

PROGRAMME SPECIFICATION

Course record information

Name and level of final award:	Awards determined by module credits achieved after progressing onto the parent degree course.
Awarding body/institution:	University of Westminster
Teaching Institution:	University of Westminster
Status of awarding body/institution:	Recognised Body
Location of delivery:	Central London, New Cavendish Street site
Language of delivery and assessment:	English
Mode, length of study and normal starting month:	Full time, 1 year, September start.
QAA subject benchmarking group(s):	N/A (Foundation Year only)
Professional statutory or regulatory body:	Institution of Engineering and Technology (IET)
Date of course validation/review:	March 2015
Date of programme specification approval:	July 2015
Valid for cohorts:	2016/17
Course Leader:	Katerina Christofylaki
UCAS code and URL:	H653, H656, G427, G425, H608, H607 http://www.westminster.ac.uk/courses/undergraduate

What are the minimum entry requirements for the course?

There are standard minimum [entry requirements](#) for all undergraduate courses. Students are advised to check the standard requirements for the most up-to-date information.

westminster.ac.uk/courses/undergraduate/how-to-apply

For most courses a decision will be made on the basis of your application form alone. However, for some courses the selection process may include an interview to demonstrate your strengths in addition to any formal entry requirements.

More information can be found here: westminster.ac.uk/courses/undergraduate/how-to-apply

Aims of the course

The Foundation year aims to:

- provide the opportunity for students from varied backgrounds to acquire the knowledge and skills necessary to progress successfully to completion of an undergraduate degree course within the Department of Engineering;
- promote interest in, and enthusiasm for, the study of electronic systems engineering, computer system engineering, networks and communications;
- balance the desire for wide access with the challenging nature of the BEng/BSc courses, so that as many people as possible are given the opportunity to prepare for degree places, but only those demonstrably suitable for BEng/BSc Honours study are permitted to continue;
- provide modules whose content and delivery style are suited to the diverse backgrounds and previous experience of foundation students, whilst preparing them for the pace and standards of Level 4 BEng/BSc courses.

What will you be expected to achieve?

Learning outcomes are statements on what successful students have achieved as the result of learning. These are threshold statements of achievement and they broadly fall into four categories:

- The overall **knowledge and understanding** you will gain from your course (KU).
- **Graduate attributes** are characteristics that you will have developed during the duration of your course (GA).
- **Professional and personal practice learning outcomes** are specific skills that you will be expected to have gained on successful completion of the course (PPP).
- **Key transferable skills** that you will be expected to have gained on successful completion of the course (KTS).

Level 3 Learning Outcomes

Upon completion of the Foundation year, students will be able to:

- L3.1. Have general mathematical awareness and be confident with mathematical skills in tackling engineering problems; (KTS, GA)
- L3.2. Analyse simple problems and synthesise appropriate solutions using engineering methods, as taught; (KU, KTS).
- L3.3. Read, use and create simple descriptions in words, mathematics or diagrams of electronic, software and mathematical concepts; (KTS, PPP).

- L3.4. Demonstrate knowledge and understanding of technology related to electronics, computer systems and networks; (KU, GA).
- L3.5. Communicate technical information through written work and/or oral presentations, work individually or as part of a group with guidance from staff, be able to learn through reflection and review; (PPP).
- L3.6. Demonstrate given prescribed methods, design, implement, debug and test simple programs in a high-level language; (KTS, GA).

How will you learn?

The principal aim of this course is to equip you with the essential and appropriate skills required for undergraduate study in engineering. The fundamental principle underlying the teaching methods used on this course is “learning by doing” and learning focuses on active student participation, inquiry, problem-solving, collaboration, creative dialogue and critical thinking. That is, in order to learn and understand the engineering skills and techniques required, you cannot just read about them - you need to practise them.

To prepare you for this, the learning in your course will not take place only in the class. Your learning will use diversity of methods, each supporting the others:

Lecture/seminar sessions will give you access to expertise and present you with the core knowledge you need in your subject.

Practical laboratory sessions will allow you to enrich the learning from lectures and understand, apply and strengthen your skills in solving real problems under the guidance of a tutor.

Problem sheets and investigations will further develop your skills in applying the core knowledge you gained across different modules to analyse a given problem to support “learning by doing” ethos.

Projects (group and individual) will develop your transferable skills, such as problem solving, team working, leadership and negotiation skills, time management skills, communicating noticeably in electronics, computer systems, networks and communications through written and oral form.

Blended learning will empower you to take control over your studying, making you an effective and independent learner.

Technology- enhanced learning is promoted through Blackboard, the University’s virtual learning environment used also to disseminate the content of modules and courses. You will use Blackboard to gain access to the information relevant for your module such as study resources, tutorial work etc. Blackboard has numerous facilities including announcements, discussion boards, communication areas for groups, email, blogs, wikis, e-portfolios, enabling greater interaction between you, academic staff and other students.

