

1. Programme Title(s) and Code(s):

<i>Programme Title</i>	<i>UCAS Code</i>	<i>GU Code</i>
MSci in Geology		F604A-2207

2. Academic Session:

2018-19

3. SCQF Level (see [Scottish Credit and Qualifications Framework Levels](#)):

11

4. Credits:

600

5. Entrance Requirements:

Please refer to the current undergraduate prospectus at:
<https://www.gla.ac.uk/undergraduate/degrees/earthscience>

6. ATAS Certificate Requirement (see [Academic Technology Approval Scheme](#)):

ATAS Certificate not required

7. Attendance Type:

Full Time

8. Programme Aims:

Geology is the study of the Earth, its structure, composition, and history, and its hazards and resources. Geology uses rocks, minerals and fossils to provide an integrated understanding of whole Earth processes in 4D, linking the deep Earth, its crust, the surface, and associated environments. This knowledge is applied to contemporary geological and socio-environmental problems, including natural and anthropogenic change and

¹ This specification provides a concise summary of the main features of the programme and the learning outcomes that a typical student might reasonably be expected to achieve and demonstrate if full advantage is taken of the learning opportunities that are provided. More detailed information on the learning outcomes, content and teaching, learning and assessment methods of each course can be found in course handbooks and other programme documentation and online at www.gla.ac.uk/

The accuracy of the information in this document is reviewed periodically by the University and may be checked by the Quality Assurance Agency for Higher Education.

the sustainable development of resources.

The aims of the Geology programme encompass a detailed understanding of all aspects of geology, and their synthesis into a comprehensive view of the Earth. The MSci programme builds from an introduction to geology and its applications into a broader and deeper understanding in the Honours courses, before concluding with high level independent research, focused on critical and quantitative analysis of geological problems, including advanced analytical methods and science communication – the programme involves theoretical study and extensive practical work in the laboratory and field, including geological mapping, earth observation, and spatial and numerical analysis.

The programme aims to:

- Enable students to develop their capacity to learn and in particular to develop their:
 - ability to synthesize a range of geological data and apply to Earth problems
 - descriptive, observational, interpretation and communication skills
 - problem-solving capacities and reasoning skills in theoretical, laboratory and field solutions
- Provide students with the knowledge-base, transferable skills and employability skills that they will require in further study and graduate employment

9. Intended Learning Outcomes of Programme:

The programme provides opportunities for students to develop and demonstrate knowledge, understanding and skills in the following areas.

By the end of this programme students will be able to:

- Demonstrate advanced theoretical and practical knowledge and understanding of the central facts, concepts and terminology of geology, of major geological paradigms, and the application of these skills to societal-economic problems.
- Demonstrate detailed theoretical and practical knowledge of the core areas (Igneous, Sedimentary, and Metamorphic Geology, Mineralogy, Geochemistry and Isotopes, Palaeontology, Stratigraphy, Structural Geology, Global Tectonics, Geological Maps, Geophysics, Applied and Economic Geology, GIS and Remote Sensing, Geomorphology, Geological Synthesis, Geological Fieldwork) and in a range of options subjects.
- Critically assess and synthesize literature and other sources of information and use evidence to formulate and test hypotheses.
- Collect, record and analyse field, numerical and spatial data, and present results and interpretations in scientific reports, to solve geological problems.
- Plan and execute projects both independently and as part of a team.
- Plan and carry out experimental investigations, using standard and complex or advanced experimental equipment and apparatus, of complex geological systems or processes, demonstrating logic, initiative, planning and decision making skills in solving problems encountered.
- Present outputs in appropriate ways for both specialist and non-technical audiences, including verbally, in writing, graphically, and in digital/social media formats.
- Demonstrate competence in safety techniques and the assessment of risks for field work.

10. Typical Learning and Teaching Approaches:

Learning and teaching are effected by the following methods:

Lecture Format: Lectures, IT instruction, Video presentations, Lecture-demonstrations.

Practical and Field Format: Laboratory work, Project work, Database/modelling work, Reports/Essays, Group discussion, Seminar instruction and presentations, Skills workshops (laboratory/field), Independent geological mapping research dissertation, Team-working skills, Problem-solving work, Library work, Report/technical/site report writing instruction. Small group work.

Private study.

11. Typical Assessment Methods:

Written degree examinations

- Including essay format and practical testing

Formal continuous assessment of coursework (formative and summative) includes:

- Essays, seminars, extensive independent research project report, laboratory reports, field reports, mapping project report, rock and thin section descriptions, map-based exercises, problem-solving/teamwork reports.

Informal continuous assessment of coursework includes:

Verbal feedback on description and interpretation of rocks and their geological and environmental relationships in the laboratory and field. Verbal feedback on theoretical and practical skills by supervisors.

