## PROGRAMME SPECIFICATION

<table>
<thead>
<tr>
<th>Awarding body/institution:</th>
<th>Queen Mary, University of London</th>
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<tr>
<td>Teaching institution (if different from above):</td>
<td>Queen Mary, University of London</td>
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<tr>
<td>Name of the final award and Programme title:</td>
<td>MSc in Electronic Engineering by Research</td>
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<tr>
<td>Duration of Study/Period of Registration</td>
<td>12 months (full-time)</td>
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| UCAS code:                        | H6T5  
                                          | H6X1  
                                          | H6X3 |
| QAA Benchmark Group               |                                  |
| Academic Department/s involved in programme delivery | School of Electronic Engineering & Computer Science |

If accredited by a professional/statutory body, please give the name, date of last accreditation visit, approximate date of next visit and details of exemptions that will be given to QMUL graduates.  

| If accredited by a professional/statutory body, please give the name, date of last accreditation visit, approximate date of next visit and details of exemptions that will be given to QMUL graduates. | N/A |

### Criteria for admission to the programme

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.

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.

Learning outcomes for the programme

- An understanding of the fundamental technical issues within the area of
  study, e.g. Digital Music Production
- 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

Teaching, learning and assessment strategies

- Research Methods module is organised using seminars and lectures by
  external speakers.
Three appropriate selected taught modules with assessed coursework and laboratory sessions in line with individual programme requirements.

Individual 120 credit research project, with weekly supervisions.

Project report and viva examination.

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Programme structure(s) and requirements, levels and modules

Students must undertake the core module Research Methods in Electronic Engineering. They select three 15 credit taught courses. All modules are Level M.

**Semester A**
- ELEM027 Research Techniques in Electronic Engineering (core)
- ELEM002 Advanced Software Technologies
- ELEM011 Internet Infrastructure
- ELEM014 Security & Authentication
- ELEM018 Advanced Transform Methods
- ELEM019 Real-Time Digital Signal Processing
- ELEM020 Fundamentals of Digital Signal Processing
- ELEM028 CAD Techniques for RF Electromagnetics
- ELEM031 Business Technology Strategy
- ELEM032 Digital Broadcasting
- ELEM044 Contemporary Studio Production

**Semester B**
- ELEM005 Network Modelling & Performance
- ELEM006 Multimedia Systems
- ELEM007 Intelligent Agents & Multi-Agent Systems
- ELEM012 Network Internet Databases
- ELEM015 Protocols for the Electronic Marketplace
- ELEM021 Music & Speech Processing
- ELEM023 Image & Video Processing
- ELEM025 Wireless Networks
- ELEM026 Satellite Communications
- ELEM028 CAD Techniques for RF Electromagnetics
- ELEM025 Wireless Networks
- ELEM026 Satellite Communications
- ELEM029 Antennas for Mobile Applications
- ELEM030 Radio Wave Propagation for Wireless Communications
- ELEM035 Music Analysis & Synthesis
- ELEM037 Ad hoc & Broadband Wireless
- ELEM038 Mobile Services
- ELEM041 Machine Learning
- ELEM043 Network Planning: Finance & Management
- ELEM046 Network Programming

**Semester C**
- ELEM111 MSc by Research Project
Quality assurance mechanism (please include details of: SSLC meetings, student feedback mechanisms, personal tutor arrangements, programme induction, programme review and monitoring.)

There is a programme induction in the core module Research Methods I. Students on the course will be represented by student members of the Computer Science SSLC. Student feedback and evaluations will be obtained through the usual channels. Each student will have a project supervisor.

Employers Links
Please provide details of any links with employers e.g.
• Details of advisory panels that include current or potential employers;
• Organisations that regularly employ graduates from this programme and the roles that graduates undertake.
• Student prizes donated by organisations that may offer employment to graduates from this programme.

If there are no links with employers consider the learning outcomes and transferable skills and explain how these might be used to inform employers about the qualities and skills a graduate from this programme might be expected to have.

The programme will develop skills in communications (written, verbal), planning and research which is relevant to both industrial practice. It also provides opportunities to develop solid theoretical and practical research competences in the student's chosen field of study and an additional degree qualification, supporting his/her employability.
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<thead>
<tr>
<th><strong>Person Completing Programme Specification</strong></th>
<th>Mark Jenkinson</th>
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<tbody>
<tr>
<td><strong>Person responsible for management of programme</strong></td>
<td>Dr Tony Stockman</td>
</tr>
<tr>
<td><strong>Date programme specification agreed by Department or teaching and learning committee</strong></td>
<td>2009</td>
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<tr>
<td><strong>Date of approval by Faculty Board/SMD Education Board</strong></td>
<td>N/A</td>
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<tr>
<td><strong>Date of update/amendment</strong></td>
<td>August 2009</td>
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