

These programme regulations should be read in conjunction with the University's [core regulations for undergraduate programmes](#), and the [marking and classification conventions for undergraduate programmes](#).

MSci Earth Sciences (F644)

1. This programme is available at Durham City, in a full-time mode of study.
2. Candidates shall choose one of the following Routes through Level 1 to Level 3:

Geology Route

Environmental Route

Geophysics Route

Geoscience Route

Climate Science Route

Geology Route Levels 1 - 3

Level 1 (Certificate)

3. Candidates shall study and be assessed in the following modules:

		Credit value
Earth Materials #	GEOL1021	20
Field Studies #	GEOL1051	20
Understanding Earth Sciences #	GEOL1101	20
Sustainability	GEOL1141	20
Introductory Data Science for Geoscientists	GEOL1151	20

4. Candidates shall also study and be assessed in modules to the value of 20 credits from List A:

List A:		Credit value
Mathematical Methods in Geosciences	GEOL1061	20
Further Mathematics for Geoscientists	GEOL1081	20

Level 2 (Diploma)

5. Candidates shall study and be assessed in the following modules:

		Credit value
Sedimentary Environments	GEOL2031	20
Fieldwork (Geological)	GEOL2191	20
Igneous and Metamorphic Processes	GEOL2231	20
Structural Geology	GEOL2367	10
Tectonics	GEOL2377	10

6. Candidates shall also study and be assessed in modules to the value of 40 credits from List B:

List B:		Credit value
Geophysical Methods for Geoscientists	GEOL2081	20
Isotopes in Environmental and Climate Sciences	GEOL2171	20
Fieldwork (Environmental)	GEOL2201	20
Modelling Earth Processes	GEOL2251	20
Ancient Life and its Environment	GEOL2347	10
Concepts in Geophysical Data Applications	GEOL2327	10
Geoinformatics	GEOL2387	10
Modules up to 20 credits offered by any Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		

Level 3 (Degree)

7. Candidates shall study and be assessed in the following modules:

	Credit value
Dissertation ~ GEOL3022	40

8. Candidates shall also study and be assessed in modules to the value of 80 credits from List C:

List C:	Credit value
Environmental Geochemistry	GEOL3041 20
Volcanology and Magmatism	GEOL3051 20
Earth Structure and Dynamics	GEOL3151 20
Earth Sciences into Schools	GEOL3251 20
Atmospheric Circulation and Dynamics	GEOL3387 10
Western Alps field trip (Anatomy of a subduction zone)	GEOL3367 10
Tectonic Processes and Renewable Geo-resources	GEOL3357 10
Monitoring the Oceans: Geohazards & Climate Change	GEOL3377 10
Polar Quaternary Environmental Processes	GEOL3437 10
Groundwater Hydrology	GEOL3427 10
The Geochemical Evolution of the Earth	GEOL3467 10
Volcanic Hazards and Impacts	GEOL3457 10
Environmental Management	GEOL3477 10
Modules up to the value of 20 credits offered by any Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).	

Environmental Route Levels 1 - 3

Level 1 (Certificate)

9. Candidates shall study and be assessed in the following modules:

	Credit value
Field Studies	GEOL1051 20
Understanding Earth Sciences	GEOL1101 20
Environmental Earth Science	GEOL1111 20
Sustainability	GEOL1141 20
Introductory Data Science for Geoscientists	GEOL1151 20

10. Candidates shall also study and be assessed in modules to the value of 20 credits from List A:

List A:	Credit value
Mathematical Methods in Geosciences	GEOL1061 20
Further Mathematics for Geoscientists	GEOL1081 20

Level 2 (Diploma)

11. Candidates shall study and be assessed in the following modules:

	Credit value
Sedimentary Environments	GEOL2031 20
Isotopes in Environmental and Climate Sciences	GEOL2171 20
Fieldwork (Environmental)	GEOL2201 20

12. Candidates shall also study and be assessed in modules to the value of 60 credits from List B:

List B:	Credit value
Geophysical Methods for Geoscientists	GEOL2081 20
Fieldwork (Geological)	GEOL2191 20
Modelling Earth Processes	GEOL2251 20
Fieldwork (Geophysical)	GEOL2241 20
Ancient Life and its Environment	GEOL2347 10
Structural Geology	GEOL2367 10
Tectonics	GEOL2377 10

