

## Programme Specification: Foundation Year

### For students starting in Academic Year 2022/23

#### 1. Course Summary

<b>Names of programme and award title(s)</b>	Science Foundation Year
<b>Award type</b>	Foundation Year
<b>Mode of study</b>	Full-time
<b>Framework of Higher Education Qualification (FHEQ) level of final award</b>	Foundation Year
<b>Normal length of the programme</b>	1 year with progression onto a further three years at Keele
<b>Maximum period of registration</b>	The normal length as specified above plus 3 years
<b>Location of study</b>	Keele Campus
<b>Accreditation (if applicable)</b>	Not applicable
<b>Regulator</b>	Office for Students (OfS)
<b>Tuition Fees</b>	<p><b>UK students:</b> Fee for 2022/23 is £9,250*</p> <p><b>International students:</b> Fee for 2022/23 is £14,700**</p>

**How this information might change:** Please read the important information at <http://www.keele.ac.uk/student-agreement/>. This explains how and why we may need to make changes to the information provided in this document and to help you understand how we will communicate with you if this happens.

\* These fees are regulated by Government. We reserve the right to increase fees in subsequent years of study in response to changes in government policy and/or changes to the law. If permitted by such change in policy or law, we may increase your fees by an inflationary amount or such other measure as required by government policy or the law. Please refer to the accompanying Student Terms & Conditions. Further information on fees can be found at <http://www.keele.ac.uk/studentfunding/tuitionfees/>

\*\* We reserve the right to increase fees in subsequent years of study by an inflationary amount. Please refer to the accompanying Student Terms & Conditions for full details. Further information on fees can be found at <http://www.keele.ac.uk/studentfunding/tuitionfees/>

#### 2. What is a Foundation Year programme?

Keele has a long-standing Foundation Year programme. The Foundation Year programmes in general are for students who meet Keele's minimum entry requirements, but not the specific requirements for entry directly onto the degree programme of their choice. They extend the duration of the degree by one year.

#### 3. Overview of the Programme

The Science Foundation Year provides a scientific background customised to individual students' needs, helping them to progress to the subsequent years of a degree programme at Keele. A broad range of

modules is available from the life, physical, geographical and environmental sciences, mathematics, computing and psychology.

## 4. Aims of the programme

The broad aim of the programme is to provide preparation for subsequent study at Honours degree level in subjects provided in the Faculty of Natural Sciences. A full list of Honours degree programmes provided by each School in the Faculty of Natural Sciences can be found using the links below:

School of Computing and Mathematics: <https://www.keele.ac.uk/scm/undergraduatestudy/>

School of Life Sciences: <https://www.keele.ac.uk/lifesci/undergraduatestudy/>

School of Geography, Geology and the Environment: <https://www.keele.ac.uk/gge/studyatgge/undergraduatecourses/>

School of Chemical and Physical Sciences: <https://www.keele.ac.uk/scps/>

School of Psychology: <https://www.keele.ac.uk/psychology/undergraduatestudy/>

Institute of Liberal Arts and Sciences: <https://www.keele.ac.uk/ilas/interdisciplinarydegrees/>

For combined honours programmes the second subject may be a science, social science, humanities or business discipline.

## 5. What you will learn

The intended learning outcomes of the programme (what students should know, understand and be able to do at the end of the programme), can be described under the following headings:

- Subject knowledge and understanding
- Subject specific skills
- Key or transferable skills (including employability skills)

### Subject knowledge and understanding

These are covered by the subject-specific modules, which are specific to individual programmes and not core to the Science Foundation Year.

### Subject specific skills

These are covered by the subject-specific modules, which are specific to individual programmes and not core to the Science Foundation Year.

