# Programme Specification (Undergraduate) FOR ENTRY YEAR: 2025/26

**Date created:** 01/03/21 **Last amended:** 16/12/2024 **Version no.** 1

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

MGeol Geology F601
MGeol Geology with a Year Abroad *
MGeol Geology with a Year in Industry *

* Selected on course

### a) HECOS Code

| HECOS Code | % |
|---|---|
| 100395 | 100% |

### b) UCAS Code (where required)

F601

## 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 four years (five years for Year in Industry)

The maximum period of registration is six years (seven years for Year in Industry)

## 5. Typical entry requirements

A-level: AAB preferably including at least two from: Biology, Chemistry, Computer Science, Environmental Science, Geography, Geology, Maths , Use of Maths or Physics.

. We also consider one-science profiles with Geology, Maths, Biology, Chemistry or Physics.
EPQ with A-levels: AAB + EPQ at grade B. A-level subjects preferably including at least two from: Geology, Maths, Biology, Chemistry, Physics, Use of Maths, Computer Science, Environmental Science, or Geography. We also consider one-science profiles with Geology, Maths, Biology, Chemistry or Physics.
Access to HE Diploma: Pass science diploma with a minimum of 45 credits at level 3, 30 of which must be at Distinction. To include Physics, Chemistry and Maths Level 3 credits.
International Baccalaureate: Pass Diploma with 30 points, including grade 5 in two science subjects at HL. Minimum of 3 in HL Maths or 4 in SL Maths required if grade C/4 not held at GCSE. Minimum of 4 in English Language required if grade C/4 not held at GCSE.
BTEC Nationals: Pass Diploma with DDD (Science Related). Please contact School regarding eligibility.
T Levels: Distinction in Science (with an Occupational Specialism in Laboratory technician).

## 6. Accreditation of Prior Learning

APL will not be accepted for exemptions from individual modules, however may be considered for direct entry to year 2, on a case by case and subject to the general provisions of the University APL policy.

## 7. Programme aims

The programme aims to:

1. provide students with a breadth of knowledge of Geology, and exposure to areas of research at the cutting edge of the Earth Sciences;
2. provide students with a thorough understanding of the theoretical and practical applications of Geology in the study of the Earth, and environmental and societal issues;
3. equip students with transferable and subject-specific skills necessary for a career in the Earth Sciences, other science based industries, education, and for training at management levels in other professions;
4. promote the development of ICT and written, oral and presentation skills appropriate for a science graduate at the MGeol level;
5. stimulate students to develop a wide range of independent and team skills;
6. ensure that students benefit from an extensive programme of work in the field, developing fundamental geological knowledge through observation and critical analysis as well as developing personal and character skills;
7. provide students, via the curriculum and research expertise of staff, with a first training in research and research techniques appropriate for further postgraduate study or a research position in industry;
8. provide students with the environment in which to develop their interest in Geology;
9. enthuse and motivate all students to achieve their full potential in their degree course.
10. provide breadth and depth, via advanced M-level modules, in the subject area of Geology.
11. provide students with a training in, and appreciation of, research methods in Geology.

**Additional aims and objectives for Year Abroad degree**

The Year Abroad will provide students with the opportunity to spend their third year of academic study at the University of Canterbury, New Zealand.

**For the Year in Industry variant only, these additional programme aims apply:**

- Prepare students for career and training opportunities which relate to their degree – in both the private and public sectors, and voluntary organisations.
- Construct effective applications for placement opportunities
- Provide students the opportunity to recognise suitable plans for transitioning into the workplace

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

### Degree programmes broadly concerned with earth sciences

2.4 It is anticipated that all graduates have appropriate knowledge of the main aspects of the Earth sciences, as listed:

- A holistic view of the present and past interactions between components of the Earth system, including the effects of extra-terrestrial influences on these interactions.
- The cycling of matter and the flows of energy into, between and within the solid Earth, the Earth's surface, the hydrosphere, the atmosphere and the biosphere.
- The study of the biological, chemical and physical processes that underpin our understanding of the structure, materials and processes relevant to the Earth and planetary bodies.

- The central paradigms in the Earth sciences: uniformitarianism (the present is the key to the past); the extent of geological time; evolution (the history of life on Earth); and plate tectonics
- Geological time, including the principles of stratigraphy, the stratigraphic column, the methods of geochronology, the rates of Earth processes, major events in Earth history, the evolution of life as revealed by the fossil record, the Quaternary and Anthropocene.
- Collection and analysis of Earth science data in the field, and the appropriate presentation, manipulation and extrapolation of these sometimes incomplete data in both two and three-dimensions, including the generation of geological maps and cross sections.
- The study of structures, materials and processes that includes an appreciation of temporal and spatial variations at appropriate scales.
- The study of the structure, the composition and the materials of the solid Earth (core, mantle, crust, asthenosphere, lithosphere and so on), the hydrosphere, the atmosphere, the cryosphere and the biosphere, and the processes operating within and between them.
- An understanding of other planetary bodies.
- Earth science terminology, nomenclature and classification of rocks, minerals, fossils, and geological structures.
- The identification of rocks, minerals, fossils, and geological structures.
- Surveying and measurement both in the field and laboratory, and using quantitative and instrumental techniques.
- An awareness that the understanding and knowledge gained from the subject and its application has to be considered within a wider socio-economic and environmental context.

