Programme Specification (PG)

Awarding body / institution:	Queen Mary University of London
Teaching institution:	Queen Mary University of London
Name of final award and programme title:	MSc FT Computing and Information Systems
Name of interim award(s):	PG Certificate and PG Diploma
Duration of study / period of registration:	12 Months
Queen Mary programme code(s):	G5U5
QAA Benchmark Group:	Computing
FHEQ Level of Award:	Level 7
Programme accredited by:	BCS The Chartered Institute for IT
Date Programme Specification approved:	
Responsible School / Institute:	School of Electronic Engineering & Computer Science

Schools / Institutes which will also be involved in teaching part of the programme:

NA

Collaborative institution(s) / organisation(s) involved in delivering the programme:

NA

Programme outline

This MSc is an intensive one-year generalist programme for highly motivated graduates with a good honours degree, but with little prior experience of computer science. You will develop theoretical and practical skills in computing and information systems development. The programme includes modules which introduce core aspects of computing, including a double module in object-oriented programming (using Java), plus modules covering Systems Analysis and Software Engineering – essential for anyone seeking a career in Information Systems development. The core modules are supplemented by optional specialist modules covering a broad range of subjects relevant to the software industry, such as Network Programming, Business Information Systems and Graphical User Interface design. Your project work will typically involve the design and implementation of a significant piece of software within your chosen specialism. Projects undertaken for external organisations are encouraged.

Aims of the programme

This is an intensive conversion Masters course. The programme has a strong practical character concentrating on software engineering, computer systems and applications. Its aim is to provide a foundation programme in computing for highly

motivated graduates who have little or no previous experience. On completion students are readily able to find employment as software designers and engineers in various areas of industry and commerce.

What will you be expected to achieve?

The programme provides opportunities for students to develop and demonstrate knowledge, understanding and skills in the following areas:
• in-depth experience of at least one programming language in common use in industry (currently Java)
• appreciate the importance of simplicity, robustness and systematic organization in program design
• knowledge of the software life-cycle, software design methodologies and software development tools
• experience of developing large-scale software systems
• follow through all the stages of the software development process
• work effectively as a member of a software engineering team
• knowledge of project management skills
• knowledge of computer systems components and organization
• understanding of database principles and techniques and they role they play in information
• management knowledge and understanding of further selected topics in software engineering, computer systems or applications, depending on the options chosen

Academic Content:	
A 1	Theories, principles and techniques on Computer Science and Information Systems
A 2	Object Oriented program development
A 3	Approaches to computer system design, testing and evaluation
A 4	Principles of Database Systems
A 5	Principals of network and operating systems
A 6	Fundamentals of Computer Architecture

Disciplinary Skills - able to:	
B 1	Design, implement and test software programs
B 2	Design and implement Database Systems
B 3	Apply Systems Analysis techniques to elicit requirements for Information System solutions
B 4	Develop and apply appropriate criteria to choose between a number of different technology solutions for a given set of requirements

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B 5	Apply Software Engineering techniques to the design, implementation and testing of Information Systems
B 6	Critically reflect on their own performance in technology-related projects and apply to future projects

Attributes:	
C 1	Integrate scholarship, research and professional activities with software engineering in a developing professional career
C 2	Evaluate their practice and engage in continuing professional development

How will you learn?

Each non-project-based module normally involves lectures, problem solving coursework and practical sessions. Lectures are used to introduce principles and methods and also to illustrate how they can be applied in practice. Coursework allows students to develop their skills in problem solving and to gain practical experience. Practical sessions provide students with guidance and help while solving a problem. These lessons take the form of exercise classes and programming laboratories that allow the students to learn-by-doing in order to complement the lectures.

Individual projects are undertaken during the summer months under the supervision of an academic member of staff with whom there are normally weekly consultancy meetings. These are used for students to report on their progress, discuss research and design issues and plan their future work. This develops and reinforces students' ability to communicate technical ideas clearly and effectively. The Projects Coordinator also runs a thread of taught sessions to support the project module. A number of industrial-linked projects may be offered each year, which students can apply for.

How will you be assessed?

The assessment of taught modules normally consists of a combination of written examination and coursework.

The project is examined on the basis of a written report, a formal oral presentation, and, where applicable, a demonstration of any software and/or hardware developed by the student.

How is the programme structured?

Please specify the structure of the programme diets for all variants of the programme (e.g. full-time, part-time - if applicable). The description should be sufficiently detailed to fully define the structure of the diet.

Year 1
Semester 1
ECS740P Databases (15 credits)
ECS780P Computer Programming (15 credits)
ECS7009P Introduction to Software Engineering (15 credits)
ECS7010P Computer Architecture and Networks (15 credits)

Semester 2
ECS726P Security and Authentication (15 credits)

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ECS7005P Risk and Decision Making for Data Science and AI (15 credits)

Select two options from:
ECS725P Mobile Services (15 credits)
ECS733P Interactive Systems Design (15 credits)
ECS784P Data Analytics (15 credits)
ECS745P Business Information Systems (15 credits)

Semester 3
ECS750P Project (60 credits)

Academic Year of Study   FT - Year 1

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Databases	ECS740P	15	7	Compulsory	1	Semester 1
Computer Programming	ECS780P	15	7	Compulsory	1	Semester 1
Introduction to Software Engineering	ECS7009P	15	7	Compulsory	1	Semester 1
Computer Architecture and Networks	ECS7010P	15	7	Compulsory	1	Semester 1
Security and Authentication	ECS726P	15	7	Compulsory	1	Semester 2
Risk and Decision Making for Data Science and AI	ECS7005P	15	7	Compulsory	1	Semester 2
Mobile Services	ECS725P	15	7	Elective	1	Semester 2
Data Analytics	ECS784P	15	7	Elective	1	Semester 2
Interactive Systems Design	ECS733P	15	7	Elective	1	Semester 2
Business Information Systems	ECS745P	15	7	Elective	1	Semester 2
Project Module	ECS750P	60	7	Core	1	Semester 3

What are the entry requirements?