### Key or transferable skills (including employability skills)

Successful students will be able to:

- communicate effectively in writing and produce professional reports;
- communicate effectively orally and give formal presentations;
- work cooperatively and collaboratively in groups;
- utilize effective independent study skills;
- reflect on own skills and progress;
- manage time effectively and work towards deadlines;
- write assignments with both formal and informal structures;
- perform mathematical calculations and solve problems through the application of mathematical equations;
- derive and interpret the accuracy of numerical values obtained from calculations;
- use bespoke commercial software used to represent numerical data graphically.

### Keele Graduate attributes

Engagement with this programme will enable you to develop your intellectual, personal and professional capabilities. At Keele, we call these our ten Graduate Attributes and they include independent thinking, synthesizing information, creative problem solving, communicating clearly, and appreciating the social,

environmental and global implications of your studies and activities. Our educational programme and learning environment is designed to help you to become a well-rounded graduate who is capable of making a positive and valued contribution in a complex and rapidly changing world, whichever spheres of life you engage in after your studies are completed.

Further information about the Keele Graduate Attributes can be found here: <http://www.keele.ac.uk/journey/>

## 6. How is the programme taught?

The programme will be delivered through a mixture of lectures, tutorials, seminars, workshops, computer classes, laboratory classes, problem-based learning and team-based learning. There will be activities outside of the classroom such as online directed learning activities and field trips. In addition, students are expected to undertake a large amount of independent study and revision.

**Digital Learning** give students access to a variety of high quality, on-demand digital resources that students have access to including Microsoft Sway, OneNote and PowerPoint.

**Lectures** are normally delivered asynchronously and available for students to engage with prior to the associated taught session/s.

**Tutorials** and **seminars** are small group sessions with a member of staff. Usually there is much more participation by students than in lectures. There is often opportunity for students to suggest the topics to be discussed, to ask questions and even to lead part of the session. Tutorials and seminars usually support the material delivered in the lectures; seminars often allow students and/or staff to introduce supplementary material.

**Workshops** are small group sessions based around an activity. These may be individual or group activities. A member of staff facilitates the session but the learning comes largely through the undertaking of the activity. Some workshops will complement the material delivered in the lectures rather than build on it directly.

**Laboratory** classes provide opportunity for students to perform experiments and other practical work under supervision.

**Field trips** allow students to carry out supervised investigations outside the class room.

In **computer classes** students complete tasks using a wide variety of computer applications. Members of staff are available to provide guidance.

**Team-based learning** and **problem-based learning** are group work classes that are facilitated by a tutor. Students complete a series of tasks to actively learn about a subject.

**Directed learning activities** are set by tutors, that will be completed by students independently, or as part of a group.

**Independent study** includes revision, wider reading around the subject, preparation and writing of assignments, preparatory reading, preparation for seminars and tutorials, and developing skills to complement the material delivered in class. Reading lists are provided to help students direct their reading.

Apart from these formal activities, students are also provided with regular opportunities to talk through particular areas of difficulty, and any special learning needs they may have, with their Personal Tutors or module lecturers on a one-to-one basis.

## 7. Teaching Staff

All Foundation Year Centre staff already have or are completing formal teaching qualifications and collectively have many years experience of teaching on foundation year programmes. Many are engaged in scholarship relating to teaching and learning. In some cases teaching may be delivered by staff from other Schools in the University, or external experts in their field contracted to deliver specific teaching.

The University will attempt to minimise changes to our core teaching teams, however, delivery of the programme depends on having a sufficient number of staff with the relevant expertise to ensure that the programme is taught to the appropriate academic standard.

Staff turnover, for example where key members of staff leave or fall ill may result in changes to the programme's content. The University will endeavour to ensure that any impact on students is limited if such changes occur.

## 8. What is the structure of the programme?

The Science Foundation Year offers a September and January start. Both provide 120 credits worth of study

during the academic year. There may be variation in the modules that are studied on the January start programme compared to the September start and this will depend on the degree path chosen.

**NB. We do not offer a January intake for the [Veterinary Medicine and Surgery degree with Foundation Year](#).**

The academic year runs from September to June (September start) and January to July (January start) and is divided into two semesters. The number of weeks of teaching may vary from programme to programme but you can normally expect up to 12 weeks of teaching for each semester.

