

Programme Specification

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| Awarding Body/Institution | Queen Mary, University of London |
| Teaching Institution | Queen Mary, University of London |
| Name of Final Award and Programme Title | BSc (Eng) Information Technology Management for Business with Industrial Experience |
| Name of Interim Award(s) | Cert HE, Dip HE, BSc |
| Duration of Study / Period of Registration | 4 years |
| QM Programme Code / UCAS Code(s) | NI11 |
| QAA Benchmark Group | |
| FHEQ Level of Award | Level 6 |
| Programme Accredited by | e-Skills |
| Date Programme Specification Approved | |
| Responsible School / Institute | School of Electronic Engineering & Computer Science |

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

School of Business & Management

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

e-Skills

Programme Outline

The ITMB degree (<http://www.e-skills.com/itmb>) has been developed with some of the UK's leading companies and Universities. It has proved over the last seven years that there is a clear demand from students and industry for a degree that combines business and technical learning objectives and skills in order to produce graduates who are ready for the workplace.

e-skills Technology Insights 2012 document states that "there are 1.5 million people working in IT & Telecoms in the UK – equivalent to around one in twenty of the working population. Of these individuals, 913,000 (59%) work in the IT & Telecoms industry itself whilst a further 633,000 (41%) work as IT or Telecoms professionals in other industries (the IT department of a retail chain or bank for example)". We cannot ignore the requirement for employees with these skills.

Forecasting by Experian, as referenced in the e-skills Technology Insights 2012 document concluded "that the growth of the IT & Telecoms sector is predicted to continue strongly to 2020. The IT professional workforce is forecast to grow at 1.62%, nearly twice as fast as the average employment growth of the UK. Growth is likely to manifest itself mainly amongst the more senior level/high value roles i.e. ICT managers, IT Strategy & Planning and Software Professional Roles." We can conclude that graduates are more likely to follow a senior level/high value role in these areas. The ITMB is the ideal degree programme to prepare students for these employment opportunities.

Programme Title: Information Technology Management for Business with Industrial Experience

Each provision of the ITMB degree is supported and influenced by industrial contacts and each university is given an industrial liaison and mentor. For QMUL EECS the industrial organisation mentor is SAS (www.sas.com) - SAS is the leader in business analytics software and services, and the largest independent vendor in the business intelligence market.

e-Skills provides significant support to universities offering the ITMB degree. This includes the mentoring above, plus weekly "Guru Lectures" – (see below) and two student events where all students on the ITMB degrees from all of the universities are invited to attend to meet with employers who are involved in the degrees. Students have the opportunity to attend interview sessions, enter competitions which involve work experience prizes etc. these events are unique to the students on the ITMB degree. The access to industry is the key unique selling point of this degree.

Special Features of the ITMB degree (from e-skills)

- ITMB students will attend specialist 'guru lectures' (where industry leaders give talks and impart their knowledge and expertise to students) and other UK-wide initiatives developed specifically for universities offering the ITMB degree.
- Students will work closely with business mentors on team-based project work in order to develop highly sought-after transferable skills.
- Students will tackle real business problems and projects geared to real work situations.
- Students will be able to get direct feedback on their CV and interview technique from employers.
- Students will be able to meet industry leaders and ask them questions.
- Students will visit companies and meet employees, helping them to make informed career choices as a result.
- Students will link up with ITMB students from other universities, giving them access to an exclusive network.

Why QMUL EECS and the ITMB?

QMUL EECS has a strong background in this area, having run the BSc (Eng) ICT with Business Management degree within EECS for over nine years producing a steady stream of good graduates.

Our significant USP is the type and varied research that the school covers. The research and teaching strengths of the school are broad, but some of the key areas for an IT graduate include QMedia (Centre for Digital Media, Interaction, Media and Communication, Media and Arts Technology & Multimedia and Vision), Antennas & Electromagnetics, Computer Vision, Networks (including Mobile and Cloud Computing), Risk and Information Management and Theoretical Computer Science. The former of these and indeed the overlap between each of the research and teaching groups gives the BSc (Eng) ITMB IE programme a theme which other versions of the ITMB may not deliver, which makes it a very attractive option for applicants.