Independent study time will let you take more control of your own learning and give you the framework that will help you to study and keep on learning without supervision.

Personal development will allow you to complement your knowledge with the specific specialised skills that meet your individual needs.

One of the main features of the course is “learning by doing” which is best supported by group project work. Group project work allows you to engage with your course at the practical level by integrating the knowledge you gained in all modules across your course and applying it to real world problem by further strengthening the connection between theory and practice. Working in a group, tackling a real world problem encourages you to combine all elements of your learning from different parts of the course and integrate and apply your skills, knowledge and understanding across your course as a whole.

Unlike some programmes with a wide choice of separate modules, this course builds on tightly interrelated themes. They have been designed to fit together, and it is vital that knowledge and skills feed across from one subject to another. Staff teaching the modules have experience across a range of engineering areas, and you will be expected to develop the same without compartmentalising ideas.

How will you be assessed?

The modules in comprising this course share a common assessment strategy, where assessment is viewed as part of the learning process. As well as ensuring that students have met the module learning outcomes, assessment will, where possible and appropriate, be:

- formative (helping students to learn);
- rigorous (not easily copied or passed without appropriate knowledge and skill);
- challenging (requiring understanding, not just memorising of facts or mathematical tricks);
- relevant to the application of the subject.

Module assessment consists of formative tasks and summative assessment.

Formative tasks include a number of activities enabling learning by doing such as practical laboratory work, problem solving, class voting, computer-based testing and others. The formative tasks do not carry any marks instead they are used for student interaction, peer marking and provide a number of opportunities for feedback, dialogue and action given a specific topic. Formative tasks take place throughout the module life and shall precede the summative assessment.

Summative assessment consists of laboratory work, problem sessions under exam conditions and other coursework assignments, which are designed to meet module learning outcomes. Summative assessment grades performance and student achievement.

Modules may include between one or two aspects of assessment making up the total mark. There are minimum marks for each aspect. This means, for example, that students cannot make up for a very poor exam mark by getting an excellent coursework mark nor can they depend on a good group mark, due to the efforts of other group members, to compensate for a very poor individual mark.

A wide variety of assessment methods are used, including

- In-class tests
- Group work
- Laboratories
- Viva-voce examinations
- Formal examinations
- Written reports
- Presentations and posters
- Computer-based quizzes and exercises
- Design and implementation of hardware and software
- Analysis, testing and modification of existing hardware or software
- Participation in class activities such as interactive question-and-answer sessions

Employment and further study opportunities

University of Westminster graduates will be able to demonstrate the following five Graduate Attributes:

- Critical and creative thinkers
- Literate and effective communicator
- Entrepreneurial
- Global in outlook and engaged in communities
- Social, ethically and environmentally aware

University of Westminster courses capitalise on the benefits that London as a global city and as a major creative, intellectual and technology hub has to offer for the learning environment and experience of our students.

The planned destination of the Engineering Foundation is the BEng and BSc degrees taught within the Department of Engineering with the aim to prepare you for further studies as an undergraduate student in any of our engineering based degrees. On successful completion, you will have all the necessary skills required for the degrees, ranging from technical skills to that of soft skills. In the past, students coming from the Foundation year have demonstrated a better track record of managing within the undergraduate degree programmes in comparison to direct entry students.

Course structure

This section shows the six modules available as part of the Engineering Foundation course and their credit value. Full-time Foundation students study 120 credits.

Credit Level 3				
Module code	Module title	Status	UK credit	ECTS
3ELEN002W	Engineering Mathematics	Core	20	10
3ELEN005W	Programming	Core	20	10
3NTCM001W	Computers and Networks	Core	20	10
3ELEN001W	Electronics fundamentals	Core	20	10
3ELEN003W	Introduction to Communications	Core	20	10
3ELEN004W	Problem Solving & Professional Practice	Core	20	10

The course has been designed with reference to:
 UK-SPEC (Engineering Council's UK Standard for Professional Engineering Competence)
The Accreditation of Higher Engineering Programmes
 QAA Subject Benchmark for Engineering
 Also:
 QAA Guidelines for Preparing Programme Specifications
 SEEC Credit Level Descriptors for Further and Higher Education

Academic Regulations

The current Handbook of Academic Regulations is available at westminster.ac.uk/academic-regulations

Progression Requirements

The overall criterion is that the students are likely to be successful in any of the courses to which they are allowed to progress. To that end, the Progression Board will take into account the entire academic profile of each student.
 Students must normally pass 120 credits of which not more than 20 are condoned.

Assessment of Modules

A *pass* in a module is achieved when the overall mark is greater than or equal to 40%; with at least 30% in the final assessment and any qualifying marks and/or sets achieved as detailed in the module handbook.

