Programme Title: Foundation Certificate in Science & Engineering, Science and Engineering Foundation Programme

Programme Specification

Awarding Body/Institution	Queen Mary University of London
Teaching Institution	Queen Mary University of London
Name of Final Award and Programme Title	BSc/BEng/MSci/MEng (subject to field and duration of study)
Name of Interim Award(s)	Foundation Certificate in Science & Engineering (of Queen Mary, University of London), for those students successfully completing Level 3 studies but not continuing studies at QMUL at a higher level
Duration of Study / Period of Registration	4-5 years (1-year foundation-level; plus 3 or 4 years degree- level study)
QM Programme Code / UCAS Code(s)	FGH0 / FFX1, FFY1, CCX1, FFX7, FFX3, FFY3, GGX1, GGY1, HHX6, HHY6,
QAA Benchmark Group	
FHEQ Level of Award	Level 3
Programme Accredited by	
Date Programme Specification Approved	
Responsible School / Institute	School of Biological & Chemical Sciences

Schools which will also be involved in teaching part of the programme
School of Electronic Engineering & Computer Science
School of Engineering & Materials Science
School of Mathematical Sciences
School of Physics and Astronomy

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

Programme Outline

The SEFP integrates a foundation year with a traditional university degree programme, giving an extended degree programme in science and engineering. It is designed for students who satisfy the general entrance requirements, but do not meet the special entry requirements for direct entry onto their chosen degree programme. After successfully completing the foundation year, students may progress onto one of the regular degree programmes offered at Queen Mary, University of London. The SEFP therefore typically leads to the award of a University of London Bachelor of Science (BSc) or Bachelor of Engineering (BEng) degree after four years of study, or University of London MSci/MEng degrees after five years of study.

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Aims of the Programme

The aim of the foundation year is to equip students with the skills and knowledge to enable them to successfully undertake a degree programme at Queen Mary in one of the following fields: Biological & Chemical Sciences; Computer Science; Electronic Engineering; Engineering & Materials Science; Mathematical Sciences; Physics

The SEFP seeks to achieve this by providing students in Year 0 with a thorough background in mathematics and training in English language / communication skills, along with the opportunity to further strengthen and develop their understanding of one or more of the following core scientific fields: biology, chemistry, engineering and physics.

What Will You Be Expected to Achieve?

By the end of the foundation year, students who meet the progression criteria should be:
- able to communicate effectively in written and spoken English
- able to manage their time and to study independently
- familiar with the learning and teaching styles employed in higher education
- able to use the library and other sources of information effectively
- able to carry out mathematical calculations at a level appropriate to their intended progression route
- able to demonstrate an understanding of concepts and applications in subject areas relevant to their intended progression route

Academic Content:	
A 1	Mathematical techniques including algebra, matrices, trigonometry, calculus, polynomial and exponential functions and graphical.
A 2	Computing and communication methods for engineering and general applications.

Disciplinary Skills - able to:	
B 1	Analyse data and organise information for effective communication and presentation.
B 2	Select and apply mathematical techniques to solve problems and to analyse data
B 3	Apply IT, spreadsheets and database software for analysis and communication.

Attributes:	
C 1	Manage time, prioritise activities and work to timescales.

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C 2	Reflect upon work and plan for personal development.
C 3	Communicate effectively in writing and presentations.
C 4	Use software applications for word-processing, spreadsheets, communication, presentation and research.

How Will You Learn?

Independent learning is encouraged through research tasks for assignments and in the requirement to plan work schedules to meet deadlines for coursework submission.
Lecture and tutorials are supplemented by on-line resources in various formats such as video lectures, multiple-choice questions, quizzes, forums. The use of the VLE will provide the student with the opportunity to access and revisit material such for revision and reinforcement.
The development of transferable/key skills is pervasive, incorporated into assignments as appropriate, e.g. team-working skills are fostered via group-based practical tasks. Reflection and self awareness are encouraged through self assessment logbooks to support of personal planning and performance.
Formative assessment occurs in various ways throughout the programme, typically involving feedback in tutorials and opportunities for on-line tasks and quizzes that provide immediate feedback. Students can take examples of their work to tutors in the Learning Centre for formative feedback on, for example, written work.

These teaching, learning and assessment strategies will be similar to those employed in the first year of Queen Mary degree programmes in the science and engineering sector. Individual modules will generally consist of formal lectures (typically 2-3 h per week), supplemented by tutorials, practical or problem classes.

How Will You Be Assessed?

Assessment will generally be by means of a combination of coursework and final examination (with a coursework weighting of no less than 30% to the total mark, so as to encourage students to recognise the importance of completing coursework as part of the learning process).

How is the Programme Structured?

The full range of modules available as part of the foundation year is given in Appendix 1: all modules are chased as being of Level 3.