#### **For the September start:**

You can generally expect to attend scheduled teaching sessions between the end of September and mid-December (semester 1), and from mid-January to the end of April (semester 2).

There are usually two reassessment periods.

Semester 1 reassessment period usually takes place at the end of May beginning of June.

Semester 2 reassessment period usually takes place mid-August.

#### **For the January start:**

You can generally expect to attend scheduled teaching sessions between the beginning of January and the end of March (semester 1), and from mid-April to July (semester 2).

There is one reassessment period for both semester 1 and semester 2 modules. This usually takes place towards the end of August.

Each module is usually a self-contained unit of study and each is usually assessed separately with the award of credits on the basis of 1 credit = 10 hours of student effort.

Students take a combination of modules to a total of 120 credits: compulsory modules will be those related to their intended degree programmes after their Foundation Year. Depending on their degree choice their may be some free choice. Modules are worth 15 or 30 credits.

An outline of the structure of the programme is provided below.

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## **Module Lists**

### ***Foundation Year***

Students will study their main science subject: Life Science, Chemistry, Computing, Geography, Geology and the Environment, Maths, Physics and Psychology.

Single honours students will study their main discipline subject and may have an option to study another subject area.

Combined honours students will study both of their disciplines. The modules studied will be determined by your chosen degree and can be from the Sciences, Business, Humanities or Social Sciences programmes.

<b>Optional modules</b>	<b>Module Code</b>	<b>Credits</b>	<b>Period</b>
Practical and Academic Skills in Science	FYO-00185	15	Semester 1
Academic Skills for Computer Scientists and Mathematicians	FYO-00187	15	Semester 1
Foundations of Chemistry	FYO-00189	15	Semester 1
Foundations of Geography, Geology and the Environment	FYO-00193	15	Semester 1
Foundations of Life Sciences	FYO-00197	15	Semester 1
Foundations of Psychology	FYO-00201	15	Semester 1
Foundations of Physics	FYO-00205	15	Semester 1
Foundations of Numerical and Quantitative Methods for Scientists	FYO-00211	15	Semester 1
Foundations of Mathematical Methods - CH Physics	FYO-00215	15	Semester 1
Foundations of Mathematical Methods	FYO-00217	30	Semester 1
Foundations of Computational Theory and Programming	FYO-00221	30	Semester 1
Foundations of Applied Mathematics - Mechanics and Statistics	FYO-00223	15	Semester 1
Foundations of Computational Theory and Programming (15 credits)	FYO-00275	15	Semester 1
Foundations of Science for Sustainability	FYO-00276	15	Semester 1
Advancing Chemistry	FYO-00191	30	Semester 2
Advancing Geography, Geology and the Environment	FYO-00195	30	Semester 2
Advancing Life Sciences	FYO-00199	30	Semester 2
Advancing Psychology	FYO-00203	30	Semester 2
Advancing Physics	FYO-00207	30	Semester 2
Advancing Physics (15 credits)	FYO-00209	15	Semester 2
Advancing Programming	FYO-00225	15	Semester 2
Advancing Computing: Client-Led Collaborative Design	FYO-00227	15	Semester 2
Advancing Mathematical Methods	FYO-00229	30	Semester 2
Advancing Mathematical Methods - CH Physics	FYO-00231	15	Semester 2
Advancing Applied Mathematics and Computing - Making Decisions	FYO-00233	15	Semester 2
Advancing Applied Mathematics and Computing - Logic, Codes and Cryptography	FYO-00235	15	Semester 2

### **Foundation Year Module Rules**

In Semester 1 students study the foundation modules that follow onto the appropriate advancing modules in Semester 2.

## Learning Outcomes

The table below sets out what students learn in the programme and the modules in which that learning takes place. Details of how learning outcomes are assessed through these modules can be found in module specifications.