The e-skills UK research document – Technology insights 2012 states that there is significant need for what they call "Future Skills" – Cloud Computing and Mobile Computing. These are both areas in which QMUL EECS has research groups. A quote from the document – "a large proportion of firms anticipate an increase in their use of cloud computing and mobile computing/applications over the coming year". EECS at QMUL is in a strong position to provide a version of the ITMB programme that includes modules covering these developing topics.

Athena Swan Bronze Award

An additional USP for QMUL EECS is the recent Athena Swan Bronze Award in recognition of the School's work to advance the careers of women in science. EECS is the first School at Queen Mary to achieve an Athena SWAN award, in recognition of its individual efforts to further equality in higher education. This is significant as another finding of the Technology Insights 2012 document is that "Gender remains a significant and worsening issue for the IT & Telecoms sector and in 2011, just 18% of IT & Telecoms professionals were female compared to an overall figure of 48% for the UK workforce as a whole". EECS should be seen as a school that welcomes students regardless of gender and actively encourages girls into technology based education and careers through different programmes.

Industrial Experience Placement Support

The degree proposal includes an industrial placement year in year three. Students will be encouraged to take this year, but an alternative completion path will be identified if they are unable to complete this year in industry.

EECS has several years' experience of industrial placement activities and support and employs one member of staff full time to manage this activity.

References: e-skills Technology Insights 2012;

[http://www.e-skills.com/education/he-and-fe/itmb/itmb-course-content/;](http://www.e-skills.com/education/he-and-fe/itmb/itmb-course-content/)

Aims of the Programme

The aim of this programme is to produce IT management graduates who are capable of making a real contribution to their new employer within a few months of graduation. It will equip students with key business, technology, interpersonal and project management skills that have been identified by employers and it will produce graduates with:-

- a broad background of business operations, procedures and culture applicable to a career in an IT environment
- sufficient technical knowledge to play a key role in an IT related environment
- personal and interpersonal skills enabling them to work closely and communicate with employees in non-IT related areas of an organisation
- a set of problem-solving and modelling skills appropriate to IT related business operations
- sufficient management and business knowledge to play a management role in an IT project
- with business experience in a project oriented environment

What Will You Be Expected to Achieve?

Students who successfully complete the degree programme should be able to

Academic Content:

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| A 1 | Broad knowledge of the IT sector, from both a technical and a business perspective |
| A 2 | Technical knowledge in key areas identified by contributing IT-related employers |
| A 3 | Understanding of business principles, structures, operations, procedures and cultures applicable to a career in an IT environment |
| A 4 | Grounding in project, people and resource management principles and techniques |

Disciplinary Skills - able to:

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| B 1 | Undertake problem-solving and modelling tasks relevant to IT-related business operations |
| B 2 | Work closely and communicate with employees in non-IT related areas of an organisation |
| B 3 | Investigate, select, analyse, manipulate and manage information from a variety of technical and non-technical sources |
| B 4 | Apply the technical skills learned in the taught component of the programme while on placement, and, vice versa, apply the technical skills learned while on placement when back in your final year of study |

Attributes:

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| C 1 | Able to have a global perspective and engage with the professional world |
| C 2 | Keen to learn continuously and develop the skills to influence, negotiate and lead |

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| C3 | Display initiative and resilience in the face of new challenges |
| C4 | Use information for evidence-based decision-making and creative thinking |

How Will You Learn?

The teaching and learning strategies are tailored to the learning outcomes of the different modules. These will include lectures, lab and tutorial sessions, practical and library-based research, presentations and group work. Lectures are used to introduce principles and methods and also to illustrate how they can be applied in practice, e.g. through examples and case studies. Lab and tutorial sessions will allow students to put these theoretical principles and methods into practice. Practical and library-based research will allow them to develop skills in review, investigative methods and critical analysis. Presentations and group work will enhance their team-working and communication skills. The overall profile of teaching and learning strategies is designed to foster the development of (i) Graduate Attributes, as captured in Queen Mary's Statement of Graduate Attributes and (ii) key skills, as captured in the e-skills UK endorsement criteria.

