

**Programme Specification**

**Title of Course:** Foundation Year in Science, Engineering & Computing

**Date Specification Produced:** March 2019

**Date Specification Last Revised:** April 2019

This Programme Specification is designed for prospective students, current students, academic staff and employers. It provides a concise summary of the main features of the programme and the intended learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if they take full advantage of the learning opportunities that are provided. More detailed information on the teaching, learning and assessment methods, learning outcomes and content of each module can be found in the Course Guide, on Canvas and in individual Module Descriptors.

**SECTION 1: GENERAL INFORMATION**

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| **Title:** | Foundation Year in Science, Engineering & Computing |
| **Awarding Institution:** | Kingston University |
| **Teaching Institution:** | Kingston University |
| **Location:** | Penrhyn Road and Roehampton Vale Campus |
| **Programme Accredited by:** | Not applicable |

**SECTION 2: THE PROGRAMME**

1. **Programme Introduction**

The Foundation year in Science, Engineering & Computing forms an integral part of the BSc and BEng (in the case of Engineering) extended degree programmes within the Faculty of Science, Engineering & Computing. It provides an alternative approach to studying for a degree for those coming from a range of backgrounds and educational experiences and who lack the formal qualifications for direct entry at level 4. The design of the year carefully dovetails with later levels in the degrees, allowing incremental learning and subsequent subject development and has the same dynamic forward thinking approach seen at subsequent levels where the focus is an active approach to teaching and learning and real world scenarios.

Students who benefit from the additional Foundation year, as part of their degrees typically fall into three major categories, namely:-

* Mature students returning to full-time education, often with a mix of vocational experience and qualifications.
* Students who wish to change direction in their studies/career and who do not have A-levels or equivalent qualifications in subjects required for entry at level 4.
* Students who have undertaken relevant subject A-levels but have grades lower than required for entry at level 4 and who would benefit from an additional year of study to realise their potential.

Taught within the University at both Penrhyn Road and Roehampton Vale campuses, students have access to all the facilities and resources a student coming in directly at level 4 would have, ensuring they are part of the University and course communities from the very outset. Teaching on the Foundation year benefits from a mix of staff, and include those whose pedagogic expertise is in level 3 delivery within the context of HE and also other staff who teach on the degree programmes at subsequent levels, many of whom are research active. This blend of staff ensures the currency of the subject material and methods of delivery during the Foundation year, preparing students for subsequent levels of study on the degrees, as well as creating a strong sense of degree course identity from the outset.

Teaching on the Foundation year is designed to promote active learning and student engagement. Students have a central subject-specific module, reflecting their degree interest, where the focus is the acquisition of subject knowledge and understanding. Within such modules there is strong emphasis on developing the student’s practical skills, which allows application of subject knowledge and aids their future employability. Alongside the subject-specific module, students undertake two further modules, one of which supports students with their Academic Study Skills, introduces some basic Business and Project management, as well as allowing early awareness of career options in their subject discipline and employability skills. The other module takes a project-based approach, whereby students work in group to find solutions to subject-related scenarios/problems and/or creating ‘real-world’ artefacts. The focus of this module is to develop their problem solving skills.

The teaching and learning approach used throughout the year is designed to be inclusive of the diverse student intake. A variety of teaching methods are used and students are encouraged to contribute to the discussion of the curriculum, bringing their own experiences and background to wider discussion. The approach to assessment during the year is designed not only to prepare students for subsequent levels of study but is also inclusive in nature, offering a range of assessment tools and the use of formative assessment alongside feedforward sessions to prepare students for summative assessment.

One benefit of the Foundation year as part of the extended degree is that it has a common module structure to many of the intended degree routes and this allows students an opportunity to re-evaluate their original degree choice and, assuming the right modules being undertaken, to change routes.

A key measure of the success of the Foundation year, as part of the extended degree programmes, is in the student success at degree level, where a large percentage achieve good degrees. Student success is also high with regard those who subsequently gain graduate employment, with a number who are now University lecturers and others who play key roles in industry.

1. **Aims of the Field/Course**

The primary aims of the programme are:-

* To provide an opportunity for students from a wide range of educational backgrounds, and who lack the traditional qualifications, entry onto level 4 of their chosen degree route upon progression from the Foundation year.
* Through the acquisition of subject-specific knowledge, study skills, IT and practical skills, allow students to become confident, independent and resilient learners.
* To encourage self-awareness and a reflective practice to a students learning.
* To develop students as effective communicators in both written and oral form.
* To ensure that students are able to work effectively with others.
* To develop the students ability to interrelate and apply the knowledge, skills and understanding gained from the Foundation year to the solution of basic problems
* To provide an early awareness of the careers available to students within the chosen field of study and the skills they will need to develop as a result.

1. **Intended Learning Outcomes**

The Foundation year in Science, Engineering & Computing represents level 3 of extended degree programmes and as such are not subject to QAA subject benchmarks. However, the programme outcomes do take account of the QAA subject benchmarks for Biomedical Science (2015), Biosciences (2015), Chemistry (2014), Computing (2016), Earth Sciences, environmental sciences and environmental studies (2014), Engineering (2015), Events, Hospitality, Leisure, Sport and Tourism (2016), Forensic Science (2012), Geography (2014), and Mathematics, Statistics and Operational Research (2015), since students undertaking this year do progress to level 4. The programme outcomes are referenced to the [Framework for Higher Education Qualifications of UK Degree-Awarding Bodies (2014)](http://www.qaa.ac.uk/quality-code/the-existing-uk-quality-code/part-a-setting-and-maintaining-academic-standards), and relate to the typical student. The course provides opportunities for students to develop and demonstrate knowledge and understanding specific to the subject, key skills and graduate attributes in the following areas:

