



**MSci Computer Science (Software Engineering)
(Year in Industry) (G463)**

September 2018 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

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|-------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Awarding institution | Royal Holloway University of London |
| Accreditation(s) (where applicable) | British Computer Society (BCS) and European Quality Assurance Network for Informatics Education (EQANIE). |
| Standard length of degree | Five Years |

To comply with British Computer Society and EQANIE accreditation requirements students must successfully complete the degree programme and pass the final year project.

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 | | | | | | |
|-------------------------------|---------------------|------------------|-----------------------|-----------|------------|---------|
| | Methods of teaching | | Methods of assessment | | | |
| Course unit name | Contact hours | Self-study hours | Written exam | Practical | Coursework | Credits |
| Object Oriented Programming | 57 | 93 | 90% | 0 | 10% | 15 |
| Software Development | 42 | 108 | 60% | 0 | 40% | 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 | | | | | | |
| | Methods of teaching | | Methods of assessment | | | |
| Course unit name | Contact hours | Self-study hours | Written exam | Practical | Coursework | Credits |
| Software Engineering | 33 | 117 | 60% | 0 | 40% | 15 |
| Small Enterprise Team Project | 40 | 110 | 0 | 0 | 100% | 15 |
| Operating Systems | 44 | 106 | 80% | 0 | 20% | 15 |

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|--------------------------------------|----|-----|-----|---|-----|----|
| 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 |

| Year 3 (at least two of the chosen courses must be from the Software Engineering (SE) strand) | | | | | | |
|-----------------------------------------------------------------------------------------------------------|---------------------|------------------|-----------------------|-----------|------------|---------|
| | Methods of teaching | | Methods of assessment | | | |
| Course unit name | Contact hours | Self-study hours | Written exam | Practical | Coursework | Credits |
| Human-Computer Interaction | 44 | 106 | 40% | 0 | 60% | 15 |
| Full Unit Project | 10 | 290 | 0 | 0 | 100% | 30 |
| Malicious Software | 33 | 117 | 70% | 0 | 30% | 15 |
| Year 4- See below for more information | | | | | | |
| | 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 |
| Year 5 (at least three of the chosen courses must be from the Software Engineering (SE) strand) | | | | | | |
| | Methods of teaching | | Methods of assessment | | | |
| Course unit name | Contact hours | Self-study hours | Written exam | Practical | Coursework | Credits |
| MSci Team Project | 20 | 580 | 0 | 0 | 100% | 60 |

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 lies with the student. In order to remain in or transfer to a Year in Industry degree, students must show good academic performance in Year 1, Year 2 and Year 3 (as detailed in the Year in Industry handbook). For students on the Year in Industry programme CS4001 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.

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* |
| | Multi-dimensional Data Processing | Digital audio and applications | Large-scale data storage and 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) | Advanced data communications* (DNS) |
| | | Smart cards/Token security and applications (IS) | Security management (IS) |
| | | Digital forensics (IS) | Secure business architectures (IS) |

| | | | |
|--|--|------------------------------------|---------------------------------------------------|
| | | Cyber security (IS) | Smart cards/Token security and applications* (IS) |
| | | Applications of cryptography (IS) | Digital forensics* (IS) |
| | | Software language engineering (SE) | Security testing theory and practice (IS) |
| | | IT Project Management (SE) | Cyber security* (IS) |
| | | | Technology entrepreneurship (SE) |
| | | | Running a small business (SE) |
| | | | Standards IP and technology seminar series (SE) |

* 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

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|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| H/EU tuition fee 2018/19* | £9250 |
| Overseas tuition fee 2018/19** | £17,500 |
| 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> |

*The fees shown are for the 2017/18 academic year and are for reference purposes only. Current information available (October 2017) means that we expect the tuition fee for UK and EU undergraduates starting their degrees in 2018 to be £9,250. The UK Government has also announced that EU students starting an undergraduate or postgraduate taught degree in 2018/19 will pay the same level of fee as a UK student for the duration of their degree.

** Fees for international students may increase year-on-year in line with the rate of inflation. Royal Holloway's policy is that any increases in fees will not exceed 5% for continuing students.

There is a different tuition fee for a year spent abroad or working in industry. 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. General costs such as accommodation, food, books and other learning materials and printing etc., have not been included, but further information is available 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.

Please note that this information is final at the time of publication (20/10/2017) and supersedes any previous information provided in publications or on Royal Holloway's website.