In addition, the programme includes a significant component of industrial input and experience. The series of "guru" lectures offers the opportunity for students to increase their awareness of the broader context of their discipline, hear a range of industrial speakers and ask questions. The industrial placement offers a real-world opportunity for them to apply the technical skills that they have learnt in the taught component of the programme. Students will receive full training in preparation for the placement, supported by the dedicated Industrial Placement Manager, who also provides support while they are out on placement.

Learning materials will be hosted on Queen Mary's tailored virtual learning environment, QMPlus. This will also provide access to announcement and discussion forums used for asynchronous support.

How Will You Be Assessed?

Taught modules are usually assessed through a combination of examination and coursework, as appropriate for the content and focus of each individual module. Laboratory-based modules are often assessed through practical coursework, while more theoretical modules may be assessed through in-class tests, exercise sheets or written assignments. Project work, both group and individual, forms a significant component of the assessment - project modules are assessed on the basis of a written report, oral presentation and demonstration of the concrete outcomes of the module, e.g. developed software. The assessment for the placement year includes an employer evaluation and the production of a reflective learning log, in addition to a report and oral presentation.

In addition to summative assessment, the programme provides regular opportunities for formative feedback, e.g. through the submission of a draft report for project modules. The School has a feedback policy, which stipulates standard requirements for acceptable types and timing of feedback. The School also uses the TurnItIn plagiarism detection system, and students will have the opportunity to submit some formative assignments to TurnItIn for feedback on the correctness and effectiveness of their referencing.

How is the Programme Structured?

SEMESTER 1

ECS401U Procedural Programming
ECS404U Computer Systems & Networks
ECS402U Professional and Research Themes
BUS001 Fundamentals of Management

SEMESTER 2

BUS017 Economics for Business
ECS417U Fundamentals of Web Technology
ECS418U Business Modelling
ECS419U Information Systems Analysis

ECS422U Skills for Electronic Engineering and Computer Science (runs in sem 1 & 2. Non credit bearing module).

Programme Title: Information Technology Management for Business with Industrial Experience

SEMESTER 3

ECS505U Software Engineering
 ECS507U Website Design & Authoring Tools
 ECS524U Internet Protocols & Applications
 BUS021 Financial Accounting

SEMESTER 4

ECS508U Business Information Systems
 ECS519U Database Systems
 ECS523U ICT Group Project
 BUS011 Marketing

SEMESTER 5 and 6 - Year In Industry

ECS550U Industrial Placement Project

SEMESTER 7

ECS635U Project
 ECS609U Project Risk Management
 Plus one from:
 ECS607U Data Mining
 ECS612U Interaction Design
 ECS650U Semi-Structured Data and Advanced Data Modelling
 Plus one from:
 ECS604U Entrepreneurship for IT
 BUS204 Strategy

SEMESTER 8

ECS635U Project
 BUS324 The Management of Human Resources
 Plus three from:
 ECS619U Network planning, Finance & Management
 ECS637U Digital Media and Social Networks
 ECS639U Web Programming
 ECS641U Communicating and Teaching Computing
 ECS647U Bayesian Decision and Risk Analysis

Academic Year of Study 1

| Module Title | Module Code | Credits | Level | Module Selection Status | Academic Year of Study | Semester |
|----------------------------------|-------------|---------|-------|-------------------------|------------------------|------------|
| ECS401U Procedural Programming | ECS401U | 15 | 4 | Core | 1 | Semester 1 |
| Computer Systems and Networks | ECS404U | 15 | 4 | Core | 1 | Semester 1 |
| Professional and Research Themes | ECS402U | 15 | 4 | Core | 1 | Semester 1 |