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| **Programme Learning Outcomes** | | | | | |
|  | **Knowledge and Understanding**  On completion of the course students will be able to: |  | **Intellectual Skills**  On completion of the course students will be able to |  | **Subject Practical Skills**  On completion of the course students will be able to |
| A1 | Demonstrate a knowledge and understanding in the core areas of the chosen subject discipline | B1 | Apply the theoretical principles of the subject disciplines to tackle simulated projects and problems | C1 | Use a range of instrumentation applicable to the subject of study and exhibit competence in their use |
| A2 | Demonstrate a knowledge of investigational techniques used within the subject disciplines and understand the basis for their use | B2 | Assess and select the tools and methods appropriate for a number of given maths-related problems contextualised to the subject of study | C2 | Carry out subject-specific practical work in accordance to defined protocols and appropriate Health and Safety regulations |
| A3 | Understand the Health and Safety regulations relevant to the subject discipline and the need for compliance | B3 | Analyse information from a variety of primary and secondary sources | C3 | Demonstrate the ability to evaluate, interpret and present data generated through investigational techniques |
| A4 | Understand the basic principles of Business as relevant to either Science, Engineering, Computing or Mathematics | B4 | Demonstrate, by application of study skills, the ability to be an independent and reflective learner | C4 | Demonstrate the ability to work effectively both independently and as part of a group |
| A5 | Demonstrate a knowledge of the career opportunities within the chosen subject area |  |  |  |  |

In addition to the programme learning outcomes identified overleaf, the programme of study defined in this programme specification will allow students to develop a range of Key Skills as follows:

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| --- | --- | --- | --- | --- | --- | --- |
| **Key Skills** | | | | | | |
| **Self-Awareness Skills** | **Communication Skills** | **Interpersonal Skills** | **Research and information Literacy Skills** | **Numeracy Skills** | **Management & Leadership Skills** | **Creativity and Problem Solving Skills** |
| Take responsibility for own learning and plan for and record own personal development | Express ideas clearly and unambiguously in writing and the spoken work | Work well with others in a group or team | Search for and select relevant sources of information | Collect data from primary and secondary sources and use appropriate methods to manipulate and analyse this data | Determine the scope of a task (or project) | Apply scientific and other knowledge to analyse and evaluate information and data and to find solutions to problems |
| Recognise own academic strengths and weaknesses, reflect on performance and progress and respond to feedback | Present, challenge and defend ideas and results effectively orally and in writing | Work flexibly and respond to change | Critically evaluate information and use it appropriately | Present and record data in appropriate formats | Identify resources needed to undertake the task (or project) and to schedule and manage the resources | Work with complex ideas and justify judgements made through effective use of evidence |
| Organise self effectively, agreeing and setting realistic targets, accessing support where appropriate and managing time to achieve targets | Actively listen and respond appropriately to ideas of others | Discuss and debate with others and make concession to reach agreement | Apply the ethical and legal requirements in both the access and use of information | Interpret and evaluate data to inform and justify arguments | Evidence ability to successfully complete and evaluate a task (or project), revising the plan where necessary |  |
| Work effectively with limited supervision in unfamiliar contexts |  | Give, accept and respond to constructive feedback | Accurately cite and reference information sources | Be aware of issues of selection, accuracy and uncertainty in the collection and analysis of data | Motivate and direct others to enable an effective contribution from all participants |  |
|  |  | Show sensitivity and respect for diverse values and beliefs | Use software and IT technology as appropriate |  |  |  |

1. **Entry Requirements**

The minimum entry qualifications for the programme are:

From A levels: 32 points from two A2 subjects, with the exception of General Studies.

BTEC National: 32 points in any subject discipline

Access Diploma: Pass in Access course with minimum of 60 credits of which 45 must be at the higher level

Plus: Candidates are normally required to hold five GCSE subjects grades A\*-C (or comparable numeric score under the newly reformed GCSE grading) including Mathematics and English Language, plus Science in the case of Science routes.

A minimum overall IELTS score of 6.0 with a minimum of 5.5 each element, iBT TOEFL 80 with R at 20, L at 19, S at 21 and W at 20 or equivalent is required for those for whom English is not their first language.

Mature applicants with vocational experience may be considered but offers will be subject to interview.

1. **Course Structure**

This programme is offered in full-time mode, and leads to progression onto level 4 of the BSc or BEng degree programme and is available as a full-field. Entry is at level 3 with A-level or equivalent qualifications but a wide range of qualifications are considered (See section D). Intake is in September.

**E1. Professional and Statutory Regulatory Bodies**

Not applicable

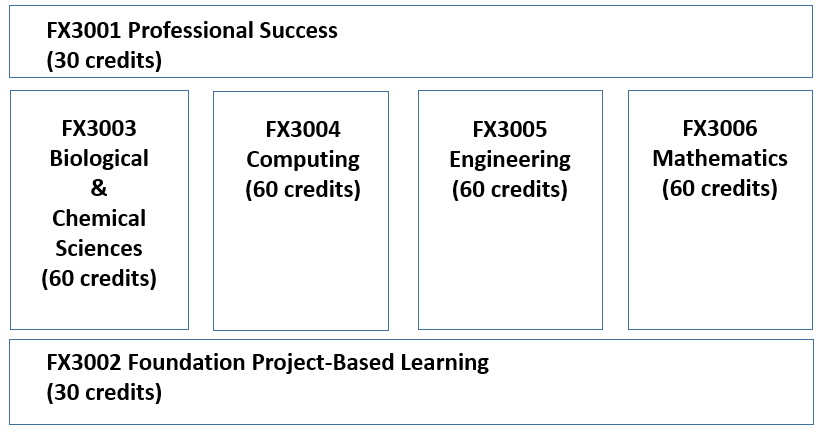
**E2. Work-based learning, including sandwich courses**

Not applicable

**E3. Outline Programme Structure**

The Foundation year (level 3) is made up of three modules, one worth 60 credits which reflects the intended degree route subject and two which are worth 30 credits each, which support study. A student must complete 120 credits at level 3. All students will be provided with the University regulations and specific additions that are sometimes required for accreditation by outside bodies (e.g. professional or statutory bodies that confer professional accreditation). Full details of each module will be provided in module descriptors and student module guides available in Canvas.

The overall structure of the Foundation year is shown overleaf.



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| --- | --- | --- | --- | --- |
| **Level 3** (all core) | | | | |
| **Core modules** | **Module code** | **Credit**  **Value** | **Level** | **Teaching Block** |
| Professional Success | FX3001 | 30 | 3 | 1&2 |
| Foundation Project-based Learning | FX3002 | 30 | 3 | 1&2 |
| Biological & Chemical Sciences | FX3003 | 60 | 3 | 1&2 |
| Computing | FX3004 | 60 | 3 | 1&2 |
| Engineering | FX3005 | 60 | 3 | 1&2 |
| Mathematics | FX3006 | 60 | 3 | 1&2 |

All students take FX3001 and FX3002, with the choice of the other core module dictated by the degree route being undertaken.

