

## BSc Computer Science (Year in Industry) (G402)

### 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) | The Chartered Institute for IT (BSC) and European Quality Assurance Network for Informatics Education (EQANIE). |
| Standard length of degree           | Four 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                         |                     |                  |                       |           |            |         |
|--------------------------------|---------------------|------------------|-----------------------|-----------|------------|---------|
|                                | 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- See below for further 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 4                                    |                     |                  |                       |           |            |         |
|   | Methods of teaching |                  | Methods of assessment |           |            |         |
| Course unit name                          | Contact hours       | Self-study hours | Written exam          | Practical | Coursework | Credits |
| Full Unit Project                         | 10                  | 290              | 0                     | 0         | 100%       | 30      |

The third 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. 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 4   |
|--------|---|--|
| None   | Introduction to Artificial Intelligence | Bioinformatics                                   |
|        | Human-Computer Interaction              | Digital audio and applications                   |
|        | Computer and Network Security           | Compilers and code generation                    |
|        | Multi-dimensional Data Processing       | Computational optimisation                       |
|        |   | Functional programming and applications          |
|        |   | Advanced algorithms                              |
|        |   | Visualisation and exploratory analysis (AI)      |
|        |   | Machine learning (AI)                            |
|        |   | Computational finance (AI)                       |
|        |   | Intelligent agents and multi-agent systems (AI)  |
|        |   | Semantic Web (AI)                                |
|        |   | Advanced data communications (DNS)               |
|        |   | Concurrent and parallel programming (DNS)        |
|        |   | Smart cards/Token security and applications (IS) |
|        |   | Digital forensics (IS)                           |
|        |   | Cyber security (IS)                              |
|        |   | Applications of cryptography (IS)                |
|        |   | Malicious software (IS)                          |
|        |   | Software language engineering (SE)               |

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 our Student Fees Office.</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.