2.5 Typical programme elements might include: engineering geology; geochemistry; geological mapping; geomorphology; geophysics; geographic information systems and remote sensing applications; hydrogeology; igneous and metamorphic petrology, local and global tectonics; mineralogy; mineral deposits; natural hazards;; palaeobiology; palaeoclimatology; palaeontology; petroleum geology; petrology; sedimentology; stratigraphy; and structural geology.

2.6 Applications of the subject areas might include the exploration, development and remediation/storage of Earth resources (eg hydrocarbons, minerals, water, carbon dioxide sequestration, aggregates & radioactive waste), using past climates to understand climate change and the impact on the environment and society, civil engineering projects (e.g. land restoration, site investigations and waste disposal and understanding geohazards (e.g. flooding, earthquakes, volcanic eruptions and landslides).

In addition, the Programme Specifications were informed by:

- QAA Benchmarking Statement
- Framework for Higher Education Qualifications (FHEQ)
- UK Quality Code for Higher Education
- University Education Strategy
- University Assessment Strategy [log in required]
- University of Leicester Periodic Developmental Review Report
- External Examiners' reports (annual)
- United Nations Education for Sustainable Development Goals
- Student Destinations Data

## 9. Programme Outcomes

Unless otherwise stated, programme outcomes apply to all awards specified in 1. Programme title(s).

**a) Discipline specific knowledge and competencies**

i) Mastery of an appropriate body of knowledge

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Discuss and explain the general principles and techniques of Geology, including the structure, composition and evolution of the Earth and its interrelationships with the hydrosphere, cryosphere, biosphere, and atmosphere and the perturbations of these systems by extraterrestrial influences. | Lectures; Tutorials; Practical classes; Seminars; Field Courses; Demonstrations; Example sheets; Resource-based learning; Directed reading; Problem-solving classes. | Written and practical examinations, including short-answer and essay examinations; Problem-based examinations; Coursework; Module tests; Essays; Assessment of field reports and maps; Poster presentations; Field notebooks; Problem-based exercises |

ii) Understanding and application of key concepts and techniques

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Describe, identify and interpret a range of geological materials in the laboratory and field; select appropriate techniques to enable this; and explain geological relationships. | Lectures; Tutorials; Practical classes; Field Courses; Demonstrations; Example sheets; Resource-based learning; Directed reading. | Written and practical examinations, including short-answer and essay examinations; Problem-based examinations; Field notebooks. |
| Examine, record and interpret the geology (senso lato) of a region via a range of field-based techniques. | Lectures; Tutorials; Practical classes; Field Courses; Demonstrations; Independent field work. | Practical examination; Report and field notebook and map assessment |
| Explain geological time, rates and fluxes, and the techniques required to determine them. | Lectures, Tutorials, Practical classes; Seminars; Field Courses; Demonstrations; Example sheets; Resource-based learning; Directed reading; Problem-solving classes. | Written and practical examinations, including short-answer and essay examinations; Problem-based examinations. |
| Select geological knowledge and data for modeling purposes (for example, for evaluation of scientific hypotheses, for hazard mitigation, or for resource estimation). | Lectures; Tutorials; Practical classes; Field Courses; Demonstrations. | Written and practical examinations, including short-answer and essay examinations; Problem-based examinations; field notebooks. |
| Describe the importance of geological materials resources, their exploitation and associated environmental impact. | Lectures, practical classes, tutorials, field courses | Exam and group work. |

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Demonstrate and apply knowledge of safety procedures in the field. | Field-based practical classes and demonstrations. | Demonstration and role play. MGeol research project diary and report. |
| Demonstrate and apply knowledge of safety procedures in the laboratory. | Supervised classes and training with appropriate staff and supervisors. | MGeol research project diary and report. |
| Demonstrate a knowledge of a number of research techniques and procedures. | Supervised laboratory classes, discussion sessions with project supervisors. | MGeol Research project poster, report, project diary, associated oral presentation. |

iii) Critical analysis of key issues

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Identify theories paradigms, concepts and principles; apply scientific principles to evaluate current geological paradigms; and evaluate environmental and societal aspects of the Earth's resources. | Lectures; Tutorials; Practical classes; Field Courses; Demonstrations; Example sheets; Resource-based learning; Directed reading. | Written and practical examinations, including short-answer and essay examinations; MGeol research project report and project diary; Problem based examinations; Coursework; Module tests; Essays; Tutorial discussions. |

iv) Clear and concise presentation of material

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Synthesise and interpret results, in order to effectively communicate (via written, oral, graphical means) data and ideas to a range of audiences. | Tutorials; Group seminars; Practical classes | Essays, essay-based examinations; independent projects; MGeol research project report, poster and project diary; contributions to tutorial discussions; poster displays; reports; group talks. |

v) Critical appraisal of evidence with appropriate insight

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Debate geological ideas. Construct and test scientific hypotheses and analyse using geological data. | Lectures; Tutorials; Practical classes; Seminars; Field Courses; Demonstrations; Directed reading; Problem-solving classes | Essays; essay- and practical examinations; reports; presentations; MGeol research project report and project diary. |

vi) Other discipline specific competencies

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Conduct a range of field-based studies (e.g. geological mapping and recording of field observations). | Field courses, practical classes and demonstrations. | Report, field notebook, and geological map. Practical examinations. |