FX3003: If on Biochemistry, Biological Sciences, Biomedical Sciences, Chemistry, Environmental Science, Environmental Science with Hazards and Disasters, Forensic Science, Geography, Human Geography, Nutrition (Exercise & Health), Nutrition (Human Nutrition), Pharmaceutical Science, Pharmacology, Pharmacology with Business, Sport Science, Sport Science (Coaching) or Sport Science with Business.

FX3004: If on Computer Games Programming, Computer Science, Cyber Security & Computer Forensics or Digital Media Technology.

FX3005: If on Aerospace Engineering, Civil & Infrastructure Engineering or Mechanical Engineering.

FX3006: If on Mathematics.

Students exiting the field/course at this point who have successfully completed 120 credits are eligible for a transcript showing this credit.

1. **Principles of Teaching, Learning and Assessment**

The Foundation year is designed to take account of the KU Curriculum Design principles, with the Teaching and Learning strategies reflecting the course and module learning outcomes. As befits a course with a diverse entry profile and expected variation in student knowledge, a range of teaching and learning strategies are utilised from lectures, laboratory practicals, computer sessions, tutorials, workshops and fieldwork.

Overall the strategy is the development of knowledge and understanding in the subject disciplines, as well ensuring students have a broad range of technical (practical) skills and competences. The theoretical and practical knowledge alongside acquisition of level-specific academic study skills ensures students have a suitable base for study in subsequent levels of their intended degree course.

***Development of Independent Learning***

The Foundation year acts as a transition year, providing students with a range of skills and learning strategies to allow them to become independent resilient, learners, attributes necessary for success at subsequent levels.

The development of independent learning starts in FX3001, Professional Success, which provides students with a comprehensive set of academic study skills. A key part of this module is the use of ‘Skills4studycampus’, an online system available to all KU students and which is introduced during Induction week. Students are directed at this stage to the ‘Getting Ready for Academic Study’ unit in preparation for the start of the course and also the ‘Time Management’ unit, since being able to manage their time effectively is essential to allow for their development as independent learners. Students then take subsequent units as guided learning, with each unit allowing them to pre-read, watch supporting video, undertake diagnostic self-evaluation and inbuilt formative assessments. Each unit also has a journal facility which allows students to capture their reflections which provides the basis for their Personal Development Log (PDL). Timetabled teaching sessions are then delivered in small groups workshops, where the application of the Study skill to the student’s subject discipline is undertaken. The contextualisation of study skills is seen as more likely to promote engagement and understanding of its importance.

The early development of study skills is integral to success on other modules and the course. Therefore the delivery of FX3001 takes a ‘tapered’ approach, with extensive front loading of the module in the first teaching block. This is offset by a slower introduction to FX3002 Project-based Learning, for which the development of such study skills is crucial.

In each module students are provided with an indication of the types of Guided Independent Learning that is expected of them in support of their learning. Indicative hours to be spent on such activities are provided but it is recognised that these do not provide a prescriptive account of time allocation but rather acts a guidance, allowing for differences in student learning. In the Subject modules, some of this time is to be spent preparing for teaching sessions by reading lecture material, watching videos, reviewing factsheets and taking initial diagnostic tests. Much of this is available on Canvas, allowing the student to access this at any time. For each teaching session students are also directed to the relevant parts of recommended texts. The strategy of pre-reading is designed to allow teaching sessions to be less instructional and to allow greater engagement and application of the subject knowledge within the session. Students are then expected to consolidate their knowledge and understanding by reviewing lecture material in light of the learning in such sessions by additional reading and by undertaking of questions which in turn give students a gauge of their ability to apply the concepts introduced in teaching sessions.

***Active learning and Student Engagement***

In preparation for later levels of the degree and also to promote student engagement, an active learning approach has been adopted. Lectures sessions are increasingly ‘flipped’ in their approach over the year and are less didactic / instructional. Where subject content is delivered, this is reinforced by the application of this content to ‘real world’ problems / scenarios. Practical and workshop activity allows students to apply the knowledge they have gained to the creation of artefacts, to demonstrate practical competences and the ability to work both individually and in a group.

In FX3002 Foundation Project-based Learning, students will start by undertaking a Problem-solving toolkit, which is delivered in small workshop groups. These sessions are designed to promote icebreaking activities for group work and allow students to start to think what problems are and the approaches taken to finding or developing solutions. Students in these sessions will explore the dynamics of group work in problem solving and decision making, the importance of communication skills, emotional intelligence and negotiating/resolution skills. Subsequently in subject-specific groups, students will then be presented with a series of scenarios that have been developed with the various subject course teams. Each scenario starts with a session where the ‘brief’ is introduced and students are encouraged to consider what they may need to research to provide a solution. Subsequent timetabled sessions provide the opportunity for the group to come together and use their research findings to work on collective solutions. Such sessions will be facilitated by academic staff, who can act as advisors and ensure that students stay on track. Throughout these sessions students will keep a reflective log of the ongoing development of the solution and the contributions made by each team member. 100% Attendance at these sessions will be expected due to the nature of group work and also to reflect the professional environment which is being simulated. To encourage attendance, some of the assessment marks can only be accessed by attending and contributing to group work. Towards the end of the scenario block of sessions students will be encouraged to explore how best to communicate their solutions and they will then present these in the final session.

***Technology-Enhanced Learning***

A blended learning approach is taken in the Foundation year with the use of Technology-Enhanced Learning (TEL). The use of Canvas as a VLE, is not restricted to simply acting as a static repository for teaching materials but allows students to use the facilities within to promote active engagement with teaching materials via use of podcasts, quizzes and also to facilitate group work via the use of discussion boards. Canvas also houses the reading list, Leganto, which provides students access to a range of e-resources to support their learning.

In teaching sessions the use of Clickers provides students and staff instant feedback on the level of understanding of material delivered and therefore allows more tailored sessions. Such technology also provides an inclusive approach for students who are less able to verbalise their answers in a group setting.

A range of other technologies are used from the use of Padlet and Blogs to promote group discussion and shared learning, the use of Peerwise where students can create their own questions which can be shared by the group, through to the use of Prezi as a means of creating presentations to showcase projects that students have been working on.

In each subject discipline students will also use a range of software/ hardware that facilitate practical and technical investigation (e.g.: Raspberry Pi usage in Computing to allow active learning of programming and creation of project work).

