

**MSci Computer Science (Information Security) (Year in Industry) (G502)**  
**September 2017 intake**

The purpose of this information sheet is to provide prospective students and applicants with further information about the nature of this degree, in order to help you decide if it is the right 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)	GCHQ, BCS, The Chartered Institute for IT and European Quality Assurance Network for Informatics Education (EQANIE).
Standard length of degree	Five Years

The following table summarises the compulsory modules, which Royal Holloway refers to as mandatory course units, offered on this degree programme each year:

Year 1						
Course unit name	Methods of teaching		Methods of assessment			Credits
	Contact hours	Self-study hours	Written exam	Practical	Coursework	
Object Oriented Programming I	57	93	90%	0	10%	15
Object Oriented Programming II	55	95	90%	0	10%	15
Computer Lab (Robotics)	44	106	0	0	100%	15
Computer Lab (Games)	44	106	0	0	100%	15
Internet Services	40	110	90%	0	10%	15
Mathematical Structures	42	108	90%	0	10%	15
Machine Fundamentals	42	108	90%	0	10%	15
Software Design	34	116	40%	0	60%	15
Year 2						
Course unit name	Methods of teaching		Methods of assessment			Credits
	Contact hours	Self-study hours	Written exam	Practical	Coursework	
Software Engineering	33	117	60%	0	40%	15
Team Project	40	110	0	0	100%	15
Operating Systems	44	106	80%	0	20%	15
Databases	44	106	60%	0	40%	15

Algorithms and Complexity	33	117	90%	0	10%	15
Introduction to Information Security	33	117	80%	0	20%	15
Computer and Network Security	33	117	70%	0	30%	15
<b>Year 3</b>						
<b>(from the chosen courses, a maximum of two can be from the Information Security (IS) strand)</b>						
	Methods of teaching		Methods of assessment			
Course unit name	Contact hours	Self-study hours	Written exam	Practical	Coursework	Credits
Applications of Cryptography	33	117	80%	0	20%	15
Malicious Software	33	117	70%	0	30%	15
<b>Year 4-See below for more information</b>						
	Methods of teaching		Methods of assessment			
Course unit name	Contact hours	Self-study hours	Written exam	Practical	Coursework	Credits
Year out in Industry	6	294	0%	0%	100%	30
<b>Year 5</b>						
	Methods of teaching		Methods of assessment			
Course unit name	Contact hours	Self-study hours	Written exam	Practical	Coursework	Credits
Information Security MSci Project	10	590	0	0	100%	60
Security Management	33	117	100%	0	0	15
Secure Business Architectures	30	120	100%	0	0	15
Security Testing Theory and Practice	30	117	100%	0	0	15

The fourth 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 to secure a placement lies with the student. 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.

In addition to these mandatory course units, there will be a number of optional course units available during the course of your degree. The following table lists 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.

Year 1	Year 2	Year 3	Year 5
None	Introduction to Artificial Intelligence	Bioinformatics	Digital audio and applications*
	Human-Computer Interaction	Digital audio and applications	Large-scale data storage and processing
	Multi-dimensional Data Processing	Compilers and code generation	Computational optimization*
		Computational optimisation	Business Intelligence Systems, Infrastructures and Technologies
		Functional programming and applications	Data analysis (AI)
		Advanced algorithms	On-line machine learning (AI)
		Visualisation and exploratory analysis (AI)	Visualisation and exploratory analysis* (AI)
		Machine learning (AI)	Machine learning* (AI)
		Computational finance (AI)	Methods of computational finance* (AI)
		Intelligent agents and multi-agent systems (AI)	Intelligent agents and multi-agent systems* (AI)
		Semantic Web (AI)	Semantic Web* (AI)
		Advanced data communications (DNS)	Deep Learning (AI)
		Concurrent and parallel programming (DNS)	Smart cards/Token security and applications* (IS)
		Smart cards/Token security and applications (IS)	Digital forensics* (IS)
		Digital forensics (IS)	Cyber security* (IS)
		Cyber security (IS)	Advanced data communications* (DNS)

		Software language engineering (SE)	
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\* cannot be taken if the course with the same title was taken in Year 3

As part of your degree programme you may be required to complete a course to develop your study skills, for example a course in academic writing skills. Courses such as these often do not carry credit but passing the course may be a requirement to progress to the next year of study.

### Section 2 – degree programme costs

H/EU tuition fee 2017/18*	£9,250
Overseas tuition fee 2017/18**	£15,600
Other essential costs***	<i>Costs incurred by students while on a Year in Industry/Business vary depending on the nature and location of the placement. For further information please contact the department.</i>

\*Tuition fees for UK and EU nationals starting a degree in the academic year 2017/18 will be £9,250 for that year. This amount is subject to the UK Parliament approving a change to fee and loan regulations that has been proposed by the UK Government. In the future, should the proposed changes to fee and loan regulations allow it, Royal Holloway reserves the right to increase tuition fees for UK and EU nationals annually. If relevant UK legislation continues to permit it, Royal Holloway will maintain parity between the tuition fees charged to UK and EU students for the duration of their degree studies.

\*\* Royal Holloway reserves the right to increase tuition fees for overseas fee paying students annually. Tuition fees are unlikely to rise more than 5% each year.

For further information on tuition fees please see Royal Holloway's [Terms & Conditions](#).

\*\*\*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. Undergraduate degrees at Royal Holloway comprise four full units, or a combination of full and half units, to the value of 120 credits per year. Mandatory course units must be taken by every student on the relevant degree programme. Some of these mandatory course units must be passed for progression or a particular degree title. On some degree programmes a certain number of optional course units must be passed for a particular degree title.

*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).

Please note that this information is final at the time of publication (15/03/2017) and supersedes any previous information provided in publications or on Royal Holloway's website.