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Develop responsibility for the immediate working environment. | Field-based classes and projects. | Staff-monitoring of hazard assessment forms. Assessment of fieldwork. |
| Describe risks for hazard assessment for field-based work. Identify safe practice. | Field-based classes and projects. | Staff-monitoring of hazard assessment forms. Assessment of fieldwork. |
| Explain the geological structure and history of an area. | Field classes, lectures, practical classes. | Independent field project report. |

**b) Transferable skills**

i) Oral communication

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Present geological data and theories using appropriate methods. | Tutorials; Group seminars / discussions; field-based presentations. | Oral presentations in tutorials and classes; MGeol research project oral presentation; MGeol poster discussions |
| Discuss and review geological topics in tutorial and other group discussions, and respond effectively to questioning. | Tutorials; Group seminars/discussions; field-based presentations. | Oral presentations in tutorials and classes |
| Effectively lead and direct discussion of controversial subject-specific topics. | Discussion groups within module | Oral presentation in classes and assessment of debating skills and contributions. |

ii) Written communication

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Communicate effectively and appropriately in a variety of written formats including essays, reports, projects, CVs and posters | Tutorials, demonstrations and guidance notes | Assessed essays, reports, poster displays, and examinations |
| Draw and describe geological features, specimens and thin sections. | Practical classes, demonstrations, fieldwork, independent project work | Field notebooks; assessed practical folders; assessed reports. |

iii) Information technology

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Use spreadsheets or other software to enter, manipulate and display numerical data. | Subject-embedded exercises. Tutorials. | Assessed report; practical assignments. |

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Use appropriate software packages to prepare written reports, essays, posters and presentations (e.g. Word, PowerPoint) | Report-writing for tutorials; subject-embedded exercises; presentation to tutorial groups and classes. | Assessed report; tutorial and practical assignments; independent work assignments; MGeol Research project report, poster and oral presentation. |
| Critically review information from electronic sources. | Tutorial and class supported information retrieval for projects, essays and reports. | Assessed report; tutorial; practical assignments and independent work assignments (including MGeol research project report). |

iv) Numeracy

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Select appropriate numerical, statistical and graphical methods to explain and interpret geological concepts. | Introduced in the first year within practical classes and tutorials. | Mid-semester progress tests and as components within subject specific modules throughout the three years of study; feedback on practical class assignments. MGeol research project report and project diary |

v) Team working

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Organize and work effectively within a team, and evaluate performance of self and of team. | Tutorials, seminars, practical classes, project work, and field-based discussions. | Tutorial-based assessments; assessed practical work, and team fieldwork. |
| Identify self and team goals and responsibilities for team working. | Tutorials, seminars, practical classes, project work, and field-based discussions. | Tutorial-based assessments; assessed practical work, and team fieldwork. |

vi) Problem solving

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Solve numerical, spatial, temporal and geometrical problems. | Lectures, tutorials, practical and field classes, group work, projects. | Assessment of field notebooks, practical class work, project work and reports. |
| Solve problems with incomplete or contradictory information. | Field and practical classes, independent research supervisory sessions. | Dissertation; independent field project and poster;MGeol research project report and poster. |

vii) Information handling

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Effectively search for, gather and utilise information relevant to geological problem solving. | Lectures, tutorials, practicals, study skills within tutorials, field and lab-based projects. MGeol research project. | Tutorial assignments, project work. |

viii) Skills for lifelong learning

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated? |
|---|---|---|
| Demonstrate intellectual independence via independent research. | Independent project work, including field-based project work; MGeol research project; dissertation. | Assessed independent work. Coursework within modules; MGeol project report, poster, oral presentations, dissertation. |
| Develop and implement a personal plan of work to meet a deadline. | All of the above, and particularly independent project work. | Assessed independent work including MGeol research project; field project, coursework within modules. |
| Identify targets for personal, career and academic development | All of the above, and particularly independent project work and in tutorials Project planning classes, supervisory sessions, independent research project. | Assessed independent work. Successful Placement for Year in Industry students |
| Plan and execute an independent research project | Project planning classes, supervisory sessions, independent research project. | Assessed MGeol research project |