***Assessment***

There are a diverse range of assessment tools used in the Foundation year, which ensure an inclusive approach to determining student’s knowledge, understanding and application of subject content. Since one of the features of the Foundation year is to develop academic confidence amongst students, a ‘little and often’ approach is taken, often by use of portfolios. This approach allows students to develop over time and offers a position of recovery should early ‘missteps’ occur. In light of this the course team have taken care to ensure that assessment bunching is minimised by use of assessment calendars that students have access to at the start of the year and which help feed into sessions on time management.

The tools used for assessment are varied and include use of in class /online tests to assess students subject knowledge or skills, lab or technical reports which are more analytical in approach, group reports based on project-based learning scenarios that detail the approach taken and suggested solutions, creation of real world artefacts through to oral and poster presentations as groups and individuals respectively. Wherever group work is assessed, the assessment regime will include a proportion that acknowledges an individual students contribution to the final assessed piece of work. This will involve use of peer-evaluation of student contribution to tasks, as well as the use of group blogs to which each student post their contributions. The blogs are available to academic staff and allow mediation to occur where students are unable to agree on the contributions made by each member of the group

In each module there are opportunities for formative assessment prior to those which are summative. To support this there are both feed-forward and feedback sessions which allow students to understand what the assessment is about and the criteria to be used for marking. Early low stakes assessment take place in a number of modules and allow both student and staff to determine suitable support needs, with clear signposting to both SASC and Maths Aid where appropriate.

Assessment of study skill takes place within a portfolio of small tasks that, whilst having a common basis, are contextualised to the subject discipline that the student is studying. This also allows an inclusive approach to be taken since choice of the subject tasks can reflect the student’s background and interests. Formative assessment for study skills is contained within the Skills4studycampus online platform that students use.

The use of end of module examination is largely restricted to FX3003 Biological and Chemical Sciences, FX3005 Engineering and FX3006 Mathematics. This reflects that students undertaking these modules are exposed to end of examination in level 4 and beyond of the respective degrees and where in some cases may be expected by the Professional bodies which accredit such degrees. Examination is used a tool for determining a students subject knowledge and also its application. To help support students in undertaking this type of assessment, specific sessions are provided in FX3001. Here examination technique is covered, with opportunity to practice decoding what examination questions are asking for, strategies for planning and executing answers, as well as how to use the University assessment criteria in grading responses. Opportunities to engage in formative examinations are also given in modules where end of module examination feature. Access to outline answers will allow students to self-evaluate their answers as well as peer mark answers as a means of learning.

***Inclusive curriculum***

The teaching, learning and assessment approach undertaken on the Foundation year reflects the inclusive approach of the University to the curriculum and how it is assessed and values the diversity of our learners.

This ranges from the various modes of delivery, enabling accessibility irrespective of previous educational background or preferred learning styles, through to the use of inclusive global examples to illustrate the aspects covered, and to enable students to see themselves within the curriculum. Teaching materials are accessible prior to teaching sessions via the use of Canvas, allowing students time to not only pre-read in preparation but also the opportunity to adapt such materials to meet their learning needs. Teaching sessions reflect that students have different learning styles and a variety of approaches are taken within lectures and workshops. The use of technology to enhance learning is a key feature in the teaching environment and include the use of clickers to allow instant feedback and reduce the use of more traditional approaches to question and answer, that might otherwise be inhibitory for some students.

The use of learning technologies such as blogs, student generated questions via ‘Peerwise’ and sharing of examples via ‘Padlet’ provide an opportunity for students to contribute to the curriculum. Wherever possible, students are encouraged to seek examples that resonate with their background and bring these to the teaching sessions for group discussion. Emphasis is also placed on discussion of global issues within a subject discipline, ensuring student background is reflected in such discussion.

Where group work takes place, the early ‘icebreaking’ activities allow sharing of students experience and backgrounds to develop their ability to understand different perspectives to the issues. This enables students to demonstrate their strengths and utilise any of their previous work and learning experiences in an inclusive learning environment which aids in peer-led learning. The choice of group project examples are designed to be authentic in nature, developing real-world skills and students are encouraged to think about and discuss the global issues relating to the topics under investigation. Wherever possible, groups will be mixed in terms of student background to ensure all students feel that their views are represented in the development of the solution. The role of the academic facilitator is such sessions is to ensure that there is a shared sense of ownership of the work being developed and that everyone’s contributions are recognised and valued.

Assessment is designed to be inclusive, offering a range of assessment tools that reflects the diversity of learners. Assessments are designed to be authentic in nature, so that they reflect the issues/problems that they will ultimately face in their profession and provide early development of graduate attributes. Within assessment there is scope for students to choose the topic they wish to study. For example, the independent project allows students to choose a topic area for research, which reflects both their interests and background.

Where group work is a feature of modules, the use of a blog to capture ideas and contributions allows students who find group work difficult, an opportunity to be included in the approach to taken towards the solutions. Where formative ‘pitches’ are used in sessions to discuss progress with project solutions, these may include the use of technology such as ‘Prezi’ or video presentations and not simply conventional oral presentation, which may preclude some students.

The use of formative assessment in support of knowledge and skills development allows students to choose examples that reflect their background. This in turn support students toward their summative assessment.

1. **Support for Students and their Learning**

Given their prior educational background it is acknowledged that students entering onto the Foundation year often require additional support. Therefore students are provided with a range of support mechanisms to aid in the transition to Higher Education and also to maximise their chances of progressing to level 4 and beyond.

**Induction Activities**

Students undertake a comprehensive induction week prior to teaching on the year. Apart from the course-specific activity, there are additional sessions from the Library staff, as well as sessions on IT, Health and Safety and Academic writing. Foundation students undertake the same induction programme as those entering directly into level 4 and this is designed to promote course and subject identity at an early stage. In addition, students have an additional IT session where students are introduced to the VLE, Canvas, and how to access course pages and module information, as well being self-directed to self-enrol on a range of modules relating to the Library and Study skills.

Induction is not just limited to this week but continues to be undertaken during the first teaching block. This allows reinforcement and also has the advantage that students who arrive late in the first few weeks can catch up with the induction and support mechanisms on offer.

