

**1. Programme title(s) and code(s):**

- a) Natural Sciences and Geoscience Foundation Year

This programme provides progression onto BSc / Integrated Masters programmes in Natural Sciences, Geology, Physical Geography and Geography. It is not available as a stand-alone award.

- b)
- [HECOS Code](#)

HECOS CODE	%
100391	100

- c) UCAS Code (where required)

N/A

**2. Awarding body or institution:**

University of Leicester

**3. a) Mode of study:**

Full-time

**b) Type of study:**

Campus-Based

**4. Registration periods:**

The normal period of registration is one year (progressing to a 3 or 4 year UG degree)

The maximum period of registration for the Foundation Year is 2 years.

The foundation year is linked to BSc & integrated M-level programmes in Natural Sciences, Geography and Geology, which have their own maximum registration period. The foundation year will contribute towards the maximum registration period of these programmes; this is shown in the programme specifications for these degrees.

**5. Typical entry requirements:**

A-levels: CCD – including two science subjects

BTEC: DDM

Students with less science backgrounds looking to use the foundation year as a transition route into the related undergraduate programmes will be considered individually.

**6. Accreditation of Prior Learning:**

N/A

**7. Programme aims:**

The programme aims to:

- Help students to develop mature, professional, study skills that will equip them to thrive in the higher education environment and beyond.

## Undergraduate Programme Specification

- Provide students who lack suitable entry qualifications with training in a range of sciences, mathematics, and study skills, that will enable them to progress onto an undergraduate degree programme in natural sciences, geography or geology.

### 8. Reference points used to inform the programme specification:

- University of Leicester Learning Strategy 2016-2020
- Specification documents for various A level mathematics qualifications
- Specification documents for various A level science (Physics, Chemistry, Biology, Geography, Geology) qualifications
- Programme (and module) specifications from the following courses to which this foundation year provides progression:

### 9. Programme Outcomes:

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
<b>(a) Discipline specific knowledge and competencies</b>		
<b>(i) Mastery of an appropriate body of knowledge</b>		
Mastery of mathematics and general science equivalent to parts of the content of A level	Prepared pre-reading. Lectures, problem classes. Group work/peer learning. Regular coursework with timely feedback.	Regular coursework assessments. Group projects. Presentations. Formal laboratory reports. End of semester examinations. Blackboard based multiple choice exams. Precis of research article
<b>(ii) Understanding and application of key concepts and techniques</b>		
Application of different scientific disciplines and mathematical knowledge to specific scenarios	Regular coursework questions with timely feedback. Group work/peer learning. Workshop/surgery sessions.	Regular coursework assessments. End of semester examinations.
<b>(iii) Critical analysis of key issues</b>		
Students should be able to explain the process of scientific enquiry, the roles of experiment and theory, the limits of science and the role of experimental error.  Students should be able to evaluate the reliability of information retrieved from electronic resources	Induction programmes, resource based learning, group projects, seminars	Presentations, written reports, literature review
<b>(iv) Clear and concise presentation of material</b>		
Students should be able to communicate scientific ideas through written material and oral presentations.	Lectures, seminars, written guidance (handbook). Formative feedback on presentations and reports.	Presentations, written reports, literature review,
<b>(v) Critical appraisal of evidence with appropriate insight</b>		
Distinguish between precision and accuracy and explain the role of experimental error in the scientific process.	Embedded throughout the programme in lectures, seminars workshops, written course material, handbook. Specific instruction through problem solving classes	Written reports, specific coursework assessments.

