Queen Mary
University of London

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 Computer Science by Research
Name of interim award(s):	PG Certificate
Duration of study / period of registration:	12 Months FT
Queen Mary programme code(s):	G4Q1 (12 months full-time)
QAA Benchmark Group:	Computing
FHEQ Level of Award:	Level 7
Programme accredited by:	Chartered Institute for IT (BCS), Institute for Engineering and Technology (IET)
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

Our MSc in Computer Science by Research involves an extended (one-year) individual research project carried out as part of one of our established research groups, combined with selected taught modules.

This programme offers you the chance to undertake an advanced Masters programme through an extended research project. The programme is suitable for outstanding students who have an interest in advanced research-based study in one of our research specialisms: Computer Vision; Information Retrieval; Interaction, Media and Communication; Risk Assessment and Decision Analysis; Computer Science Theory.

You will join one of our research groups, taking four selected taught modules and completing an extended research project. You will have the opportunity to develop further research and technical skills and to be able to demonstrate a level of independence that is greater than developed on a purely taught programme.

The MSc by Research programme will give you solid theoretical and practical research competences in your chosen field of study and will enhance your employability. Successful completion of the programme may also provide a route to further study

Queen Mary
University of London

Programme Title: MSc FT Computer Science by Research

at doctoral level or for a research and development position in industry.

Aims of the programme

The programme aims to expose students to a challenging research environment, and to allow them to develop demonstrable technical and research skills through an extensive research project. In addition it will develop skills in communications (written, verbal), planning and research, relevant to both industrial and academic practice.

The programme provides opportunities to develop further research and technical skills and to be able to show a demonstrable level of independence greater than that provided in a purely taught course structure. It develops solid theoretical and practical research competences in the student's chosen field of study and an additional degree qualification, supporting his/her employability. Successful completion of the course will often provide a route to further study at doctoral level or for a research and development position in industry.

What will you be expected to achieve?

• An understanding of the fundamental technical issues within the area of study, e.g. computer vision
• An ability to assess critically and apply advanced techniques in area of study, demonstrated through successful completion of a cognate research project
• An understanding of the issues surrounding writing a journal paper for publication in the area of study
• An understanding of the issues surrounding presenting a conference paper in the area of study
• An understanding of the issues surrounding time management and finances in sponsored research projects

Academic Content:	
A 1	Theories, principles and techniques on research in Computer Science
A 2	Approaches to critical enquiry
A 3	Research project planning and monitoring
A 4	Evaluation of alternative research methods
A 5	Evaluation of alternative project trajectories

Disciplinary Skills - able to:	
B 1	Develop a clearly defined, focused research question
B 2	Sustain a focused approach to a complex research problem
B 3	Choose and apply appropriate research methods
B 4	Critically evaluate alternative solutions
B 5	Plan, activate and review an appropriate research project

Queen Mary
University of London

B 6	Critically reflect on their own performance in research projects and apply to future projects

Attributes:	
C 1	Integrate scholarship, research and professional activities within the context of a Computer Science research project in a developing professional career
C 2	Evaluate practice and engage in continuing professional development
C 3	Learn to engage critically with knowledge.
C 4	Understand the importance of learning continuously in a fast-changing world.

How will you learn?

Each non-project-based module 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 120-credit projects are undertaken throughout the year under the supervision of an academic member of staff with whom there are 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.

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.

In the taught component of the programme, the students select four 15-credit Level 7 modules relevant to their research project area and academic background, in discussion with their project supervisor.

Year 1
Semester 1 - Any 2 level 7 EECS modules
Semester 2 - Any 2 level 7 EECS modules
Semester 3 - ECS753P MSc Research Project, worth 120 credits.

Queen Mary
University of London

Programme Title: MSc FT Computer Science by Research

Academic Year of Study FT - Year 1

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
MSc Research Project	ECS753P	120	7	Core	1	Semester 3

What are the entry requirements?

Applicants should normally possess a good Honours degree (first or upper-second class honours) with a substantial computer science component (at least half) or equivalent industrial experience. Good programming skills are required for undertaking the practical elements of the course. Applicants must also supply a brief research proposal outlining the areas of interest, for consideration.

For international students, English Language skills are required to a recognised standard. The minimum requirement is: IELTS 6.5 or TOEFL (IBT) 92. For students not quite meeting this requirement (e.g. IELTS 6.0), enrolling on a one month pre-sessional English Language course is required. These conditions are higher than standard College conditions.

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 Learning and Teaching Committee.

The School's Learning and Teaching Committee advises the Director of Taught Programmes 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

Queen Mary
University of London

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 available from the project supervisor, who is assigned to the student in advance of their arrival.

Programme-specific rules and facts

The programme adheres to the standard Academic Regulations for Masters by Research programmes.

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.

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.

Programme Specification Approval

Queen Mary
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Person completing Programme Specification:

Karen FinesilverSmith

Person responsible for management of programme:

Tony Stockman

Date Programme Specification produced / amended by School / Institute Learning and Teaching Committee:

17 Feb 2021

Date Programme Specification approved by Taught Programmes Board:

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