**Academic Skills Support**

All students have access and are directed to the use of Skills4studycampus, which an online resource through the Library, which provides an opportunity for students to develop a range of study skills from getting ready for Academic study, time management, writing skills, referencing to exams and employability. There are a number of online diagnostic tests the students can attempt which provide feedback and signposting for skills development. This online resource is also embedded into the FX3001 Professional Success module.

Students have access to SASC and Maths Aid, located in the Sopworth Building at the Penrhyn road campus and also on the Roehampton Vale campus. Both SASC and Maths operate one to one drop sessions every weekday and can help with a range of issues relating to generic study skills, writing reports, referencing exam technique and mathematical and programming skills. Both SASC and Maths Aid have Canvas modules to which students can self-enrol and they are encouraged to do this in the induction week with staff signposting these resources throughout the year.

**Personal Tutor Scheme (PTS)**

The following provides the aims and structure of the how the Personal Tutor Scheme (PTS) will operate within the Foundation year. It is intended that the PTS is embedded within the FX3001 Professional Success module.

***Aims***

* To build rapport between staff and students and contribute to personalising students’ experience at Kingston
* To provide appropriate academic advice and guidance to students throughout their time at Kingston by monitoring their progress and helping to identify individual needs
* To foster a close and engaged academic relationship with students and advise and refer students to other University services as appropriate
* To help to develop students’ ability to be self-reliant and self-reflective and their ability to use feedback to best advantage.

***Allocation of Personal Tutors***

* Personal tutors are allocated during induction week.
* Each student will be allocated two personal tutors.
* Tutor 1 will be someone who will act as the student’s personal tutor throughout the course of study (i.e. to level 6/7 as appropriate). Such individuals will be someone from the course team of the student’s degree route. This tutor will be able to offer degree subject knowledge and will be important in the employability aspects of the FX3001 module, where careers options and associated skills requirements are explored by the student. They will also be important in helping prepare for the start of level 4 upon progression from level 3.
* Tutor 2 will be allocated from those staff who have responsibility for teaching the Foundation year itself and will stay with student only during their Foundation year. Since these tutors have expertise in the pedagogy of level 3 within the context of HE, their role is helping students develop and reflect on the academic skills they are acquiring through the Foundation year.

***Level 3 - Settling in and building confidence***

Therefore the role of the Personal tutors is to:-

* Assist students in making the transition to Higher Education and to generate a sense of belonging to KU.
* Help students to develop good academic habits and to gain the confidence to operate successfully in a university context.
* Prepare students to make the most of feedback throughout their course.

***Meetings between students and Personal Tutors***

Students will meet both of their personal tutors as early as possible – usually in Induction Week but, certainly, within the first two weeks of Teaching Block 1. This is followed by an expectation of the following.

* Teaching Block 1: minimum of three one-to-one or small group meetings. At least on these meetings should be with Tutor 1
* Teaching Block 2: minimum of 2 face to face meetings (may be group or one-to-one) with the suggested final meeting with Tutor 1.
* At the end of the academic year, personal tutors will make contact with their tutees to offer advice on their academic performance and how best to prepare for the next year of study and/or retakes if necessary.

To increase a sense of integration with the degree course, some of the tutor meetings which occur in small groups may be cross-level in nature between Foundation and level 4.

Students will be asked to keep a Personal Development Log over the year, which they allow them to be reflective on their skills development and which they will share with their personal tutors in tutor meetings.

In summary, overall students are supported by:

* Two personal tutors in their Foundation year who offer academic and pastoral support.
* An overall Course Leader for the Foundation year, who can offer advice specifically to the Foundation year
* Their extended degree route Course Director, who can offer advice about their chosen subject.
* A Module Leader for each module
* Overall course and module team, who can be seen outside of teaching by means of an office hours policy advertised to students
* Technical support to advise on laboratory practices (as applicable)
* Technical support to advise students on IT and the use of software
* A dedicated Course administrator
* Library services with dedicated subject specialists
* A Student Achievement officer
* An Induction programme at the start of the year and continues as a long thin induction throughout Teaching Block 1
* Faculty Skills support through a SEC Academic Success Centre (SASC) including Maths Aid.
* Canvas – an online interactive learning environment, which hosts not only individual module sites but also hosts the course landing pages, which provide students with the course handbook, course information, professional body accreditation information (where appropriate) and other online University regulatory and support information.
* Student support which via Student Life and Student Wellbeing can provide advice on issues such a finance and money matters, accommodation, childcare (University nursery), visa and immigration issues and well-being services such as the Medical centre.
* Disabled student support
* Students Union
* Careers and Employability services

1. **Ensuring and Enhancing the Quality of the Course**

The University has several methods for evaluating and improving the quality and standards of its provision. These include:

* External examiners
* Boards of study with student representation
* Annual Monitoring and Enhancement
* Periodic review undertaken at subject level
* Student evaluation including module evaluation questionnaires (MEQs), level surveys and the National Student Survey (NSS)
* Moderation policies
* Feedback from employers

1. **Employability Statement**

Whilst the primary aim of the Foundation year is to support entry onto level 4 of the intended degree programmes, students develop a range of generic employability skills throughout the year. Students are encouraged to take a reflective approach, via the use of a PDL and the Personal Tutor scheme, to what they have learned both academically and in terms of transferable skills they have acquired. This in turn allows them to relate these to the attributes a graduate will require for successful employment and lifelong learning. These skills include time management, communication skills, practical competences, ability to work in groups and problem solving skills.

Careers and employability is embedded into the FX3001 Professional Success module, where early awareness of the career options in their chosen discipline is discussed and mapped to the skills to be developed. Students are encouraged to explore the job market and possible career paths. In addition, the role of Professional Bodies in both supporting careers and in shaping their curricula is discussed and where appropriate, students are encouraged to join such bodies. There is an emphasis on introducing students to the concept of ‘Professionalism’ and they are encouraged to start generating a suitable digital profile (e.g.: LinkedIn) during this year. To reinforce the importance of employability, an assessed portfolio is undertaken in FX3001. Here students generate a curriculum vitae, locate a relevant job and undertake a skill audit for such a post, and undertake a mapping of their skills development against a competency framework, providing evidence of how they have achieved these and how it relates to their degree. Since many students are likely to work within organisations, be they industrial or public sector (e.g.: NHS), time is spent exploring such organisations and the basic principles of Business and Project Management. Students work in groups against a ‘real-world brief’, helping to develop their teamwork and presentation skills.