Programme Title: Information Technology Management for Business with Industrial Experience

| Module Title | Module Code | Credits | Level | Module Selection Status | Academic Year of Study | Semester |
|--------------------------------|-------------|---------|-------|-------------------------|------------------------|------------|
| Fundamentals of Management | BUS001 | 15 | 4 | Core | 1 | Semester 1 |
| Fundamentals of Web Technology | ECS417U | 15 | 4 | Core | 1 | Semester 2 |
| Business Modelling | ECS418U | 15 | 4 | Core | 1 | Semester 2 |
| Information Systems Analysis | ECS419U | 15 | 4 | Core | 1 | Semester 2 |
| Economics for Business | BUS017 | 15 | 4 | Core | 1 | Semester 2 |

Academic Year of Study 2

| Module Title | Module Code | Credits | Level | Module Selection Status | Academic Year of Study | Semester |
|-------------------------------------|-------------|---------|-------|-------------------------|------------------------|------------|
| Software Engineering | ECS505U | 15 | 5 | Core | 2 | Semester 1 |
| Website Design and Authoring Tools | ECS507U | 15 | 5 | Core | 2 | Semester 1 |
| Internet Protocols and Applications | ECS503U | 15 | 5 | Core | 2 | Semester 1 |
| Financial Accounting | BUS021 | 15 | 4 | Core | 2 | Semester 1 |
| ICT Group Project | ECS523U | 15 | 5 | Core | 2 | Semester 2 |
| Database Systems | ECS519U | 15 | 5 | Core | 2 | Semester 2 |
| Business Information Systems | ECS508U | 15 | 5 | Core | 2 | Semester 2 |
| Marketing | BUS011 | 15 | 5 | Core | 2 | Semester 2 |

Academic Year of Study 3

Programme Title: Information Technology Management for Business with Industrial Experience

| Module Title | Module Code | Credits | Level | Module Selection Status | Academic Year of Study | Semester |
|------------------------------|-------------|---------|-------|-------------------------|------------------------|-----------------|
| Industrial Placement Project | ECS550U | 30 | 5 | Core | 3 | Semesters 1 & 2 |

Academic Year of Study 4

| Module Title | Module Code | Credits | Level | Module Selection Status | Academic Year of Study | Semester |
|--|-------------|---------|-------|-------------------------|------------------------|-----------------|
| Project | ECS635U | 30 | 6 | Core | 4 | Semesters 1 & 2 |
| Strategy | BUS204 | 15 | 5 | Core | 4 | Semester 1 |
| Project Risk Management | ECS609U | 15 | 6 | Elective | 4 | Semester 1 |
| Advanced Database Systems & Technology | ECS613U | 15 | 6 | Elective | 4 | Semester 1 |
| Entrepreneurship for IT | ECS604U | 15 | 6 | Elective | 4 | Semester 1 |
| Interaction Design | ECS612U | 15 | 6 | Elective | 4 | Semester 1 |
| The Management of Human Resources | BUS324 | 15 | 6 | Core | 4 | Semester 2 |
| Network Planning, Finance and Management | ECS619U | 15 | 6 | Elective | 4 | Semester 2 |
| Software Risk Assessment | ECS621U | 15 | 6 | Elective | 4 | Semester 2 |
| Data Mining | ECS626U | 15 | 6 | Elective | 4 | Semester 2 |

What Are the Entry Requirements?

S/A-level:

Typical tariff or grades required: AAB-BBB (340-300 points)

Additional information: Grade B GCSE Mathematics minimum. Science-related subjects are preferred.

International Baccalaureate:

Acceptability: Acceptable on its own and combined with other qualifications. Subjects and grades required: 32-34 points for MEng and BSc(Eng).. Must include Mathematics HL at least six points for all BSc programmes.

Vocational and other qualifications:

Vocational and other qualifications:

The College accepts a wide range of qualifications such as; Access and Foundation programmes, vocational awards, Irish Leaving

Certificate, Scottish Highers and other Baccalaureates. Please visit our further information page below.

Further information on our entry requirements.