Condoned Credit at Level 3

A student may be awarded condoned credit at Level 3, on the condition that the failed element(s) of assessment has been attempted at both the first opportunity, and where he/she has achieved:

- (a) an overall module mark of greater than or equal to 30% but less than 40%;
- (b) an overall mark of 40% or greater but not reached the required qualifying mark(s) and/or qualifying set(s) as detailed in the module handbook.

Where a student is awarded condoned credit, the recorded module mark will be capped at 40%. Condoned credit will count towards any credit limits for specified awards. Where a student is awarded condoned credit in a module but subsequently achieves an overall pass at a re-take, credit may contribute only once to an award.

Referrals

Referrals will not be given for Engineering Foundation modules and students repeat the modules they failed in the following academic year.

How will you be supported in your studies?

Course Management

This course is managed by staff from the Department of Engineering in the Faculty of Science and Technology. The Course Team consists of lecturers on individual modules, the Head of Department and technical support staff. The day-to-day running of each course is the responsibility of the Course Leader, while the strategic direction of the courses and the allocation of staff is the responsibility of the Head of the Department. The Dean of the Faculty of Science and Technology takes overall responsibility for all departments within it.

Academic Support

Upon arrival, an induction programme will introduce you to the staff responsible for the course, the campus on which you will be studying, the Library and IT facilities, additional support available and to your Faculty Registry Office. You will be provided with the Course Handbook, which provides detailed information about the course. Each course has a course leader or Director of Studies. All students enrolled on a full-time course and part time students registered for more than 60 credits a year have a personal tutor, who provides advice and guidance on academic matters. The University uses a Virtual Learning Environment called Blackboard where students access their course materials, and can communicate and collaborate with staff and other students.

Learning Support

The Academic Learning Development Centre supports students in developing the skills required for higher education. As well as online resources in Blackboard, students have the opportunity to attend Study Skills workshops and one to one appointments.

Learning support includes four libraries, each holding a collection of resources related to the subjects taught at that site. Students¹ can search the entire library collection online through the Library Search service to find and reserve printed books, and access electronic resources (databases, e-journals, e-books). Students can choose to study in the libraries, which have areas for silent and group study, desktop computers, laptops for loan, photocopying and printing services. They can also choose from several computer rooms at each campus where desktop computers are available with the general and specialist software that supports the courses taught at their Faculty. Students can also securely connect their own laptops and mobile devices to the University wireless network.

¹ Students enrolled at Collaborative partners may have differing access due to licence agreements.

Support Services

The University of Westminster Student Affairs department provide advice and guidance on accommodation, financial and legal matters, personal counselling, health and disability issues, careers, specialist advice for international students and the chaplaincy providing multi-faith guidance. The University of Westminster Students' Union also provides a range of facilities to support students during their time at the University.

How do we ensure the quality of our courses and continuous improvement?

The course was initially approved by a University Validation Panel in 2015. The panel included internal peers from the University, academic(s) from another university and a representative from industry. This helps to ensure the comparability of the course to those offered in other universities and the relevance to employers.

The course is also monitored each year by the Faculty to ensure it is running effectively and that issues which might affect the student experience have been appropriately addressed. Staff will consider evidence about the course, including the outcomes from Course Committees, evidence of student progression and achievement and the reports from external examiners, to evaluate the effectiveness of the course. Each Faculty puts into place an action plan. This may for example include making changes on the way the module is taught, assessed or even how the course is structured in order to improve the course, in such cases an approval process is in place.

A Course review takes place periodically to ensure that the curriculum is up-to-date and that the skills gained on the course continue to be relevant to employers. Students meet with review panels to provide feedback on their experiences. Student feedback from previous years e.g. from Course Committees is also part of the evidence used to assess how the course has been running.

How do we act on student feedback?

Student feedback is important to the University and student views are taken seriously. Student feedback is gathered in a variety of ways.

- Through Course Committees students have the opportunity to express their voice in the running of their course. Student representatives are elected to Committee to expressly represent the views of their peer. The University and the Students' Union work together to provide a full induction to the role of the student representatives.
- Each Faculty also has its own Faculty Student Forum with student representatives; this enables wider discussions across the Faculty. Student representatives are also represented on key Faculty and university committees.
- All students are invited to complete a questionnaire before the end of each module. The feedback from this will inform the module leader on the effectiveness of the module and highlight areas that could be enhanced.
- The University also has an annual Student Experience Survey which seeks the opinions of students about their course and University experience. Final year Undergraduate students will be asked to complete the National Student Survey which helps to inform the national university league tables.

Please note: This programme specification provides a concise summary of the main features of the course and the learning outcomes that a student might reasonably be expected to achieve and demonstrate if s/he takes full advantage of the learning opportunities that are provided. This specification should be read in conjunction with the Course Handbook provided to students and Module Handbooks, which provide more detailed information on the specific learning outcomes, content, teaching, learning and assessment methods for each module.

Copyright of University of Westminster 2015 ©