The ability of students to develop their ability to work in groups, solve problems and present solutions are further developed in the FX3002 Foundation Project-Based Learning module, where a series of subject relevant and ‘real-world’ scenarios and/or problems are presented. Students develop solutions to these, which are the presented in a range of formats. Such learning is more akin to the situations that a student will encounter in employment.

Subject careers information is provided by a mixture of that from the course teams and that provided by the University Careers and Employability service. Students are encouraged to attend workshops, covering topics such as CV and cover letter writing, presentation skills, psychometric testing. The service also offers drop-ins as well as 1-2-1 appointments and a range of online resources to help support students. Introductory talks from the Careers and Employability service occur in Induction week and then as a series of in-curricular skills sessions.

Foundation year students have access to KUextra, an online platform that brings together a range of events and activities in one place. It enables students a ‘one-stop’ place to find, and book onto, extra-curricular activities across the University. KUextra integrates with the Kingston Award, a University-wide scheme that recognises the participation of students beyond just their day to day course and as a result improves their employability prospects. Foundation year students have access to all the course-related co- and extra-curricular activities on offer and are encouraged to become part of their course communities from the very outset.

Some students take the opportunities to become Course Representatives, communicating the views of fellow students at Staff-Students Consultative Committees, Boards of Study and faculty Forum and/or Student Ambassadors, representing the student face at Open days and Outreach activities, during their Foundation year. Both roles help to develop a range of skills such as communication, negotiation and leadership, much sort after in the employment market.

As the Foundation year is part of the extended degree, each of the programme specifications provide more detail on the Employability options within each discipline and how Employability is developed in the course from level 4 onwards.

1. **Approved Variants from the Undergraduate or Postgraduate Regulations**

There are no variants

1. **Other sources of information that you may wish to consult**

<https://www.kingston.ac.uk/undergraduate-course/computing-mathematics-foundation/>

<https://www.kingston.ac.uk/undergraduate-course/engineering-foundation/>

<https://www.kingston.ac.uk/undergraduate-course/science-foundation/>

**Development of Field/Course Learning Outcomes in Modules**

This map identifies where the field/course learning outcomes are **summatively** assessed across the modules for this field/course. It provides an aid to academic staff in understanding how individual modules contribute to the field/course aims, a means to help students monitor their own learning, personal and professional development as the field/course progresses and a checklist for quality assurance purposes.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Module code** | | **Level 4** | | | | | |
| FX3001 | FX3002 | FX3003 | FX3004 | FX3005 | FX3006 |
| **Knowledge & Understanding** | A1 |  | S | S | S | S | S |
| A2 |  | S | S | S | S | S |
| A3 |  | S | S | S | S | S |
| A4 | S | S |  |  |  |  |
| A5 | S |  | S | S | S | S |
| **Intellectual Skills** | B1 |  | S | S | S | S | S |
| B2 | S | S |  |  |  |  |
| B3 | S | S |  |  |  |  |
| B4 | S | S |  |  |  |  |
| **Practical Skills** | C1 |  | S | S | S | S | S |
| C2 |  |  | S | S | S | S |
| C3 | S | S | S | S | S | S |
| C4 | S | S |  |  |  |  |

**Students will be provided with formative assessment opportunities throughout the course to practise and develop their proficiency in the range of assessment methods utilised.**

**Assessment Calendar**

Given the diversity of degree routes which are served from the Foundation year, and therefore the choice of degree- specific module taken, the assessment calendar pertinent to a student on each broad route is given. Each table indicates the weeks that summative assessments will be published and when they will be due to be submitted or sat (exams)

Extended routes in Biochemistry, Biological Sciences, Biomedical Sciences, Chemistry, Environmental Science, Environmental Science with Hazards and Disasters, Forensic Science, Geography, Human Geography, Nutrition (Exercise & Health), Nutrition (Human Nutrition), Pharmaceutical Science, Pharmacology, Pharmacology with Business, Sport Science, Sport Science (Coaching) or Sport Science with Business.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Module Title** | **Assessment Element** | **Brief published** | **Submission Week** | **Feedback Week** |
| **FX3001 Professional Success** | | | | |
|  | **E1 Study Skills Portfolio (50%)** | **TW1** |  |  |
|  | E1a Reflective Learning style exercise (5%) |  | TB1, TW2 | TB1, TW3 |
|  | E1b Information retrieval exercise (5%) |  | TB1, TW3 | TB1, TW3 |
|  | E1c Referencing exercise (5%) |  | TB1, TW4 | TB1, TW4 |
|  | E1d Practical assessment 1 (5%) |  | TB1, TW5 | TB1, TW7 |
|  | E1e Application of Mathematics 1 (5%) |  | TB1, TW7 | TB1, TW7 |
|  | E1f Comprehension exercise (5%) |  | TB1, TW8 | TB1, TW9 |
|  | E1g Critical Thinking exercise (5%) |  | TB1, TW8 | TB1, TW10 |
|  | E1h Group-work ‘Prezi’ presentation (5%) |  | TB1, TW11 | TB2, TW1 |
|  | E1i Practical assessment 2 (5%) |  | TB2, TW4 | TB2, TW5 |
|  | E1j Application of Mathematics 2 (5%) |  | TB2, TW5 | TB2, TW5 |
|  | **E2 Employability Portfolio (30%)** | **TW1** |  |  |
|  | E2a Curriculum Vitae (10%) |  | TB2, TW3 | TB2, TW5 |
|  | E2b Job Description & Skills audit (10%) |  | TB2, TW6 | TB2, TW8 |
|  | E3c Professional Competency exercise (10%) |  | TB2, TW10 | TB2, TW12 |
|  | **E3 Business & Project Management Group Assignment (20%)** | **TW1** | TB2, TW2 | TB2, TW5 |
| **FX3002 Foundation Problem-Based**  **Learning** | | | | |
|  | **E1 Portfolio of Problem-solving reflections (30%)** | **TW1** |  |  |
|  | E1a Scenario 1 reflection |  | TB1, TW9 | TB1, TW11 |
|  | E1b Scenario 2 reflection |  | TB2, TW1 | TB2, TW3 |
|  | E1c Scenario 3 reflection |  | TB2, TW5 | TB2, TW7 |
|  | **E2 Group Coursework report (40%)** | **TW1** | TB2, TW9 | TB2, TW12 |
|  | **E3 Individual Poster Presentation (30%)** | **TW1** | TB2, TW13 | TB2, TW13 |
| **FX3003 Biological & Chemical Sciences** | | | | |
|  | **E1 Examination (40%)** | **TW1** | May 2020 | July 2020 |
|  | **E2 Coursework (30%)** | **TW1** | TB2 TW7 | TB2 TW11 |
|  | **E4 Portfolio of Practicals (30%)** | **TW1** |  |  |
|  | E4a Microscopy Practical (5%) | **TW1** | TB1 TW4 & 5 | TB1 TW9 |
|  | E4b Osmosis Practical (5%) | **TW1** | TB1 TW11 & 12 | TB2 TW1 |
|  | E4c Enzyme Practical (5%) | **TW1** | TB2 TW3 & 4 | TB2 TW9 |
|  | E4d Chemical Tests for Inorganic Compounds (5%) | **TW1** | TB1 TW 7 & 8 | TB1 TW11 |
|  | E4e Chemical Tests for Organic Compounds (5%) | **TW1** | TB TW9 & 10 | TB2 TW2 |
|  | E4f Titration (5%) | **TW1** | TB2 TW5 & 6 | TB2 TW10 |