Further information on the entry requirements can be found at http://eecs.qmul.ac.uk/postgraduates/entry-requirements/

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How will the quality of the programme be managed and enhanced? How do we listen to and act on your feedback?

The Student-Staff Liaison Committee provides a formal means of communication and discussion between the School and its students. The committee consists of student representatives from each cohort, together with appropriate representation from School staff. It is designed to respond to the needs of students, as well as act as a forum for discussing programme and module developments. Student-Staff Liaison Committees meet four times a year, twice in each teaching semester.

Each semester, students are invited to complete a web-based module questionnaire for each of their taught modules, and the results are fed back through the SSLC meetings. The results are also made available on the student intranet, as are the minutes of the SSLC meetings. Any actions necessary are taken forward by the relevant Senior Tutor, who chairs the SSLC, and general issues are discussed and actioned through the School's Teaching and Learning Committee (TLC) .

The School's TLC advises the Director of Education on all matters relating to the delivery of taught programmes at school level including monitoring the application of relevant QM policies and reviewing all proposals for module and programme approval and amendment before submission to Taught Programmes Board. Student views are incorporated in this Committee's work in a number of ways, including through student membership and consideration of student surveys and module questionnaires.

The School participates in the College's Annual Programme Review process, which supports strategic planning and operational issues for all undergraduate and taught postgraduate programmes. The APR includes consideration of the School's Taught Programmes Action Plan, which records progress on learning and teaching related actions on a rolling basis. Students' views are considered in the APR process through analysis of the NSS and module questionnaires, among other data.

What academic support is available?

All students are assigned an academic advisor during induction week. The advisor 's role is to guide their advisees in their academic development including module selection, and to provide first-line pastoral support.

In addition, the School has a Senior Tutor for postgraduate students who provides second-line guidance and pastoral support for students, as well as advising staff on related matters.

Every member of teaching staff holds 2 open office hours per week during term-time.

Additional academic support is provided to those students who are successful in securing an industrial-linked project.

Programme-specific rules and facts

The programme adheres to the standard Academic Regulations for taught postgraduate programmes, with a special regulation for a progression point after the taught component.

How inclusive is the programme for all students, including those with disabilities?

Queen Mary has a central Disability and Dyslexia Service (DDS) that offers support for all students with disabilities, specific learning difficulties and mental health issues. The DDS supports all Queen Mary students: full-time, part-time, undergraduate, postgraduate, UK and international at all campuses and all sites.

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Students can access advice, guidance and support in the following areas:
• Finding out if you have a specific learning difficulty like dyslexia
• Applying for funding through the Disabled Students' Allowance (DSA)
• Arranging DSA assessments of need
• Special arrangements in examinations
• Accessing loaned equipment (e.g. digital recorders)
• Specialist one-to-one "study skills" tuition
• Ensuring access to course materials in alternative formats (e.g. Braille)
• Providing educational support workers (e.g. note-takers, readers, library assistants)
• Mentoring support for students with mental health issues and conditions on the autistic spectrum.

Links with employers, placement opportunities and transferable skills

The School has a wide range of industrial contacts secured through research projects and consultancy, our Industrial Experience programme and our Industrial Advisory Panel.

The Industrial Advisory Panel works to ensure that our programmes are state-of-the-art and match the changing requirements of this fast-moving industry. The Panel includes representatives from a variety of Computer Science oriented companies ranging from SMEs to major blue-chips. These include: Microsoft Research, Royal Bank of Scotland, BT Labs, Oaklodge Consultancy, Intel Research, The Usability Company, Hewlett Packard Labs and Arclight Media Technology Limited.

Recent graduates have found employment as IT consultants, specialist engineers, web developers, systems analysts, software designers and network engineers in a wide variety of industries and sectors. A number of students also go on to undertake PhDs in electronic engineering and computer science. Merril Lynch, Microsoft, Nokia, Barclays Capital, Logica,, Credit Suisse, KPMG, Transport for London, Sky and Selex ES are among the organizations that have recently employed graduates of EECS programmes.

Transferable skills are developed through a variety of means, including embedding of QM Graduate Attributes in taught modules and the summer project, together with the opportunity to participate in extra-curricular activities, e.g. the School's E++ Society, the School's Annual Programming Competition and external competitions with support from the School.

Students have the opportunity to undertake an industrial-linked project in the summer - these are very competitive.

Programme Specification Approval

Person completing Programme Specification:	Jennifer Richards
Person responsible for management of programme:	Tony Stockman
Date Programme Specification produced / amended by School / Institute Learning and Teaching Committee:	7 Dec 2021
Date Programme Specification approved by Taught Programmes Board:	

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