**For Year in Industry students (only)**

| Intended Learning Outcomes | Teaching and Learning Methods | How Demonstrated |
|---|---|---|
| On Placement | | |
| 1. Apply the theoretical and practical aspects of the material studied at the University and demonstrate the personal and professional skills necessary for your role within the organisation. | Project supervision, independent research | Completion of Monthly Reflective Journals to record skills development, major achievements, key areas of work, learning points and challenges overcome.<br><br>Assessed by a Placement Portfolio, comprising of a Reflective Summary, Professional Development Plan, and Updated CV (excluded from word count) to formally assess on a pass or fail basis.<br><br>Formative feedback during a Placement Visit (in person or via Skype) from Placement Provider and Placement Tutor regarding reflection on skills |

| | | |
|---|---|---|
| | | development, areas of strength and weakness and contribution to the workplace. |
| 2. Compose a Professional Development Plan considering your strengths, development areas and motivations for your next step | Project supervision, independent research | Completion of Monthly Reflective Journals to record skills development, major achievements, key areas of work, learning points and challenges overcome.<br><br>Assessed by a Placement Portfolio, comprising of a Reflective Summary, Professional Development Plan, and Updated CV (excluded from word count) to formally assess on a pass or fail basis.<br><br>Formative feedback during a Placement Visit (in person or via Skype) from Placement Provider and Placement Tutor regarding reflection on skills development, areas of strength and weakness and contribution to the workplace. |
| 3. Modify your CV to include the skills and experience you have gained through your significant experience gained in the past 12 months. | Project supervision, independent research | Completion of Monthly Reflective Journals to record skills development, major achievements, key areas of work, learning points and challenges overcome.<br><br>Assessed by a Placement Portfolio, comprising of a Reflective Summary, Professional Development Plan, and Updated CV (excluded from word count) to formally assess on a pass or fail basis.<br><br>Formative feedback during a Placement Visit (in person or via Skype) from Placement Provider and Placement Tutor regarding reflection on skills development, areas of strength and weakness and contribution to the workplace. |

## 10. Progression points

This programme follows the standard Scheme of Progression set out in Senate Regulations – see the version of Senate Regulation 5 governing undergraduate programmes relevant to the year of entry.

The following additional progression requirements for this programme have been approved:

In order for a student to continue on or transfer to this programme, they will normally be expected to achieve an average mark of at least 55% at the end of the second year. Students with an average 2nd year mark of 50-54.99% will be required to achieve an average mark of at least 55% in semester 1 of the 3rd year and an average mark of at least 55% at the end of the 3rd year. Students who do not achieve the standard required for MGeol, will be transferred to the BSc degree course.

**Progression onto a year in industry**

Students will have the opportunity to take a Year in Industry either between levels 5 and 6 OR levels 6 and 7. Student can only take a Year in Industry on one occasion and cannot take both a Year in Industry AND a Year Abroad.
To take a Year in Industry after level 5, students would need to meet standard University eligibility requirements to progress to the next level of study. Students who obtain a level 5 CWA of less than 55.00% will be permitted to take a Year in Industry but will not be eligible for progression to level 7, and therefore would revert to a BSc (with a Year in Industry). See 'Progression from levels 4 to 5 and 5 to 6' for more information.
To take a Year in Industry after level 6, students would need to have met the criteria to remain on the MGeol programme.
The progression criteria for a 'year in industry' programme is to meet the requirements needed to progress to the next level of study as outlined in the University's Senate 5 Regulations.

Where a degree programme has a requirement from a Professional or Statutory Body (PSRB) for academic attainment for students undertake a year in industry are exempt from the proposed new progression criteria and will continue to uphold existing progression criteria.

A Placement Student will revert back to the degree without Year in Industry if:

1. They fail to secure a year in industry role.
2. They fail to pass the assessment related to the year in industry.
3. The year in industry ends early due to the behaviour of the Placement Student not being in accordance with the University's Regulations for Students, Student Responsibilities. The Placement Student will need to suspend for the remainder of the academic year. To prevent such an incident from happening, processes are in place to identify any possible issues or concerns early in the year in industry role. This includes a start check, regular communications, visits to the workplace (physical and/or virtual) and evaluation. Communication and contact between the Placement Student, Placement Provider and University provides support should issues arise.
4. They discontinue their Year in Industry. A student can return to their campus-based studies no later than the end of teaching week 2 at the start of the academic year should they decide to discontinue their Year in Industry they should complete a Course Transfer From. If a Placement Student decides to discontinue their Year in Industry after this point they will need to suspend their studies for the remainder of the academic year.

Nine months is the minimum time required for a year in industry to be formally recognised. If the year in industry is terminated earlier than 9 months as a result of event outside of the Placement Students control (for example redundancy, or company liquidation), the following process will be adopted:

1. If the Placement Student has completed 1 – 6 months, they will be supported to search for another placement to take them up to the 9 months required for the year in industry to be

formally recognised. If the Placement Student does not find a placement to meet this criteria they will be required to suspend and transferred onto the degree without Year in Industry.

