Programme Title: MSc Telecommunication and Wireless Systems

Programme Specification

Awarding Body/Institution: Queen Mary, University of London
Teaching Institution: Queen Mary, University of London
Name of Final Award and Programme Title: MSc Telecommunication and Wireless Systems
Name of Interim Award(s): 
Duration of Study / Period of Registration: 12 Months FT, 24 Months PT
QM Programme Code / UCAS Code(s): H6JA / H6JD / H6M3
QAA Benchmark Group: 
FHEQ Level of Award: Level 7
Programme Accredited by: Institution of Engineering and Technology
Date Programme Specification Approved: 5 Feb 2016
Responsible School / Institute: School of Electronic Engineering & Computer Science

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

Institution(s) other than Queen Mary that will provide some teaching for the programme:

Programme Outline

This programme provides training in the principles of converged networking, network planning, network management and network performance through an integrated curriculum designed to respond to rapid developments and growing demand in the discipline. It emphasises networked applications and the underlying information and communication technologies. At the end of the programme, you will be able to address major challenges in networking and understand how the different types of infrastructure affect design and commercial decisions.

Aims of the Programme

To provide the students with the background and skills needed for careers in related technologies
To provide an in-depth understanding of telecommunication systems
To provide an in-depth understanding of network structure, protocols and technologies, of network modelling and performance, wireless and mobile networks and related systems, technologies and mathematical techniques.
Specific aims include the ability to identify major new networking challenges; solve selected performance problems in converged networks; sort and compare strategies for network planning and management; identify and compare communications strategies; identify and construct logical sub-tasks from a larger project.

What Will You Be Expected to Achieve?

- Identify key networking issues and challenges
- Solve well-formulated performance problems in converged networks
- Compare strategies for optimal network planning and management
- Identify and compare selected physical layer strategies in communication systems as appropriate to converged telecommunication systems
- Identify and construct logical sub-tasks from a larger project oriented at telecommunication systems

Academic Content:

A1 Theory, principles, concepts and methodologies fundamental to the engineering of telecommunications networks.
A2 Current developments in the engineering of converged, all-packet, next generation networks
A3 A range of research-led specialities concentrated around telecommunications networking.

Disciplinary Skills - able to:

B1 Demonstrate comprehension and higher level cognitive skills necessary to solve engineering problems in telecommunications networking.
B2 Demonstrate the ability to analyse and evaluate using the appropriate mathematical principles and techniques that underpin the analysis of telecommunications networks.
B3 Demonstrate an understanding of the business, management and other contextual issues relevant to the field of telecommunication networks.

Attributes:

C1 Develop a global perspective, particularly with respect to the globalization of networking.
C2 Learn to engage critically with knowledge, and particularly with respect to measured network data in which many parameters are uncertain or non-stationary.
C3 Understand the importance of learning continuously in a fast-moving world of communications.

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 the 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.

How Will You Be Assessed?

The assessment of taught courses takes place through a written examination and coursework.

The project is examined on the basis of a written report, a formal oral presentation, and a demonstration of the piece of software
developed by the student.

How is the Programme Structured?

The programme is structured to enable students to have some choice within the programme, while having core modules
covering essential themes. The programme structure is as follows:

SEM A

ECS701P Communication Theory
ECS702P Mobile & WLAN Technologies
ECS703P 21 Century Networks
ECS705P Software & Network Service Design

SEM B

ECS724P Network Modelling & Performance
ECS725P Mobile Services

Two options from the following:

ECS728P Business Technology Strategy
ECS746P Network Planning, Finance and Management
ECS726P Security and Authentication
ECS757P Digital Media and Social Networks

SEM C

ECS750P - Project
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Academic Year of Study

<table>
<thead>
<tr>
<th>Module Title</th>
<th>Module Code</th>
<th>Credits</th>
<th>Level</th>
<th>Module Selection Status</th>
<th>Academic Year of Study</th>
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What Are the Entry Requirements?

The entry requirements are a first or upper-second class degree in Electronic Engineering, Computer Science, Mathematics or a related discipline. Applicants with unrelated degrees will be considered if there is evidence of significant relevant industrial experience. Applicants with lower-second class degrees may be considered if the undergraduate degree specialised in the relevant subjects.

For international students, English Language skills are required to a recognised standard. The minimum requirement is: IELTS 6.5, TOEFL (CBT) 242 or TOEFL (written test) 580. 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 Do We Listen and Act on Your Feedback?

There are four SSLC meetings each academic year, two in each teaching semester. The meetings act as a forum for both students and staff to raise issues about the programmes, individual modules or facilities. Each semester students are invited to complete a web-based questionnaire 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.

Academic Support

All students are assigned an academic advisor during induction week. The advisor role is to council students on their academic development including modules selection. The School has one Senior Tutor for Postgraduate students who responsible for the pastoral care of students.

Programme-specific Rules and Facts

To obtain an MSc a student must gain passes in six of the eight taught modules taken and must pass the project. The pass mark is 50% for individual modules, but compensation is allowed for failure of up to two modules provided the mark in the module is not less than 30% and the candidate’s average over all the taught courses is not less than 50%.
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Specific Support for Disabled Students
N/A

Links With Employers, Placement Opportunities and Transferable Skills
The programme is scrutinised by a School Industrial Advisory Panel. The Panel meets annually to discuss research and teaching matters pertinent to our field.

Programme Specification Approval

| Person completing Programme Specification | Rupal Vaja |
| Person responsible for management of programme | Dr John Schormans |
| Date Programme Specification produced/amended by School Learning and Teaching Committee | 5 Feb 2016 |
| Date Programme Specification approved by Taught Programmes Board | 5 Feb 2016 |