### ***Foundation Year***

<b>Subject Knowledge and Understanding</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
Apply knowledge and understanding of scientific ideas, processes, techniques and procedures:- in a theoretical or practical context when handling qualitative or quantitative data. Analyse, interpret and evaluate scientific information, ideas and evidence, in order to: make judgments and reach conclusions, to develop and refine practical design and procedures.	Through modules across the Science programme.

<b>Intellectual skills</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
Develop an open and questioning approach to ideas, demonstrating curiosity, independence of thought and the ability to appreciate a range of perspectives and then:- plan for, and apply, your ability creatively to solve problems using a range of different approaches and techniques, determine which techniques are appropriate for the issue at hand.	Through modules across the Science programme.

<b>Key or Transferable Skills (graduate attributes)</b>	
<b>Learning Outcome</b>	<b>Module in which this is delivered</b>
Demonstrate the ability and motivation to:- participate responsibly and collaboratively as an active citizen in the communities in which you live and work, be flexible in rapidly changing and uncertain external environments and to update skills and knowledge as circumstances require.	Through modules across the Science programme.

## 9. Final and intermediate awards

Students successfully completing the programme with 120 credits will be eligible for the Certificate in Foundation Year Studies.

The certificate will only be awarded to students who successfully complete the Keele Foundation Year and then choose not to continue their studies at Keele.

## 10. How is the Programme Assessed?

The wide variety of assessment methods used on this programme at Keele reflects the broad range of knowledge and skills that are developed as you progress through the degree programme. Teaching staff pay particular attention to specifying clear assessment criteria and providing timely, regular and constructive feedback that helps to clarify things you did not understand and helps you to improve your performance. The following list is representative of the variety of assessment methods used on your programme:

- **Unseen closed and open book examinations** in different formats test students' knowledge and understanding of the subject. Examinations may consist of essay, short answer and/or multiple choice

questions, and paper comprehension.

- **Essays, blogs and reports** allow students to demonstrate their ability to articulate ideas clearly, using argument and reasoning skills and with close reference to the contexts and critical concepts covered in the modules. Essays also develop and demonstrate research and presentation skills (including appropriate scholarly referencing).
- **Class tests** taken either conventionally or online via the Keele Learning Environment (KLE) assess students' subject knowledge and often their ability to apply it in a more structured and focused way.
- **Research projects** test student's knowledge of different research methodologies and the limits and provisional nature of knowledge. They also enable students to demonstrate their ability to formulate research questions and to answer them using appropriate methods.
- **Oral, poster and video presentations, podcasts and reports** assess individual students' subject knowledge and understanding. They may also test their ability to work effectively as members of a team, to communicate what they know orally and visually, and to reflect on these processes as part of their own personal development.
- **Portfolios** may consist of a range of different pieces of work but routinely include a requirement that students provide some evidence of critical reflection on the development of their own learning.
- **Peer assessment:** In some cases students will be involved in peer evaluation of other students' work, particularly in group work. This helps students to take responsibility, improve their performance, and reflect on both their own work and that of others.
- **Course work assignments** consist of short written pieces completed in students' own time and provide the opportunity to test a range of deeper learning concepts; they are expected to make use of a variety of source material, as well as their lecture notes and text books etc., to complete these assignments.
- **Laboratory reports** - structured proformas and full laboratory reports are formal summaries of work carried out in the laboratory. They test students' understanding of the practical aspects of the programme and develop the skills necessary to enable students to present and analyse their results, as well as explain the rationale behind an experiment, describe an associated replicable methodology and draw valid conclusions.

Marks are awarded for summative assessments designed to assess your achievement of learning outcomes. You will also be assessed formatively to enable you to monitor your own progress and to assist staff in identifying and addressing any specific learning needs. Feedback, including guidance on how you can improve the quality of your work, is also provided on all summative assessments within three working weeks of submission, unless there are compelling circumstances that make this impossible, and more informally in the course of tutorial and seminar discussions.