2. If the Placement Student has completed 7-8 months, they will be supported to search for another placement to take them up to the 9 months required for the year in industry to be formally recognised. If the Placement Student cannot source an additional placement to take them to 9 months, assessments related to the year in industry will be set for the student to make it possible for the individual learning objectives for the year in industry to be met. This will allow the Year in Industry to be recognised in the degree certificate.
3. A Placement Student will not be permitted to undertake a placement which runs across two academic years.

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. Criteria for award and classification

This programme follows the standard scheme of undergraduate award and classification set out in Senate Regulations – see the version of *Senate Regulation 5 governing undergraduate programmes* relevant to the year of entry.

## 12. Special features

Residential field courses
Group problem solving
Student-centred learning – small-group tutorials
Field-based project
Department-based specialist careers advisors
Independent research project
'Hot Topics' student-led debating/seminar module
Access to state-of-the-art analytical facilities for research projects

**Placements**

The University recognises that undertaking a work placement as part the programme of study can enhance career prospects and provide added value, and as such this programme includes a 'year in industry' variant.

By experiencing real-world scenarios and applying skills and knowledge to a professional environment, students can gain a unique insight into how their studies can be utilised in industry. This will not only showcase their abilities to future employers but will also enhance their studies upon returning to university to complete your programme.

To understand the special features for year in industry undergraduate programme variants, this programme specification should be read in conjunction with the programme specification content which can be found here. This outlines details including programme aims, support, progression and duration.

It is the student's responsibility to secure a year in industry role. Employer led activities provide a platform for students to engage with organisations who are recruiting students for year in industry roles.

When a Placement Student starts a year in industry, they will be required to complete health and safety documents and confirm they have completed a formal induction process no later than the 2nd week of placement. A Placement Student on the Year in Industry variant will also gain from being able to:

1. Apply the theoretical and practical aspects of the material studied at the University and demonstrate the personal and professional skills necessary for your role within the organisation.

2. Compose a Professional Development Plan considering your strengths, development areas and motivations for your next step

3. Modify your CV to include the skills and experience you have gained through your significant experience gained in the past 12 months

**12a. Research-inspired Education**

**Students on this programme will advance through the four quadrants of the University of Leicester Research-inspired Education Framework as follows:**

| RiE Quadrant | Narrative |
|---|---|
| | The programmes provides a thorough grounding in the methods underlying Geology, and also critical thinking and problem-solving skills through exposure to current research themes and associated data streams together with an active field programme. |
| **Research-briefed**<br>Bringing staff research content into the curriculum. | • **Research briefed** - The students will be exposed to challenging learning, inspired and informed by cutting-edge research, by drawing on strong research of the Evolution and Past Environments and Solid Earth research groups in Physical Geography and Geology as well as other experts at the University of Leicester. Our staff bring their research straight into the classroom, making learning exciting and relevant. |
| **Research-based**<br>Framed enquiry for exploring existing knowledge. | • **Research based** - Lectures, and particularly enquiry-based practicals and assessments are often based on Leicester researchers' data samples, putting the geological interpretation and data analyses and modelling into context. Students undergo early training in their degree to support more independent geological mapping in later years. |
| **Research-oriented**<br>Students critique published research content and process. | • **Research oriented** – Students are required to critically appraise their own data and that of others, and conduct analyses in both laboratory and computer classes, field classes and through a variety of assessment. Students are given guidance and training in how to critically appraise published research and the data underlying it, and also learn how to write a popular science article based on their interpretation of the literature. Discussion classes also form a key component of learning. |
| **Research-apprenticed**<br>Experiencing the research process and methods; building new knowledge. | • **Research apprenticed** – The programme includes training in report writing, group work, presentation skills, and research techniques. Students present findings through written reports, geological maps, and oral presentations. Field courses are key, providing opportunities to collect and interpret geological data, and training in microscopy and geochemistry. A final independent written research project, carried out under supervision, also forms a key component of this degree.<br>The University of Leicester's Geology programme integrates research into every aspect of learning, preparing students for advanced study and professional practice in the field. |

**As part of studying at a research-intensive university, students on this programme have the following extra or co-curricular opportunities available to them to gain exposure to research culture:**

The School of Geography, Geology and Environment has a full programme of weekly seminars by outside speakers, to which Undergraduate students are encouraged to attend through promotion in the SGGE newsletter and through lecture shout-outs. The Leicester Literary and Philosophical Society (Geology Chapter) meets regularly in the environment of the School of Geography, Geology and Environment. Staff also pen their latest research findings within the SGGE newsletter, and pin their latest journal papers to their relevant VLE module sites in a virtual noticeboard.

The Centre for Palaeobiology offers research bursaries, which are open to all students in the School of Geography, Geology & Environment (GGE). These normally support multiple students to join a GGE research project.

**Teaching on this programme will be research-informed (it draws consciously on systematic inquiry into the teaching and learning process itself) in the following way:**

The School supports all staff involved in teaching to gain an accredited Higher Education teaching qualification, in which they demonstrate their use of teaching theory to support their own practice and reflect on their current teaching and continuing professional development.