## Undergraduate Programme Specification

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
<b>(vi) Other discipline specific competencies</b>		
Use mathematical models to explain various features of scientific phenomena.  View mathematics as an integral part of scientific method rather than as a separate, compartmentalised subject.  Develop observational and descriptive skills in the sciences.	Embedded throughout the programme by means of examples in lectures, seminars workshops, written course material. Coursework with rapid feedback	Regular coursework assessments. End of semester examinations
<b>(b) Transferable skills</b>		
<b>(i) Oral communication</b>		
Students should be able to communicate scientific ideas through oral presentations.	Lectures, seminars, written guidance (handbook). Formative feedback on presentations.	Individual and group presentations.
<b>(ii) Written communication</b>		
Students should be able to communicate scientific ideas through written material. Students should master the art of setting out a mathematical proof in a clear, logical manner	Lectures, seminars, written guidance (handbook). Formative feedback on written coursework assessments, reports, and mathematical submissions	Reports, regular science coursework assignments, regular competency based mathematical submissions.
<b>(iii) Information technology</b>		
Students should be able to: <ul style="list-style-type: none"> <li>• use electronic resources to find information</li> <li>• use IT resources to process data</li> <li>• use IT to present data</li> </ul>	Seminars, tutorials, inductions sessions, advice in course materials and handbook, formative feedback on presentations	Individual and group presentations.
<b>(iv) Numeracy</b>		
Mastery of specific elements of mathematics at AS-level standard	Course materials, pre-reading, lectures, problem classes, formative feedback on coursework submissions, competency-based mathematics tuition	Coursework submissions, end of semester examinations.
<b>(v) Team working</b>		
Working in groups to solve problems, prepare and deliver reports and presentations.	Feedback in workshops. Formative feedback on presentations and reports.	Presentations and reports, peer assessment.
<b>(vi) Problem solving</b>		
To apply scientific, and mathematical knowledge to a wide variety of problems	Lectures, workshops, formative feedback on regular coursework assessments.	regular coursework assessments, examinations
<b>(vii) Information handling</b>		
Students should be able to correctly process, arrange and present scientific data and draw appropriate conclusions from it	Skills workshops, laboratory practicals, handbooks, formative feedback on coursework assessments.	Laboratory notes, formal laboratory report, coursework assessments

## Undergraduate Programme Specification

Intended Learning Outcomes	Teaching and Learning Methods	How Demonstrated?
<b>(viii) Skills for lifelong learning</b>		
Students should be able to <ul style="list-style-type: none"> <li>• keep an ordered set of course notes</li> <li>• organise their time effectively</li> <li>• assimilate and draw accurate conclusions from a wide variety of data</li> <li>• effectively communicate scientific conclusions in both written and oral form</li> </ul>	Professional practice tutorials, compulsory attendance at core learning activities, specific instruction in lectures and seminars, formative feedback on presentations and written material	By keeping ordered notes, by attending sessions and being punctual, through regular coursework assessment and end of semester examinations, reports and presentations.

### 10. Progression points:

The programme follows the standard senate regulations for Undergraduate Taught Provision, with the following exceptions.

The progression requirements from Year 0 to Year 1 of the related undergraduate programmes are:

- Students will be required to pass all foundation year modules
- Reassessment will ordinarily be offered on one occasion only

In cases where a student has failed to meet a requirement to progress he or she will be required to withdraw from the course.

### 11. Special features:

None.

### 12. Indications of programme quality

The teaching methodology has been informed by experience teaching the Interdisciplinary Science/Natural Sciences degree programme to a diverse range of students with widely varying mathematical abilities. Competency-based mathematics has proven very effective in this context. The Methods and Techniques module was informed by similar modules in the IScience course.

### 13. External Examiner(s) reports

N/A

## Undergraduate Programme Specification

### Appendix 1: Programme structure (programme regulations)

Period	Module Code	Module Title	Credits
<b>Semester 1</b>			
	FS0011	Science 1: Materials	15
	CH0063	Methods, Techniques and Skills	15
	FS0031	Mathematics 1	15
<b>Semester 2</b>			
	FS0013	Science 3: Heat and Energy	15
	GY0011	Principles of Earth Science and Earth Systems	15
	NT0001	Principles of Biological Sciences	15
<b>Year Long</b>	CH0061	Introduction to Chemistry	30

### Appendix 2: Module specifications

See [module specification database](#)