Queen Mary
University of London

Programme Specification (UG)

Awarding body / institution:	Queen Mary University of London
Teaching institution:	Queen Mary University of London
Name of final award and programme title:	BEng Electronic Engineering with Foundation
Name of interim award(s):	Foundation Certificate (FdCert) - as an exit award only
Duration of study / period of registration:	4 years
QMUL programme code / UCAS code(s):	HHX0, USEF-QM4ELE1, USELE
QAA Benchmark Group:	
FHEQ Level of Award :	Level 3
Programme accredited by:	
Date Programme Specification approved:	13 Jan 2022
Responsible School / Institute:	School of Electronic Engineering & Computer Science

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

School of Biological & Behavioural Sciences

School of Physical and Chemical Sciences

School of Languages, Linguistics & Film

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

Programme outline

The BEng Electronic Engineering with Foundation provides an alternative route onto an Electronic Engineering degree, combining a foundation year with a traditional university degree in an integrated four-year programme (1+3). QMUL offers tailored pathways for subjects across science and engineering integrated with a Foundation year.

BEng Electronic Engineering with Foundation is open to UK and EU/International students. Our face-to-face sessions are taught entirely at the Mile End campus by university staff. In-line with Queen Mary's 2030 Strategy, high quality learning resources and interactive sessions with academic staff will be available online. As a foundation student, you have access to all QMUL's facilities and will be a full-time student of the university. Both UK and EU/International students should apply directly through UCAS.

Highlights:

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Programme Title: BEng Electronic Engineering with Foundation

- Opportunity to progress onto Electronic Engineering undergraduate degrees
- Study at campus-based university within easy reach of all of London's attractions
- Eligible for funding through Student Loans Company (UK/EU students only)
- Full access to all student facilities (academic, welfare, IT, library, social and sport)
- Experienced and well-qualified teaching staff, many of whom teach on undergraduate and postgraduate programmes

Aims of the programme

The foundation year will equip you with the skills and knowledge to undertake an undergraduate degree in Electronic Engineering. Successful completion of this programme at the appropriate level guarantees you a place on one of the following electronic engineering degrees at QMUL, without having to re-apply through UCAS:
BEng Electrical and Electronic Engineering (H600, H602)
BEng Electronic Engineering (H610, H611)
BEng Computer Systems Engineering (HI62, H163)
BEng Robotics Engineering (H67A, H673)

What will you be expected to achieve?

- Pass 105 credits including SEF030 Communication in Science and Technology and SEF041 Mathematics B.
- Achieve an overall average of 55%
- For progression onto particular programmes there may be additional requirements. Please check the handbook or contact fedu@qmul.ac.uk for more information.

Please note that the following information is only applicable to students who commenced their Level 4 studies in 2017/18, or 2018/19

In each year of undergraduate study, students are required to study modules to the value of at least 10 credits, which align to one or more of the following themes:

- networking

- multi- and inter-disciplinarity

- international perspectives

- enterprising perspectives.

These modules will be identified through the Module Directory, and / or by your School or Institute as your studies progress.

	Academic Content:
A 1	Mathematical topics such as algebra, functions, geometry and trigonometry, and an introduction to the techniques of calculus.

A2	Understanding of key networks concepts, including principles of communication and structure of the internet.
A3	Introduce logic gates in combinatorial and simple sequential circuits, and specification techniques including truth tables, Boolean algebra, timing diagrams and state machines.
A4	Electrical circuits. Understand and apply Ohms law R = VI; calculate the combined resistance of series and parallel resistors; understand and apply formulae to calculate the power dissipated in a circuit.

Disciplinary Skills - able to:	
B1	to have a good understanding of A-level mathematical techniques and their usage in solving problems.

Attributes:	
C1	To grasp the principles and practices of their field of study
C2	To produce analyses which are grounded in evidence
C3	To apply their analytical skills to investigate unfamiliar problems
C4	To work individually and in collaboration with others
C5	To develop a strong sense of intellectual integrity
C6	To acquire substantial bodies of new knowledge

How will you learn?