Academic staff meet twice per year to discuss the latest developments in teaching and learning, for example most recently in regard to generative artificial intelligence. Selected staff conduct horizon scanning of the latest journal papers in Journal of Geoscience Education and bring ideas at the forefront of innovation to their peers.

## 13. Indications of programme quality

Accreditation by the Geological Society of London
The research interests of the staff strongly inform the teaching programme

Quotes from recent External Examiners:
'The department is excellent and deserves its reputation as one of the leading centres of geoscience teaching/research in Europe.'
'These are high quality programmes delivered by an approachable and dedicated staff team. Further, your students really appreciate the Department and indicated that they have had a very enjoyable and satisfying learning experience. The field programme is comprehensive and to be commended.'
'The department operates under the highest academic standards. An excellent range of courses is offered and these are evidently taught with great enthusiasm and authority. Staff are at all times approachable and accessible and there is an enviably professional and friendly atmosphere in the department.'
'impressed with the diverse and stimulating set of projects offered to students'.

## 14. External Examiner(s) reports

The details of the External Examiner(s) for this programme and the most recent External Examiners' reports for this programme can be found at exampapers@Leicester [log-in required]

UNIVERSITY OF LEICESTER

# Programme Specification (Undergraduate) FOR ENTRY YEAR: 2025/26

**Date created:** 01/03/21 **Last amended:** 16/12/2024 **Version no.** 1

## Appendix 1: Programme structure (programme regulations)

The University regularly reviews its programmes and modules to ensure that they reflect the current status of the discipline and offer the best learning experience to students. On occasion, it may be necessary to alter particular aspects of a course or module.

Updates to the programme

| Academic year affected | Module | Change |
|---|---|---|
| 2025/26 | GL1101 The Rock Cycle | Core module removed |
| 2025/26 | GL1102 Micro to Macro | Core module removed |
| 2025/26 | GL1007 From Core to Crust | New core module |
| 2025/26 | GY1431 Evolution of the Earth System | New core module |
| 2025/26 | GL1108 Our Dynamic Planet | New core module |
| 2026/27 | GL2111 Geological Fieldwork: Methods and Applications | New core module |
| 2026/27 | GL2112 Mapping Earth's History: Structural and Stratigraphic Field Techniques | New core module |
| 2026/27 | GL2100 Geological Field Skills | Core module removed |

**MGeol GEOLOGY**

**Level 4/Year 1 2025/26**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 15 credits | 45 credits | 60 credits |

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Optional | n/a | n/a | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | GL1100 | Tutorials | 15 |
| Semester 1 | GL1103 | Palaeobiology and the Stratigraphic Record | 15 |
| Semester 1 | GL1107 | From Core to Crust | 15 |
| Semester 1 | GY1431 | Evolution of the Earth System | 15 |
| Semester 2 | GL1104 | Natural Resources and Energy for the 21st Century | 15 |
| Semester 2 | GL1105 | Geological Maps and Structures | 15 |
| Semester 2 | GL1106 | Introductory Field Course | 15 |
| Semester 2 | GL1108 | Our Dynamic Planet | 15 |

**Level 5/Year 2 2026/27**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | n/a | 45 credits | 60 credits |
| Optional | n/a | 15 credits | n/a |

120 credits in total

(Optional modules for Year Long and Sem1 - choose 15 credits from one or the other not both – so total will be 120)

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL2103 | Magmatic and Metamorphic Processes | 15 |
| Semester 1 | GL2111 | Geological Fieldwork: Methods and Applications | 15 |
| Semester 1 | GY2420 | Climate Change: Impacts, Vulnerability and Adaptation | 15 |
| Semester 2 | GL2101 | Introduction to Geochemistry | 15 |
| Semester 2 | GL2102 | Structure and Tectonics | 15 |
| Semester 2 | GL2105 | Depositional Processes and Environments | 15 |
| Semester 2 | GL2112 | Mapping Earth's History: Structural and Stratigraphic Field Techniques | 15 |

Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL2106 | Mineral Resources for net-zero Carbon 1 | 15 |
| Semester 1 | GL2107 | Major Events in the History of Life | 15 |

**Notes**
This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

## Level 6/Year 3 2027/28

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | n/a | 30 credits | 15 credits |
| Optional | n/a | 30 credits | 45 credits |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL3100 | Field Based Project | 30 |
| Semester 2 | GL3101 | Dissertation | 15 |

Optional modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL3102 | Environmental Geoscience | 15 |
| Semester 1 | GL3111[a] | Diversity and Evolution of Vertebrates | 15 |
| Semester 1 | GL3118 | Crustal Dynamics | 15 |
| Semester 1 | NT3100 | Sustainability Enterprise Partnership Project | 15 |
| Semester 2 | GL3106 | Planetary Science | 15 |
| Semester 2 | GL3108 | The Forensic, Archaeological and Geological Application of Microfossils | 15 |
| Semester 2 | GL3109 | Mineral Exploration, Economics and Sustainability | 15 |
| Semester 2 | GL3110[b] | Mineral Resources for net-zero Carbon 2 | 15 |
| Semester 2 | GY3434 | Stable Isotopes in the Environment | 15 |
| Semester 2 | GY3435 | Water Quality Processes and Management | 15 |
| Semester 2 | GL3113[c] | The Mining Lifecycle (Field course, Cornwall) | 15 |
| Semester 2 | GL3114[a] | Key Events in the Evolution of Planet Earth Viewed Through the Geological Lens of Wales - a field course | 15 |
| Semester 2 | GL3116 | Physical Volcanology | 15 |