12. Programme Structure and Features:

Structure

Course Title	Course Code	Credits	Core	Optional	Semester(s) taught
Year 1					
Earth Science and the Environment 1X	EARTH1001	20	Y		1
Earth Science and the Environment 1Y	EARTH1002	20	Y		2
Level 1 course in a second subject		40			
Level 1 course in a third subject		40			
<i>Exit point: Certificate of Higher Education</i>					
Year 2					
Earth Science and the Environment 2A	EARTH2010	30	Y		1
Earth Science and the Environment 2B	EARTH2011	30	Y		2
Level 2 courses in a second subject		60			
<i>Exit point: Diploma of Higher Education</i>					
Year 3					
Igneous Geology: Geochemistry, Geochronology and Volcanology	EARTH4072	30	Y		1
Sedimentary Geology: Environments and Basin Fill	EARTH4071	30	Y		1
Geological Skills: Spatial, Numerical, Geophysical and Field Methods	EARTH4078	30	Y		2
Metamorphic and Structural Geology	EARTH4073	30	Y		2
<i>Exit point: Designated Degree in Geology</i>					
Year 4					
Stratigraphy and Regional Tectonic Synthesis	EARTH4081	20	Y		1
Independent Geological Mapping	EARTH4079P	40	Y		1+2
Dissertation					
Students will choose 60 credits worth of options courses from a list including:					
Economic Minerals and Resources;	EARTH4074	20		Y	1
Engineering Geology;	EARTH4075	20		Y	1
Geomorphology;	EARTH4076	20		Y	1
Hydrogeology and Environmental Geochemistry;	EARTH4083	20		Y	1
Climates – Past and Future;	EARTH4084	20		Y	2
Petroleum Geology and Sequence Stratigraphy;	EARTH4085	20		Y	2
Planetary Science.	EARTH4086	20		Y	2
<i>Exit point: BSc Honours Degree in Geology</i>					
Year 5					
Geodynamics and Earth History	EARTH5012	20	Y		1 and 2
Geoscience Communication	EARTH5011	20	Y		1 and 2
Analytical Methods in Geoscience	EARTH5013	20	Y		1
Independent Geoscience Research Project	EARTH5010P	60	Y		1 and 2

Features

The programme will enable students who will not normally possess any prior knowledge of geology to understand the scope, main areas and boundaries of the discipline.

The programme features an exciting syllabus of field classes, including residential field classes both overseas and in the UK, where students will develop key geological skills. Students will undertake an independent geological mapping dissertation in the summer between Year 3 and Year 4, during which they will conduct independent research on field-based geological problems. In Year 5, students will undertake an extensive primarily laboratory-based research project on a geological topic, which will develop their independent learning and research skills.

Regulations

This programme will be governed by the relevant regulations published in the University Calendar. These regulations include the requirements in relation to:

- (a) Award of the degree
- (b) Progress
- (c) Early exit awards
- (d) Entry to Honours (For undergraduate programmes, where appropriate)

www.gla.ac.uk/services/senateoffice/policies/calendar/

In addition to the general progress requirements of Science:

Year 2 to Year 3: Earth Science and the Environment 2A and 2B at an average Grade B3 or better, achieving at least a Grade of C3 in each individual course, and attendance at the residential field class.

Year 3 to Year 4: Normally entrants must have attained an average grade B3 or better in the Level 3H courses.

Year 4 to Year 5: Normally entrants must have attained an average grade B3 or better in the Level 4H courses.

13. Programme Accredited By:

14. Location(s):

Glasgow

15. College:

College of Science and Engineering

16. Lead School/Institute:

Geographical and Earth Sciences [REG30400000]

17. Is this programme collaborative with another institution:

No

18. Awarding Institution(s):

University of Glasgow

19. Teaching Institution(s):

University of Glasgow

20. Language of Instruction:

English

21. Language of Assessment:

English

22. Relevant QAA Subject Benchmark Statements (see [Quality Assurance Agency for Higher Education](http://www.qaa.ac.uk/en/Publications/Documents/SBS-earth-sciences-14.pdf)) and Other External or Internal Reference Points:

This Programme Specification is informed by the QAA Benchmark Statement for Earth Sciences, Environmental Sciences and Environmental Studies (ES3): <http://www.qaa.ac.uk/en/Publications/Documents/SBS-earth-sciences-14.pdf> and by the SCQF Level descriptors: <http://www.scqf.org.uk/levels.asp>

23. Additional Relevant Information (if applicable):

Support for students is provided by the Postgraduate/Undergraduate Adviser(s) of Studies supported by University resources such LEADS (www.gla.ac.uk/myglasgow/leads/), Counselling & Psychological Services (www.gla.ac.uk/services/counselling/), the Disability Service (www.gla.ac.uk/services/studentdisability/) and the Careers Service (www.gla.ac.uk/services/careers/).

Will seek accreditation from the Geological Society and the Institution of Environmental Sciences

24. Online Learning:

No

25. Date of approval:

02/02/2018