

# UNIVERSITY OF EAST LONDON

## UNDERGRADUATE PROGRAMME SPECIFICATION BSc (Hons) Software Engineering

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| <b>Programme Title</b>                       | BSc (Hons) Software Engineering                   |
| <b>Intermediate awards available</b>         | Cert. H. E, Dip. H. E., BSc                       |
| <b>Teaching Institution(s)</b>               | FTMS Malaysia                                     |
| <b>Alternative Teaching Institutions</b>     | N/A   |
| <b>UEL Academic School</b>                   | School of Architecture, Computing and Engineering |
| <b>UCAS code</b>                             | -   |
| <b>Professional Body Accreditation</b>       | -   |
| <b>Relevant QAA Benchmark statements</b>     | Computing   |
| <b>Additional Versions of This Programme</b> | N/A   |
| <b>Date specification last updated</b>       | July 2017   |

### Programme Aims and Learning Outcomes

This programme is designed to give you the opportunity to:

- Gain appropriate knowledge and skills base to pursue a career managing and developing software systems in various industries contexts.
- Gain an understanding of the operational, strategic and practical issues in software engineering.
- Gain appropriate software development and programming skill to pursue a career in software engineering.
- Be aware of the management, economic, legal, social, professional and ethical issues relating to software engineering.
- Learn and work both independently and within groups.
- Develop the necessary study skills and knowledge to pursue further study.

### What will you learn?

#### Knowledge

- How to design and implement software applications / systems using various software engineering principles and techniques.
- How computer hardware and software work together to provide a platform for computer based systems
- How software systems contributes to various domains.
- How software project can be strategically managed and developed.

### **Thinking skills**

- Problem solving
- Evaluation and critical analysis
- Self-appraisal and review of personal practice.

### **Subject-Based Practical skills**

- Use of range of specialised computer technology, such as databases, software design and analysis tools and other software development languages.
- Apply range of software principles and techniques in development of software applications.
- Preparation of essays, reports and presentations.
- Production of major self-directed project.

### **Skills for life and work (general skills)**

- Communication Skills
- Time management
- Learning and working both independently and in groups

## **Learning and Teaching**

### **Learning environment**

Our teaching emphasises practical skills, giving you as much chance as possible to take learning out of the classroom and apply your new abilities in real-life situations.

You'll have access to first-class teaching and learning facilities and a wide range of computing resources. We use specialised labs to study operating system environments such as Windows Server and Linux, as well as networking and web technologies. You'll be given software tools for programming, database development, internet access and web-based development.

In your final year, you'll work on a year-long individual project of your choice. It's a chance to follow your own interests, though our research team are there to offer ideas, inspiration or advice.

Throughout the course, you'll be supported by a personal tutor. There are also specialist support services for students with dyslexia or English as a second language, as well as advice services for an accommodation, finance, career, IT training and learning resources.

### **Assessment**

Knowledge is assessed by

- examinations, both unseen and based on previously supplied case studies
- extended essays and reports
- multiple choice tests

Thinking skills are assessed by

- all assessment tasks set, particularly those requiring critical evaluation
- self-appraisal of performance
- use of appropriate problem solving skills

Practical skills are assessed by

- assessment tasks requiring use of general and specialised IT applications
- use of equipment in practicals and presentations

Skills for life and work (general skills) are assessed by

- evidence of group and team working
- ability to work to time constraints

## Project work

Students in level 6 complete a year long academic project. This is a major piece of individual work that allows the students to choose the direction of their study, allowing students to develop their own ideas and integrate the various subjects studied.

Students are encouraged to provide their own ideas for the project, but there is always a collections of topics provided by staff from which students can choose.

## Programme Structure

### Introduction

All programmes are credit-rated to help you to understand the amount and level of study that is needed.

One credit is equal to 10 hours of directed study time (this includes everything you do e.g. lecture, seminar and private study).

Credits are assigned to one of 5 levels:

- 3 equivalent in standard to GCE 'A' level and is intended to prepare students for year one of an undergraduate degree programme
- 4 equivalent in standard to the first year of a full-time undergraduate degree programme
- 5 equivalent in standard to the second year of a full-time undergraduate degree programme
- 6 equivalent in standard to the third year of a full-time undergraduate degree programme
- 7 equivalent in standard to a Masters degree

### Credit rating

The overall credit-rating of this programme is 360 credits. The module structure of this programme is:

| Level | Module Code | Module Title                             | Distance learning<br>Y/N | Credits | Status* |
|-------|-------------|--|--------------------------|---------|---------|
| 4     | CN4101      | Information Systems Modelling and Design | N                        | 30      | Core    |
| 4     | CN4102      | Introduction to Software Development     | N                        | 30      | Core    |

|   |        |   |   |    |      |
|---|--------|---|---|----|------|
| 4 | CN4104 | Introduction to Computer Systems and Networks | N | 30 | Core |
| 4 | CN4106 | Introduction Web Technologies                 | N | 15 | Core |
| 4 | CN4107 | Maths for Computing                           | N | 15 | Core |
|   |        |   |   |    |      |
| 5 | CN5101 | Database Systems                              | N | 30 | Core |
| 5 | CN5109 | Web Applications Development                  | N | 30 | Core |
| 5 | CN5103 | Operating Systems                             | N | 15 | Core |
| 5 | CN5104 | Computing in Practice                         | N | 15 | Core |
| 5 | CN5120 | Advanced Programming                          | N | 15 | Core |
| 5 | CN5121 | Data Structures and Algorithms                | N | 15 | Core |
|   |        |   |   |    |      |
|   |        |   |   |    |      |
| 6 | CN6120 | Formal Methods                                | N | 15 | Core |
| 6 | CN6211 | Mobile Application Development                | N | 15 | Core |
| 6 | CN6107 | Computers and Network Security                | N | 15 | Core |
| 6 | CN6103 | Project                                       | N | 45 | Core |
| 6 | CN6204 | Distributed Systems                           | N | 15 | Core |
| 6 | CN6121 | Artificial Intelligence                       | N | 15 | Core |

*\*Please Note – A core module for a programme is a module which a student must have passed (i.e. been awarded credit) in order to achieve the relevant named award. An optional module for a programme is a module selected from a range of modules available on the programme.*

### **Typical duration**

The expected duration of this programme is three (3) years full-time or five (5) years part-time.

It is possible to move from full-time to part-time study and vice-versa to accommodate any external factors such as financial constraints or domestic commitments. Many of our students make use of this flexibility and this may impact on the overall duration of their study period.

A student cannot normally continue study on a programme after 4 years of study in full time mode unless exceptional circumstances apply and extenuation has been granted. The limit for completion of a programme in part time mode is 8 years from first enrolment.

### **Further Information**

Further information about this programme is available from:

- The UEL web site (<http://www.uel.ac.uk>)
- FTMS Malaysia (<http://www.ftms.edu.my/Main/>)
- UEL Manual of General Regulations <http://www.uel.ac.uk/qa/>
- UEL Quality Manual <http://www.uel.ac.uk/qa/>
- School of Architecture, Computing and Engineering at UE <http://www.uel.ac.uk/ace/>
- External examiner reports (available from UEL virtual learning environment (Moodle))
- The Programme Handbook
- Module Study Guides

Additional Costs

N/A

Alternative Locations of Delivery

N/A