**Notes**

a - available if GL2107 taken b – available if GL2106 taken,

This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

**Level 7/Year 4 2028/29**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 75 credits | n/a | n/a |
| Optional | n/a | 45 credits | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | GL4100 | Hot Topics | 15 |
| Year long | GL4101 | Research Project (Geology) | 60 |

Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL4105 | Advanced Field Course | 15 |
| Semester 1 | GL4106[d] | Anthropogenic impact on the urban environment | 15 |
| Semester 1 | GL4107 | Ore Genesis | 15 |
| Semester 1 | GL4108[a] | Evolutionary Palaeobiology | 15 |
| Semester 1 | GL4110 | Igneous Petrogenesis | 15 |
| Semester 1 | GY4471 | Fundamentals of GIS | 15 |

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | MA4419 | Fundamentals of Data Science | 15 |
| Semester 1 | GY4473 | Living the Anthropocene | 15 |

**Notes**

This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

a - available if GL2107 taken.

**MGeol GEOLOGY WITH A YEAR IN INDUSTRY**

For MGeol students, a single year in industry can be taken either in the third year or the fourth year of their course. The schedule for MGeol students taking a year in industry in their third year is given below. The schedule is similar for MGeol students taking the year in industry in their fourth year, with the third year and fourth years interchanged.

## Level 4/Year 1 2025/26

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 15 credits | 45 credits | 60 credits |
| Optional | n/a | n/a | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | GL1100 | Tutorials | 15 |
| Semester 1 | GL1103 | Palaeobiology and the Stratigraphic Record | 15 |
| Semester 1 | GL1107 | From Core to Crust | 15 |

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GY1431 | Evolution of the Earth System | 15 |
| Semester 2 | GL1104 | Natural Resources and Energy for the 21st Century | 15 |
| Semester 2 | GL1105 | Geological Maps and Structures | 15 |
| Semester 2 | GL1106 | Introductory Field Course | 15 |
| Semester 2 | GL1108 | Our Dynamic Planet | 15 |

**Level 5/Year 2 2026/27**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | n/a | 45 credits | 60 credits |
| Optional | n/a | 15 credits | n/a |

120 credits in total

(Optional modules for Year Long and Sem1 - choose 15 credits from one or the other not both – so total will be 120)

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL2103 | Magmatic and Metamorphic Processes | 15 |
| Semester 1 | GL2111 | Geological Fieldwork: Methods and Applications | 15 |
| Semester 1 | GY2420 | Climate Change: Impacts, Vulnerability and Adaptation | 15 |
| Semester 2 | GL2101 | Introduction to Geochemistry | 15 |
| Semester 2 | GL2102 | Structure and Tectonics | 15 |
| Semester 2 | GL2105 | Depositional Processes and Environments | 15 |

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 2 | GL2112 | Mapping Earth's History: Structural and Stratigraphic Field Techniques | 15 |

Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL2106 | Mineral Resources for net-zero Carbon 1 | 15 |
| Semester 1 | GL2107 | Major Events in the History of Life | 15 |

**INDUSTRY YEAR (can be taken between years 2 and 3 or years 3 and 4)**
Students who gain an industry placement will be assessed as per the standard model for undergraduate placements in the College of Science and Engineering. The marks from this year will not be included in the final degree assessment.

| | | |
|---|---|---|
| Year long | ADGL223 | On Placement |

**Notes**
This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

## Level 6/Year 3 2028/29

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | n/a | 30 credits | 15 credits |
| Optional | n/a | 30 credits | 45 credits |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL3100 | Field Based Project | 30 |
| Semester 2 | GL3101 | Dissertation | 15 |

Optional modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL3102 | Environmental Geoscience | 15 |
| Semester 1 | GL3111[a] | Diversity and Evolution of Vertebrates | 15 |
| Semester 1 | GL3118 | Crustal Dynamics | 15 |
| Semester 1 | NT3100 | Sustainability Enterprise Partnership Project | 15 |
| Semester 2 | GL3106 | Planetary Science | 15 |
| Semester 2 | GL3108 | The Forensic, Archaeological and Geological Application of Microfossils | 15 |
| Semester 2 | GL3109 | Mineral Exploration, Economics and Sustainability | 15 |
| Semester 2 | GL3110[c] | Mineral Resources for net-zero Carbon 2 | 15 |
| Semester 2 | GY3434 | Stable Isotopes in the Environment | 15 |
| Semester 2 | GY3435 | Water Quality Processes and Management | 15 |
| Semester 2 | GL3113[c] | The Mining Lifecycle (Field course, Cornwall) | 15 |
| Semester 2 | GL3114[a] | Key Events in the Evolution of Planet Earth Viewed Through the Geological Lens of Wales - a field course | 15 |
| Semester 2 | GL3116 | Physical Volcanology | 15 |

**Notes**

a - available if GL2107 taken, c – available if GL2106 taken, d – available if GL4105 chosen as core.