Extended routes on Computer Games Programming, Computer Science, Cyber Security & Computer Forensics or Digital Media Technology.

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| --- | --- | --- | --- | --- |
| **Module Title** | **Assessment Element** | **Brief published** | **Submission Week** | **Feedback Week** |
| **FX3001 Professional Success** | | | | |
|  | **E1 Study Skills Portfolio (50%)** | **TW1** |  |  |
|  | E1a Reflective Learning style exercise (5%) |  | TB1, TW2 | TB1, TW3 |
|  | E1b Information retrieval exercise (5%) |  | TB1, TW3 | TB1, TW3 |
|  | E1c Referencing exercise (5%) |  | TB1, TW4 | TB1, TW4 |
|  | E1d Practical assessment 1 (5%) |  | TB1, TW5 | TB1, TW7 |
|  | E1e Application of Mathematics 1 (5%) |  | TB1, TW7 | TB1, TW7 |
|  | E1f Comprehension exercise (5%) |  | TB1, TW8 | TB1, TW9 |
|  | E1g Critical Thinking exercise (5%) |  | TB1, TW8 | TB1, TW10 |
|  | E1h Group-work ‘Prezi’ presentation (5%) |  | TB1, TW11 | TB2, TW1 |
|  | E1i Practical assessment 2 (5%) |  | TB2, TW4 | TB2, TW5 |
|  | E1j Application of Mathematics 2 (5%) |  | TB2, TW5 | TB2, TW5 |
|  | **E2 Employability Portfolio (30%)** | **TW1** |  |  |
|  | E2a Curriculum Vitae (10%) |  | TB2, TW3 | TB2, TW5 |
|  | E2b Job Description & Skills audit (10%) |  | TB2, TW6 | TB2, TW8 |
|  | E3c Professional Competency exercise (10%) |  | TB2, TW10 | TB2, TW12 |
|  | **E3 Business & Project Management Group Assignment (20%)** | **TW1** | TB2, TW2 | TB2, TW5 |
| **FX3002 Foundation Problem-Based**  **Learning** | | | | |
|  | **E1 Portfolio of Problem-solving reflections (30%)** | **TW1** |  |  |
|  | E1a Scenario 1 reflection |  | TB1, TW9 | TB1, TW11 |
|  | E1b Scenario 2 reflection |  | TB2, TW1 | TB2, TW3 |
|  | E1c Scenario 3 reflection |  | TB2, TW5 | TB2, TW7 |
|  | **E2 Group Coursework report (40%)** | **TW1** | TB2, TW9 | TB2, TW12 |
|  | **E3 Individual Poster Presentation (30%)** | **TW1** | TB2, TW13 | TB2, TW13 |
| **FX3004 Computing** | | | | |
|  | **E1 Portfolio of Theory (30%)**  Portfolio of bi-weekly computer-based activities: 10 total, each worth 3% | **TW1** | TB1: TW2, TW4, TW7, TW9, TW11  TB2: TW2, TW4, TW7, TW9, TW11  Final portfolio: TB2, TW12 | Teaching Week 22 + 2 weeks  Formative feedback provided shortly after submission |
|  | **E2 Portfolio of Practice (70%)**  Portfolio of software, hardware and written reports: 14 total, each worth 5% | **TW1** | TB1: TW3, TW5, TW7, TW8, TW10, TW12(x2)  TB2: TW3, TW5, TW7, TW8, TW10, TW12(x2)  Final portfolio: TB2, TW12 | Teaching Week 22 + 2 weeks  Formative feedback provided shortly after submission |

Extended routes on Aerospace Engineering, Civil & Infrastructure Engineering or Mechanical Engineering.

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| --- | --- | --- | --- | --- |
| **Module Title** | **Assessment Element** | **Brief published** | **Submission Week** | **Feedback Week** |
| **FX3001 Professional Success** | | | | |
|  | **E1 Study Skills Portfolio (50%)** | **TW1** |  |  |
|  | E1a Reflective Learning style exercise (5%) |  | TB1, TW2 | TB1, TW3 |
|  | E1b Information retrieval exercise (5%) |  | TB1, TW3 | TB1, TW3 |
|  | E1c Referencing exercise (5%) |  | TB1, TW4 | TB1, TW4 |
|  | E1d Practical assessment 1 (5%) |  | TB1, TW5 | TB1, TW7 |
|  | E1e Application of Mathematics 1 (5%) |  | TB1, TW7 | TB1, TW7 |
|  | E1f Comprehension exercise (5%) |  | TB1, TW8 | TB1, TW9 |
|  | E1g Critical Thinking exercise (5%) |  | TB1, TW8 | TB1, TW10 |
|  | E1h Group-work ‘Prezi’ presentation (5%) |  | TB1, TW11 | TB2, TW1 |
|  | E1i Practical assessment 2 (5%) |  | TB2, TW4 | TB2, TW5 |
|  | E1j Application of Mathematics 2 (5%) |  | TB2, TW5 | TB2, TW5 |
|  | **E2 Employability Portfolio (30%)** | **TW1** |  |  |
|  | E2a Curriculum Vitae (10%) |  | TB2, TW3 | TB2, TW5 |
|  | E2b Job Description & Skills audit (10%) |  | TB2, TW6 | TB2, TW8 |
|  | E3c Professional Competency exercise (10%) |  | TB2, TW10 | TB2, TW12 |
|  | **E3 Business & Project Management Group Assignment (20%)** | **TW1** | TB2, TW2 | TB2, TW5 |
| **FX3002 Foundation Problem-Based**  **Learning** | | | | |
|  | **E1 Portfolio of Problem-solving reflections (30%)** | **TW1** |  |  |
|  | E1a Scenario 1 reflection |  | TB1, TW9 | TB1, TW11 |
|  | E1b Scenario 2 reflection |  | TB2, TW1 | TB2, TW3 |
|  | E1c Scenario 3 reflection |  | TB2, TW5 | TB2, TW7 |
|  | **E2 Group Coursework report (40%)** | **TW1** | TB2, TW9 | TB2, TW12 |
|  | **E3 Individual Poster Presentation (30%)** | **TW1** | TB2, TW13 | TB2, TW13 |
| **FX3005 Engineering** | | | | |
|  | **E1 Portfolio of MCQ Tests (30%)** | **TW1** | TB1: TW3, TW5, TW7, TW9, TW11,  TB2: TW1, TW3, TW5, TW7, TW9 | Immediately. |
|  | **E2 Portfolio of Laboratory Reports and Practical Exercise (30%)** | **TW1** | TW12, TW22 and TW24 | 4 weeks |
|  | **E3 Examination (40%)** |  | May 2020 | July 2020 |