Concepts in Geophysical Data Applications	GEOL2327	10
Geoinformatics	GEOL2387	10
Modules up to the value of 20 credits offered by any Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		

Level 3 (Degree)

13. Candidates shall study and be assessed in the following modules:

		Credit value
Dissertation ~	GEOL3022	40
Environmental Geochemistry	GEOL3041	20
Environmental Management	GEOL3477	10

14. Candidates shall also study and be assessed in modules to the value of 50 credits from List C:

List C:		Credit value
Volcanology and Magmatism	GEOL3051	20
Earth Sciences into Schools	GEOL3251	20
Earth Structure and Dynamics	GEOL3151	20
Atmospheric Circulation and Dynamics	GEOL3387	10
Western Alps field trip (Anatomy of a subduction zone)	GEOL3367	10
Tectonic Processes and Renewable Geo-resources	GEOL3357	10
Monitoring the Oceans: Geohazards & Climate Change	GEOL3377	10
Polar Quaternary Environmental Processes	GEOL3437	10
Groundwater Hydrology	GEOL3427	10
The Geochemical Evolution of the Earth	GEOL3467	10
Volcanic Hazards and Impacts	GEOL3457	10
Modules up to the value of 20 credits offered by any Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		

Geophysics Route Levels 1 - 3

Level 1 (Certificate)

15. Candidates shall study and be assessed in the following modules:

		Credit value
Field Studies	GEOL1051	20
Further Mathematics for Geoscientists	GEOL1081	20
Understanding Earth Sciences	GEOL1101	20
Sustainability	GEOL1141	20
Introductory Data Science for Geoscientists	GEOL1151	20

16. Candidates shall also study and be assessed in modules to the value of 20 credits from List A:

List A:		Credit value
Earth Materials	GEOL1021	20
Environmental Earth Science	GEOL1111	20

Level 2 (Diploma)

17. Candidates shall study and be assessed in the following modules:

		Credit value
Geophysical Methods for Geoscientists	GEOL2081	20
Fieldwork (Geophysical)	GEOL2241	20
Concepts in Geophysical Data Applications	GEOL2327	10

18. Candidates shall also study and be assessed in modules to the value of 70 credits from List B:

List B:		Credit value
Sedimentary Environments	GEOL2031	20
Isotopes in Environmental and Climate Sciences	GEOL2171	20
Fieldwork (Environmental)	GEOL2201	20

Igneous and Metamorphic Processes	GEOL2231	20
Modelling Earth Processes	GEOL2251	20
Ancient Life and its Environment	GEOL2347	10
Structural Geology	GEOL2367	10
Tectonics	GEOL2377	10
Geoinformatics	GEOL2387	10
Modules up to the value of 20 credits offered by any Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		

Level 3 (Degree)

19. Candidates shall study and be assessed in the following modules:

		Credit value
Dissertation ~	GEOL3022	40
Monitoring the Oceans: Geohazards and Climate Change	GEOL3377	10
Earth Structure and Dynamics	GEOL3151	20

20. Candidates shall also study and be assessed in modules to the value of 50 credits from List C:

List C:		Credit value
Environmental Geochemistry	GEOL3041	20
Volcanology and Magmatism	GEOL3051	20
Earth Sciences into Schools	GEOL3251	20
Atmospheric Circulation and Dynamics	GEOL3387	10
Western Alps Field Trip (Anatomy of a subduction zone)	GEOL3367	10
Tectonic Processes and Renewable Geo-resources	GEOL3357	10
Polar Quaternary Environmental Processes	GEOL3437	10
Groundwater Hydrology	GEOL3427	10
The Geochemical Evolution of the Earth	GEOL3467	10
Volcanic Hazards and Impacts	GEOL3457	10
Environmental Management	GEOL3477	10
Modules up to the value of 20 credits offered by any Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		

Geoscience Route Levels 1 - 3

Level 1 (Certificate)

21. Candidates shall study and be assessed in the following modules:

		Credit value
Field Studies	GEOL1051	20
Understanding Earth Sciences	GEOL1101	20
Sustainability	GEOL1141	20
Introductory Data Science for Geoscientists	GEOL1151	20