This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

**Level 7/Year 4 2029/30**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 75 credits | n/a | n/a |
| Optional | n/a | 45 credits | n/a |

120 credits in total

(Core modules in Sem1 - choose 15 credits– so total will be 120)

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | GL4100 | Hot Topics | 15 |
| Year long | GL4101 | Research Project (Geology) | 60 |

Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL4105 | Advanced Field Course | 15 |
| Semester 1 | GL4107 | Ore Genesis | 15 |
| Semester 1 | GL4108[e] | Evolutionary Palaeobiology | 15 |
| Semester 1 | GL4110 | Igneous Petrogenesis | 15 |
| Semester 1 | GY4471 | Fundamentals of GIS | 15 |
| Semester 1 | MA4419 | Fundamentals of Data Science | 15 |
| Semester 1 | GY4473 | Living the Anthropocene | 15 |

**Notes**
This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

a - available if GL2107 taken,

**MGeol GEOLOGY WITH A YEAR ABROAD**

## Level 4/Year 1 2025/26

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 15 credits | 45 credits | 60 credits |
| Optional | n/a | n/a | n/a |

120 credits in total

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | GL1100 | Tutorials | 15 |
| Semester 1 | GL1103 | Palaeobiology and the Stratigraphic Record | 15 |
| Semester 1 | GL1107 | From Core to Crust | 15 |
| Semester 1 | GY1431 | Evolution of the Earth System | 15 |
| Semester 2 | GL1104 | Natural Resources and Energy for the 21st Century | 15 |
| Semester 2 | GL1105 | Geological Maps and Structures | 15 |
| Semester 2 | GL1106 | Introductory Field Course | 15 |
| Semester 2 | GL1108 | Our Dynamic Planet | 15 |

**Level 5/Year 2 2026/27**

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | n/a | 45 credits | 60 credits |
| Optional | n/a | 15 credits | n/a |

120 credits in total

(Optional modules for Year Long and Sem1 - choose 15 credits from one or the other not both – so total will be 120)

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL2103 | Magmatic and Metamorphic Processes | 15 |
| Semester 1 | GL2111 | Geological Fieldwork: Methods and Applications | 15 |
| Semester 1 | GY2420 | Climate Change: Impacts, Vulnerability and Adaptation | 15 |
| Semester 2 | GL2101 | Introduction to Geochemistry | 15 |
| Semester 2 | GL2102 | Structure and Tectonics | 15 |
| Semester 2 | GL2105 | Depositional Processes and Environments | 15 |
| Semester 2 | GL2112 | Mapping Earth's History: Structural and Stratigraphic Field Techniques | 15 |

Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL2106 | Mineral Resources for net-zero Carbon 1 | 15 |
| Semester 1 | GL2107 | Major Events in the History of Life | 15 |

**Notes**
This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

**THIRD YEAR MODULES for students going to New Zealand**

The third year will be spent at the University of Canterbury, Christchurch, New Zealand and modules taken there will substitute for 120 credits of normal third-year modules of the M.Geol. Geology at Leicester.

## Level 7/Year 4 2028/29

Credit breakdown

| Status | Year long | Semester 1 | Semester 2 |
|---|---|---|---|
| Core | 75 credits | n/a | n/a |
| Optional | n/a | 45 credits | n/a |

120 credits in total

(Core modules in Sem1 - choose 15 credits– so total will be 120)

Core modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Year long | GL4100 | Hot Topics | 15 |
| Year long | GL4101 | Research Project (Geology) | 60 |

Option modules

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL4105 | Advanced Field Course | 15 |

| Delivery period | Code | Title | Credits |
|---|---|---|---|
| Semester 1 | GL4106[d] | Anthropogenic impact on the urban environment | 15 |
| Semester 1 | GL4107 | Ore Genesis | 15 |
| Semester 1 | GL4108[a] | Evolutionary Palaeobiology | 15 |
| Semester 1 | GL4110 | Igneous Petrogenesis | 15 |
| Semester 1 | GY4471 | Fundamentals of GIS | 15 |
| Semester 1 | MA4419 | Fundamentals of Data Science | 15 |
| Semester 1 | GY4473 | Living the Anthropocene | 15 |

**Notes**

This is an indicative list of option modules and not definitive of what will be available. Option module choice is also subject to availability, timetabling, student number restrictions and, where appropriate, students having taken appropriate pre-requisite modules.

a - available if GL2107 taken, b – available if GL2108 taken,

## Appendix 2: Module specifications

See undergraduate module specification database [login required] (Note - modules are organized by year of delivery).