Extended route on Mathematics.

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| --- | --- | --- | --- | --- |
| **Module Title** | **Assessment Element** | **Brief published** | **Submission Week** | **Feedback Week** |
| **FX3001 Professional Success** | | | | |
|  | **E1 Study Skills Portfolio (50%)** | **TW1** |  |  |
|  | E1a Reflective Learning style exercise (5%) |  | TB1, TW2 | TB1, TW3 |
|  | E1b Information retrieval exercise (5%) |  | TB1, TW3 | TB1, TW3 |
|  | E1c Referencing exercise (5%) |  | TB1, TW4 | TB1, TW4 |
|  | E1d Practical assessment 1 (5%) |  | TB1, TW5 | TB1, TW7 |
|  | E1e Application of Mathematics 1 (5%) |  | TB1, TW7 | TB1, TW7 |
|  | E1f Comprehension exercise (5%) |  | TB1, TW8 | TB1, TW9 |
|  | E1g Critical Thinking exercise (5%) |  | TB1, TW8 | TB1, TW10 |
|  | E1h Group-work ‘Prezi’ presentation (5%) |  | TB1, TW11 | TB2, TW1 |
|  | E1i Practical assessment 2 (5%) |  | TB2, TW4 | TB2, TW5 |
|  | E1j Application of Mathematics 2 (5%) |  | TB2, TW5 | TB2, TW5 |
|  | **E2 Employability Portfolio (30%)** | **TW1** |  |  |
|  | E2a Curriculum Vitae (10%) |  | TB2, TW3 | TB2, TW5 |
|  | E2b Job Description & Skills audit (10%) |  | TB2, TW6 | TB2, TW8 |
|  | E3c Professional Competency exercise (10%) |  | TB2, TW10 | TB2, TW12 |
|  | **E3 Business & Project Management Group Assignment (20%)** | **TW1** | TB2, TW2 | TB2, TW5 |
| **FX3002 Foundation Problem-Based**  **Learning** | | | | |
|  | **E1 Portfolio of Problem-solving reflections (30%)** | **TW1** |  |  |
|  | E1a Scenario 1 reflection |  | TB1, TW9 | TB1, TW11 |
|  | E1b Scenario 2 reflection |  | TB2, TW1 | TB2, TW3 |
|  | E1c Scenario 3 reflection |  | TB2, TW5 | TB2, TW7 |
|  | **E2 Group Coursework report (40%)** | **TW1** | TB2, TW9 | TB2, TW12 |
|  | **E3 Individual Poster Presentation (30%)** | **TW1** | TB2, TW13 | TB2, TW13 |
| **FX3006 Mathematics** | | | | |
|  | **E1 Portfolio of in class tests (20%)** |  |  |  |
|  | E1a Test 1 | **TW1** | TB1:TW7 | TB1:TW9 |
|  | E1b Test 2 | **TW1** | TB1:TW12 | TB2:TW1 |
|  | E1c Test 3 | **TW1** | TB2:TW8 | TB2:TW10 |
|  | E1d Test 4 | **TW1** | TB2:TW12 | TB2:TW13 |
|  | **E2 Coursework (30%)** | **TW1** | TB2:TW2 | TB2:TW6 |
|  | **E3 Examination (50%)** |  | May 2020 | July 2020 |

**Technical Annex**

|  |  |
| --- | --- |
| **Final Award(s) and Title(s):** | Not applicable. |
| **Intermediate Award(s):** | Not applicable |
| **Minimum period of registration:** | 1 year |
| **Maximum period of registration:** | 2 years |
| **FHEQ Level for the Final Award:** | Level 3 |
| **QAA Subject Benchmark:** | Biomedical Science (2015)  Biosciences (2015)  Chemistry (2014)  Computing (2016)  Earth Sciences, environmental sciences and environmental studies (2014)  Engineering (2015)  Events, Hospitality, Leisure, Sport and Tourism (2016)  Forensic Science (2012)  Geography (2014)  Mathematics, Statistics and Operational Research (2015)  *All subject benchmark statements can be found* [*here*](http://www.qaa.ac.uk/quality-code/subject-benchmark-statements)*.* |
| **Degree Apprenticeship standard:** | Not applicable |
| **Modes of Delivery:** | Full time |
| **Language of Delivery:** | English |
| **Faculty:** | Science, Engineering & Computing |
| **School:** | School of Computer Science & Mathematics  School of Engineering & the Environment  School of Life Sciences, Pharmacy & Chemistry |
| **Department:** | Not applicable |
| **UCAS Code:** | Various depending on degree route. Can be accessed via links below:  <https://www.kingston.ac.uk/undergraduate-course/computing-mathematics-foundation/>  <https://www.kingston.ac.uk/undergraduate-course/engineering-foundation/>  <https://www.kingston.ac.uk/undergraduate-course/science-foundation/> |
| **Course/Route Code:** | Various depending on degree route |
|  |  |