Admission is based on academic merit and on the proven ability of the applicant to achieve success on their chosen programme of study. Every application to Queen Mary is considered on its individual merits with personal statement and reference taken into consideration.

IELTS 7.0

IBTOEFL* 92

PTE Academic 62

How Do We Listen and Act on Your Feedback?

The Staff-Student Liaison Committee provides a formal means of communication and discussion between schools/institutes and its students. The committee consists of student representatives from each year in the school/institute together with appropriate representation from staff within the school/institute. It is designed to respond to the needs of students, as well as act as a forum for discussing programme and module developments. Staff-Student Liaison Committees meet regularly throughout the year.

Each school/institute operates a Learning and Teaching Committee, or equivalent, which advises the School/Institute 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 the committee's work in a number of ways, such as through student membership, or consideration of student surveys.

All schools/institutes operate an Annual Programme Review of their taught undergraduate and postgraduate provision. APR is a continuous process of reflection and action planning which is owned by those responsible for programme delivery; the main document of reference for this process is the Taught Programmes Action Plan (TPAP) which is the summary of the school/institute's work throughout the year to monitor academic standards and to improve the student experience. Students' views are considered in this process through analysis of the NSS and module evaluations.

Academic Support

Personal Advisor

All students are allocated a personal advisor for each academic year. Advisors are members of academic staff who provide advice and support to students. They have two main roles: academic and pastoral. First year students will meet their Advisor at the beginning of the academic year and then again during Week 7 of the first and second semester.

In their academic capacity, advisors advise on, and approve, programmes of study.

If you are considering changing your programme of study, or taking a module that does not appear on your recommended programme, you must discuss this with your advisor. Any other academic-related concerns, e.g. general academic progress, should be discussed with your advisor in the first instance. Please note that, in this School, the role of advisor is separate from that of senior tutor.

In their pastoral capacity, advisors are the first point of contact in case of personal problems or concerns. Advisors recognise that personal problems can severely affect a student's academic performance, and they will provide a sympathetic and non judgmental ear, as well as practical help. They can also direct students to other College support services, where appropriate. Discussions with students will always be treated in confidence. However, in cases where academic performance is affected by personal problems, the School must be officially informed, and advisors can also guide students through the correct procedures for doing this.

Advisors can be asked to provide academic references for students for job and other applications after leaving university, and this is another good reason for building and maintaining a good student/advisor relationship.

Senior Tutor

Programme Title: Information Technology Management for Business with Industrial Experience

The School has three Senior Tutors who are led by the Senior Tutor coordinator, Dr Tassos Tombros. Each Senior Tutor looks after specific students; Dr Tassos Tombros looks after Undergraduate Computer Science students, Mrs Rachel Appleton, Undergraduate Electronic Engineering and Dr Akram Alomainy looks after Postgraduate taught students. A Senior Tutor is a member of the academic staff who acts as a further point of reference for problems and decisions faced by Computer Science students. Like advisors, the Senior Tutor has two main roles: academic and pastoral. Students should usually contact their own advisor first for advice, but an advisor may recommend that a student consult the Senior Tutor for either academic or pastoral reasons. If a student finds difficulty talking to their own advisor, they may consult the Senior Tutor directly. The Senior Tutor also serves as the Chair of Student-Staff Liaison Committee (SSLC).

Programme-specific Rules and Facts

N/A

Specific Support for Disabled Students

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 ITMB degree has been developed by e-Skills UK as a collaboration between some of the UK's leading companies and 14 Universities. It is a unique programme and it has proved over the last seven years that there is a clear demand from students and industry for a degree that combines business and technical learning objectives with business skills in order to produce graduates who are ready for the workplace. Endorsement will be given by e-Skills UK.

Programme Specification Approval

Programme Title: Information Technology Management for Business with Industrial Experience

Person completing Programme Specification

Rachel Appleton

Person responsible for management of programme

Rachel Appleton

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

12 Feb 2016

**Date Programme Specification approved by
Taught Programmes Board**