22. Candidates shall study and be assessed in modules to the value of 20 credits from List A:

List A:		Credit value
Earth Materials	GEOL1021	20
Environmental Earth Science	GEOL1111	20

23. Candidates shall study and be assessed in modules to the value of 20 credits from List B:

List B:		Credit value
Mathematical Methods in Geosciences	GEOL1061	20
Further Mathematics for Geoscientists	GEOL1081	20

Level 2 (Diploma)

24. Candidates shall study and be assessed in modules to the value of 120 credits from List C:

List C:		Credit value
Sedimentary Environments	GEOL2031	20

Geophysical Methods for Geoscientists	GEOL2081	20
Isotopes in Environmental and Climate Sciences	GEOL2171	20
Fieldwork (Geological)	GEOL2191	20
Fieldwork (Environmental)	GEOL2201	20
Igneous and Metamorphic Processes	GEOL2231	20
Fieldwork (Geophysical)	GEOL2241	20
Ancient Life and its Environment	GEOL2347	10
Modelling Earth Processes	GEOL2251	20
Structural Geology	GEOL2367	10
Tectonics	GEOL2377	10
Concepts in Geophysical Data Applications	GEOL2327	10
Geoinformatics	GEOL2387	10
Modules up to the value of 40 credits offered by any Boards of Studies (including up to 20 credits of appropriate language modules offered by the University's Centre for Foreign Language Study).		

Level 3 (Degree)

25. Candidates shall study and be assessed in the following module:

Dissertation ~	GEOL3022	Credit value 40
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26. Candidates shall also study and be assessed in modules to the value of 80 credits from List D:

List D:		Credit value
Environmental Geochemistry	GEOL3041	20
Volcanology and Magmatism	GEOL3051	20
Earth Structure and Dynamics	GEOL3151	20
Earth Sciences into Schools	GEOL3251	20
Atmospheric Circulation and Dynamics	GEOL3387	10
Western Alps field trip (Anatomy of a subduction zone)	GEOL3367	10
Tectonic Processes and Renewable Geo-resources	GEOL3357	10
Monitoring the Oceans: Geohazards & Climate Change	GEOL3377	10
Polar Quaternary Environmental Processes	GEOL3437	10
Groundwater Hydrology	GEOL3427	10
The Geochemical Evolution of the Earth	GEOL3467	10
Volcanic Hazards and Impacts	GEOL3457	10
Environmental Management	GEOL3477	10
Modules up to the value of 40 credits offered by any Boards of Studies (including up to 20 credits of appropriate language modules offered by the University's Centre for Foreign Language Study).		

Climate Science Route Levels 1 – 3

Level 1 (Certificate)

27. Candidates shall study and be assessed in the following modules:

		Credit value
Environmental Earth Science	GEOL1111	20
Sustainability	GEOL1141	20
Introductory Data Science for Geoscientists	GEOL1151	20
Introduction to Climate Change	GEOG1261	20

28. Candidates shall also study and be assessed in modules up to the value of 40 credits from List A:

List A:		Credit value
Field Studies	GEOL1051	20
Mathematical Methods in Geosciences	GEOL1061	20
Further Mathematics for Geoscientists	GEOL1081	20

Understanding Earth Sciences	GEOL1101	20
Planet under Pressure	GEOG1061	20
Modules to the value of 20 credits offered by any Board of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		

Level 2 (Diploma)

29. Candidates shall study and be assessed in the following modules:

Isotopes in Environmental and Climate Sciences	GEOL2171	Credit value 20
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30. Candidates shall also study and be assessed in modules to the value of 100 credits, including at least 10 credits offered by Earth Sciences (GEOL codes), from List B:

List B:		Credit value
Sedimentary Environments	GEOL2031	20
Fieldwork (Environmental)	GEOL2201	20
Fieldwork (Geophysical)	GEOL2241	20
Modelling Earth Processes	GEOL2251	20
Ancient Life and its Environment	GEOL2347	10
Geoinformatics	GEOL2387	10
Climate Change: Geographical Perspectives	GEOG2661	20
Glaciers and Glaciation	GEOG2531	20
Reconstructing Environmental Change	GEOG2571	20
Modules up to the value of 20 credits offered by any Board of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		