## 11. Contact Time and Expected Workload

This contact time measure is intended to provide you with an indication of the type of activity you are likely to undertake during this programme. The data is compiled based on module choices and learning patterns of students on similar programmes in previous years. Every effort is made to ensure this data is a realistic representation of what you are likely to experience, but changes to programmes, teaching methods and assessment methods mean this data is representative and not specific.

Foundation Year courses at Keele contain an element of module choice; therefore, individual students will experience a different mix of contact time and assessment types dependent upon their own individual choice of modules. The figures below are an example of activities that a student may expect on your chosen course by year/stage of study. Contact time includes scheduled activities such as: lecture, seminar, tutorial, project supervision, demonstration, practical classes and labs, supervised time in labs/workshop, fieldwork and external visits. The figures are based on 1,200 hours of student effort each year for full-time students.

### Activity

	<b>Scheduled learning and teaching activities</b>	<b>Guided independent Study</b>	<b>Placements</b>
<b>Foundation Year</b>	33%	67%	0%

## 12. Accreditation

This programme does not have accreditation from an external body.

## 13. University Regulations

The University Regulations form the framework for learning, teaching and assessment and other aspects of the student experience. Further information about the University Regulations can be found at: <http://www.keele.ac.uk/student-agreement/>

If this programme has any exemptions, variations or additions to the University Regulations these will be detailed in an Annex at the end of this document titled 'Programme-specific regulations'.

## 14. What are the typical admission requirements for the Programme?

See the relevant course page on the website for the admission requirements relevant to this programme: <https://www.keele.ac.uk/study/>

Please note: All non-native English speaking students are required to undertake a diagnostic English language assessment on arrival at Keele, to determine whether English language support may help them succeed with their studies. An English language module may be compulsory for some students during their first year at Keele.

Recognition of Prior Learning (APL) is considered on a case-by-case basis and those interested should contact the Programme Director. The University's guidelines on this can be found here: <http://www.keele.ac.uk/qa/accreditationofpriorlearning/>

## 15. How are students supported on the programme?

All students have a personal tutor. They see their tutor on a regular basis throughout the academic year, and they will also be available at specific times during their working week, as necessary. The tutor will book individual progress meetings with each student at least three times during the Foundation Year. There is also a dedicated Science Foundation Year Programme Director and a nominated leader for each Module. The course will be taught by staff in the Foundation Year Centre and from elsewhere in the University. There is also support from a team of administrators led by the Foundation Year Centre Manager. All students have access to the University's Student Services Centre and the Students' Union as necessary.

## 16. Learning Resources

All modules will be delivered through a combination of face-to-face and virtual contact. Most of the taught sessions will be in small classrooms with directed learning activities to be completed at other times. Some study will be undertaken in computer laboratories or practical laboratories under supervision from staff and postgraduate demonstrators. Support materials, course regulations and student handbooks will be available electronically on the Keele Learning Environment (Blackboard). All students will be registered with the library and have access to reading lists, course books and journals, and computing and printing facilities. All students have access to additional study skills support through the Student Learning section of the Keele's Student Services Centre.

## 17. Other Learning Opportunities

Students are encouraged to participate in a wide range of activities offered by the University and the Students' Union, including societies, sports and volunteering. Involvement can be recognized in a number of ways including the Higher Education Achievement Record and Keele SU awards.

## 18. Additional Costs

Activity	Estimated Cost
Equipment - approved calculator for Mathematics and Science modules only	£10
Equipment - protective equipment for Chemistry and Biology modules	£15

These costs have been forecast by the University as accurately as possible but may be subject to change as a result of factors outside of our control (for example, increase in costs for external services). Forecast costs are reviewed on an annual basis to ensure they remain representative. Where additional costs are in direct control of the University we will ensure increases do not exceed 5%.

As to be expected there will be additional costs for inter-library loans and potential overdue library fines, print and graduation. We do not anticipate any further costs for this programme.

