway Careers Service to find a suitable placement. However, Royal Holloway cannot guarantee that all students who are accepted onto this degree programme will secure a placement, and the ultimate responsibility lies with the student. You will need to achieve an agreed level of academic performance to proceed onto, or remain on, a placement. To progress to the Year in Industry students must engage with the activities run by the Careers Service throughout the year, achieve a good result in the placement test, which currently consists of CS5100's examination, and show a good performance in coursework assignments (as detailed in the



programme handbook) and pass the taught part of the programme. For students on the Year in Industry programme CS5822 is mandatory non-condonable and must be passed to qualify for the degree title Year in Industry. This year forms an integral part of the degree programme and students will be asked to complete assessed work. The mark for this work will count towards the degree.

### 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) CS5900 is a 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
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\* 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](mailto:study@royalholloway.ac.uk).

This information is final at the time of publication (09/08/2019) and supersedes any previous information provided in publications or on Royal Holloway's website.