Level 3 (Degree)

31. Candidates shall study and be assessed in the following modules:

Dissertation ~	GEOL3022	Credit value 40
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32. Candidates shall also study and be assessed in modules to the value of 80 credits from List C:

List C:		Credit value
Environmental Geochemistry	GEOL3041	20
Earth Structure and Dynamics	GEOL3491	20
Earth Sciences into Schools	GEOL3251	20
Atmospheric Circulation and Dynamics	GEOL3387	10
Monitoring the Oceans: Geohazards & Climate Change	GEOL3377	10
Polar Quaternary Environmental Processes	GEOL3437	10
Groundwater Hydrology	GEOL3427	10
The Geochemical Evolution of the Earth	GEOL3467	10
Volcanic Hazards and Impacts	GEOL3457	10
Environmental Management	GEOL3477	10
Sea Level Change and Coastal Evolution	GEOG3191	20
Oceans Past and Present	GEOG3641	20
Ice Age Environments	GEOG30K7	10
Antarctic Environments	GEOG3817	10
Archaeology and Global Sustainable Developments	ARCH3641	20
Modules up to the value of 20 credits offered by any Board of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		

All Routes

Level 4 (Degree)

33. Candidates shall study and be assessed in the following module:

Research Project ~	GEOL4053	Credit value 60
34. Candidates shall also study and be assessed in modules to the value of 60 credits from List A or 40 credits from List A and 20 credits from Lists B:		
List A:		Credit value
Science Communication	GEOL4061	20
Earth Science Field Seminar	GEOL4081	20
Earth Sciences into Industry	GEOL4091	20
List B:		Credit value
Monitoring the Oceans: Geohazards & Climate Change IV	GEOL4207	10
Polar Quaternary Environmental Processes IV	GEOL4217	10
Environmental Geochemistry IV	GEOL4291	20
Earth Structure & Dynamics IV	GEOL4281	20
Groundwater Hydrology IV	GEOL4277	10
The Geochemical Evolution of the Earth IV	GEOL4257	10
Atmospheric Circulation and Dynamics IV	GEOL4267	10

Assessment, progression and award

35. At Level 1 students are required to attend a field course that is usually held in the Easter vacation.
36. At Levels 2 and 3 students are required to attend a field course if specified as part of a module.
37. Modules marked with the # symbol must be passed at 40% or above in order to progress to the next level of study.
38. Modules marked with the ~ symbol must be passed at 40% or above for the award of an honours degree. A mark of 30-39% cannot be compensated.
39. Students who fail to achieve the standard required under the Core Regulations for progression to Level 3 of the MSci Geoscience but who achieve the standard required for progression to Level 3 of a Bachelors programme may progress to Level 3 of the BSc Geology (for students who have taken the Geology route) or BSc Environmental Geosciences (for students who have taken the Environmental Geosciences route) or BSc Geophysics with Geology (for students who have taken the Geophysics with Geology route) at Honours level in accordance with the Core Regulations.
40. A student who is qualified to progress from Level 2 to Level 3 of the MSci Geoscience but wishes to transfer to Level 3 of the BSc in Geology (for students who have taken the Geology route) or BSc Environmental Geosciences (for students who have taken the Environmental Geosciences route) or BSc Geophysics with Geology (for students who have taken the Geophysics with Geology route) shall be permitted to do so.
41. Students whose achievement at the end of Level 3 does not qualify them to proceed to Level 4 may be awarded the degree of BSc Geology (for students who have taken the Geology route) or BSc Environmental Geosciences (for students who have taken the Environmental Geosciences route) or BSc Geophysics with Geology (for students who have taken the Geophysics with Geology route) at Honours level in accordance with the Core Regulations for the award of a Bachelors degree.
42. Students whose achievement at the end of Level 4 does not qualify them to be awarded the degree of MSci Geoscience may be awarded the degree of BSc Geology (for students who have taken the Geology route) or BSc Environmental Geosciences (for students who have taken the Environmental Geosciences route) or BSc Geophysics with Geology (for students who have taken the Geophysics with Geology route) with Honours in accordance with the Core Regulations for the award of a Bachelors degree.

Professional accreditation

43. This programme is accredited by the Geological Society for a period of six years with effect from March 2022.