## 19. Quality management and enhancement

The quality and standards of learning in this programme are subject to a continuous process of monitoring,

review and enhancement.

- The Education Committee of the Foundation Year Centre is responsible for reviewing and monitoring quality management and enhancement procedures and activities across the Centre.
- Individual modules and the programme as a whole are reviewed and enhanced every year in the annual programme review which takes place at the end of the academic year.
- The programmes are run in accordance with the University's Quality Assurance procedures and are subject to periodic reviews under the Internal Quality Audit (IQA) process.

Student evaluation of, and feedback on, the quality of learning on every module takes place every year using a variety of different methods:

- The results of student evaluations of all modules are reported to module leaders and reviewed by the Programme Committee as part of annual programme review.
- Feedback received from representatives of students in all three years of the programme is considered and acted on at regular meetings of the Student Staff Voice Committee.

The University appoints senior members of academic staff from other universities to act as external examiners on all programmes. They are responsible for:

- Approving examination questions
- Confirming all marks which contribute to a student's degree
- Reviewing and giving advice on the structure and content of the programme and assessment procedures

Information about current external examiner(s) can be found here:

<http://www.keele.ac.uk/qa/externalexaminers/currentexternalexaminers/>

## 20. The principles of programme design

The programme described in this document has been drawn up with reference to, and in accordance with the guidance set out in, the following documents:

a. UK Quality Code for Higher Education, Quality Assurance Agency for Higher Education:

<http://www.qaa.ac.uk/quality-code>

b. Keele University Regulations and Guidance for Students and Staff: <http://www.keele.ac.uk/regulations>

## 21. Annex - Programme-specific regulations

### Programme Regulations: Science Foundation Year

<b>Final Award and Award Titles</b>	Science Foundation Year
<b>Intermediate Award(s)</b>	n/a
<b>Last modified</b>	May 2021
<b>Programme Specification</b>	<a href="https://www.keele.ac.uk/qa/programmespecifications">https://www.keele.ac.uk/qa/programmespecifications</a>

The University's Academic Regulations which can be found on the Keele University website (<https://www.keele.ac.uk/regulations/>)[1] apply to and regulate the programme, other than in instances where the specific programme regulations listed below over-ride them. These programme regulations list:

- *Exemptions* which are characterised by the omission of the relevant regulation.
- *Variations* which are characterised by the replacement of part of the regulation with alternative wording.
- *Additional Requirements* which set out what additional rules that apply to students in relation to this programme.

The following **exemptions, variations** and **additional requirements** to the University regulations have been checked by Academic Services and have been approved by the Faculty Education Committee.

## A) EXEMPTIONS

The clause(s) listed below describe where an exemption from the University's Academic Regulations exists:

For the whole duration of their studies, students on this Programme are exempt from the following regulations:

**No exemptions apply.**

## **B) VARIATIONS**

The clause(s) listed below describe where a variation from the University's Academic Regulations exists:

**No variations apply**

### **Additional Requirements**

The programme requirements listed below are in addition to the University's Academic Regulations:

Regulation C2 contain important information and covers all of the University's Foundation Year programmes at Level 3 and sets out;

- the fundamental structure of these programmes,
- the requirements to obtain an award,
- the requirements to progress to the next level of study at Keele,
- and academic failure.

Regulation C2 - Foundation Programmes can be found on Keele University's website - [Regulation C2 - Keele University](#)

## **Version History**

### **This document**

**Date Approved:** 21 April 2022

### **Previous documents**

<b>Version No</b>	<b>Year</b>	<b>Owner</b>	<b>Date Approved</b>	<b>Summary of and rationale for changes</b>
1	2021/22	SIMON RIMMINGTON	09 June 2021	
1.1	2020/21	SIMON RIMMINGTON	28 October 2020	Additional information added to Section 8 to incorporate a January enrolment point.
1	2020/21	SIMON RIMMINGTON	14 May 2020	
1	2019/20	SIMON RIMMINGTON	14 May 2020	