Programme Structure & Module Registration

All students must register for 8 modules of 15 credits each (4 modules in Semester A, and 4 modules in Semester B), including:
• two core mathematics modules (either SEF014 and SEF001, or SEF001 and SEF002);
• the SEF030 Communication in Science & Technology module;

International students (and those students whose first language is not English) will normally also be required to register for the SEF009 English Language 1 module.

The remaining modules for which a student is registered are determined by the specific programme code, and the exact degree onto which the student intends to progress. For each of the programme codes, there is a diet for the foundation year (see Appendix 2), which identifies the core modules (i.e. those that must be taken and passed) and also the range of other available options.

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Minimum Progression Requirements

In order to progress into year 1 of any degree programme at Queen Mary, a student must pass a minimum of 105 credits, including the SEF030 Communication in Science & Technology module, and also pass all core modules for their specific programme (the core modules being those designated as such in the programme diet, given in Appendix 2).

To gain progression into year 1 to follow a particular degree programme a student must also meet any additional progression criteria specified for the degree programme of concern. These progression criteria are published in the SEFP Student Handbook at the beginning of each academic session.

Academic Year of Study

Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Communication in Science & Technology	SEF-030	15	3	Elective		Semesters 1 & 2
English Language	SEF-009	15	3	Elective		Semester 1
Principals of Mathematics	SEF-014	15	3	Elective		Semester 1
Mathematics 1	SEF-001	15	3	Elective		Semesters 1 & 2
Essential Foundation Mathematics	SEF-026	15	3	Elective		Semester 1
Introductory Chemistry	SEF-0003	15	3	Elective		Semester 1
Physics - Mechanics and Materials	SEF-005	15	3	Elective		Semester 1
Form and Function in Biology	SEF-031	15	3	Elective		Semester 1
Mathematics 2	SEF-002	15	3	Elective		Semester 2
Discrete Mathematics	SEF-015	15	3	Elective		Semester 2
A Closer Look at Chemistry	SEF-004	15	3	Elective		Semester 2
Physics - Fields and Waves	SEF-006	15	3	Elective		Semester 2
Physics - Electricity and Atomic Physics	SEF-007	15	3	Elective		Semester 2

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Module Title	Module Code	Credits	Level	Module Selection Status	Academic Year of Study	Semester
Introduction to Engineering	SEF-024	15	3			Semester 2
Molecules to Cells	SEF-032	15	3			Semester 2
Diversity and Ecology	SEF-033	15	3			Semester 2
Computing	SEF-034	15	3			Semester 2

What Are the Entry Requirements?

Admission is by direct entry to Queen Mary 2 passes at GCE A2-level, or at least 240 points, or equivalent.

How Do We Listen and Act on Your Feedback?

The Student-Staff Liaison Committee (SSLC) 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 Teaching and Learning Committee (TLC), 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

Each student will have a departmental tutor ("adviser"), who will normally be a permanent academic member of staff of their "home" department (that is, the academic department responsible for admissions to the specific variant of the programme onto which the student has been enrolled). This person will act as a personal tutor, but students will also have scheduled tutorials with their adviser as part of the requirements for the Communication in Science & Technology module. Additional support on pastoral matters is available for international students enrolled on the programme.
Student feedback will be obtained by means of:
• the SSLC; meeting no less than twice per academic session;
• module evaluation questionnaires for individual modules.

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Further informal feedback is provided by means of contact between students and their advisers, as well as meetings of students with the SEFP Academic Director and International Officer.

Programme-specific Rules and Facts

The following special regulations apply to the foundation year of the SEFP:

Resit Opportunities

A candidate who fails a course at the first attempt may resit the examination for that course unit on one further occasion. The resit examination will normally be held during the Late Summer Examination period immediately following the first attempt. Exceptionally, the relevant Subject Examination Board may permit a student to defer a resit to a subsequent occasion. The form of the resit examination shall be at the discretion of the Subject Examination Board. The maximum mark attainable in any resit of a module shall be 40%.

Award if the Foundation Certificate in Science & .Engineering

Award of the Foundation Certificate in Science & Engineering shall be made to those students who have passed 105 credits at Level 3, including a pass in the core SEF030 module, after the first developmental year, but who do not progress onto Level 4 study on a QMUL degree programme.

(Note- this may occur due to a failure to meet other specified progression criteria or due to student withdrawal after completion of their Level 3 studies)

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

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Programme Specification Approval

Person completing Programme Specification	Dr Chris G Faulkes et al.
Person responsible for management of programme	Dr Chris G Faulkes
Date Programme Specification produced/amended by School Learning and Teaching Committee	3 Sep 2015
Date Programme Specification approved by Taught Programmes Board	

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