Independent study
For every hour spent at university you will be expected to complete additional hours of independent study. Your individual study time could be spent preparing for, or following up on formal study sessions; reading; and revising for examinations.
The direction of your individual study will be guided by the formal module structure and taught sessions you attend, along with your reading and assignments. However, we expect you to demonstrate an active role in your own learning by reading widely and expanding your own knowledge, understanding and critical ability.
Independent study will foster in you the ability to identify your own learning needs and determine which areas you need to focus on to become proficient in your subject area. This is an important transferable skill and will help to prepare you for the transition to working life.

How will you be assessed?

To pass a module, you must achieve an overall mark of 40% or above. The overall mark in most modules is based on your performance in both the examination and coursework, the weighting of these two components varies per module.

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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.

Structure
The programme structure outlined below is indicative of what you will study. It may change slightly from year to year as new topics are introduced and after we have listened to current student feedback on teaching.

You will take 8 modules in total over two semesters, starting in September.

Year Long Modules
Compulsory:
SEF041 Mathematics B

Semester 1
Compulsory
SEF005 Physics – Mechanics and Materials
SEF030 Communication in Science & Technology
SEF034 Computing

Semester 2
Compulsory
SEF006   Fields and Waves
SEF007 Physics – Electricity and Atomic Physics
SEF035 Digital Electronics and Computer Systems

Academic Year of Study

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Communication in Science & Technology	SEF030	15	3	Core	0	Semester 1
Mathematics B	SEF041	30	3	Compulsory	0	Semesters 1 & 2
Physics - Mechanics and Materials	SEF005	15	3	Compulsory	0	Semester 1
Computing	SEF034	15	3	Compulsory	0	Semester 1
Physics - Electricity and Atomic Physics	SEF007	15	3	Compulsory	0	Semester 2
Digital Electronics and Computer Systems	SEF035	15	3	Compulsory	0	Semester 2
Physics - Fields and Waves	SEF006	15	3	Compulsory	0	Semester 2

What are the entry requirements?

A-level: Grades BCC at A-Level. This must include grade B in A-Level Mathematics. Excludes General Studies.

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IB: International Baccalaureate Diploma with a minimum of 26 points overall, including 5,4,4 from three Higher Level subjects. This must include 5 in Higher Level Mathematics.
BTEC: See our detailed subject and grade requirements: https://www.qmul.ac.uk/undergraduate/apply/entry/btec/
Access qualifications are not considered for entry to this programme.

 Minimum five GCSE passes including English at grade C or 4 and Maths at grade B or 5.

Entry requirements for BEng Electronic Engineering with Foundation are lower than for direct entry to a three-year BSc. If you would like to discuss your individual situation, you can contact the admissions team via email at eecs-ug-enquiries@qmul.ac.uk

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

The Education Committee advises the School's 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 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 consideration of student surveys and input from the SSLC.

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.

What academic support is available?

Each student is provided with an Advisor who is their main point of contact for advice regarding academic matters and for assistance with pastoral concerns, throughout their whole programme. Students can see their advisors in their office hours or arrange an appointment via email. Moreover, if and when advisors are unavailable or cannot help with a specific problem, the School has several Senior Advisors to assist with student concerns.

The School also operates a PASS (Peer Assisted Study Support) programme for peer guidance.

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.

Programme-specific rules and facts

N/A

Links with employers, placement opportunities and transferable skills

Electronic engineers are in demand in sectors including aerospace, automotive, construction, electronics, defence, petrochemicals, pharmaceuticals, transportation and telecommunications.

Recent electronic engineering graduates have been hired by:

Boots
Goldman Sachs
Network Rail

Programme Specification Approval

Person completing Programme Specification:	Sarahlouise Lawrence
Person responsible for management of programme:	Prof. Yue Chen
Date Programme Specification produced / amended by School / Institute Learning and Teaching Committee:	13 Jan 2022
Date Programme Specification approved by Taught Programmes Board:	13 Jan 2022