



**MSci Computer Science (G403)**  
**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**

|                                     |   |
|-------------------------------------|---|
| 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           | Four 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 I  | 57                  | 93               | 90%                   | 0         | 10%        | 15      |
| Object Oriented Programming II | 55                  | 95               | 90%                   | 0         | 10%        | 15      |
| Computing Lab (Robotics)       | 44                  | 106              | 0                     | 0         | 100%       | 15      |
| Computing 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      |
| 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      |
| Year 3<br>(elective course units only) |                     |                  |                       |           |            |         |
| Year 4                                 |                     |                  |                       |           |            |         |
|  | Methods of teaching |                  | Methods of assessment |           |            |         |
| Course unit name                       | Contact hours       | Self-study hours | Written exam          | Practical | Coursework | Credits |
| Computer Science MSci Project          | 10                  | 590              | 0                     | 0         | 100%       | 60      |

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 4                                  |
|--------|---|--------------------------------|---|
| None   | Introduction to Artificial Intelligence | Bioinformatics                 | Digital audio and applications*         |
|        | Human-Computer Interaction              | Digital audio and applications | Large-scale data storage and processing |
|        | Computer and Network Security           | Compilers and code generation  | Computational optimization*             |

|  |                                   |  |   |
|--|-----------------------------------|--|---|
|  | Multi-dimensional Data Processing | 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)        | Security management (IS)  |
|  |                                   | Smart cards/Token security and applications (IS) | Secure business architectures (IS)                              |
|  |                                   | Digital forensics (IS)                           | Smart cards/Token security and applications* (IS)               |
|  |                                   | Cyber security (IS)                              | Digital forensics* (IS)   |
|  |                                   | Applications of cryptography (IS)                | Security testing theory and practice (IS)                       |

|  |  |                                    |                                     |
|--|--|------------------------------------|-------------------------------------|
|  |  | Malicious software (IS)            | Cyber security* (IS)                |
|  |  | Software language engineering (SE) | Advanced data communications* (DNS) |

\* 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 2018/19*      | £9,250  |
| Overseas tuition fee 2018/19** | £17,500 |
| Other essential costs***       | None    |

\*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](mailto: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.