

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 should choose one of the following Routes through Level 1 to Level 3:

**Geology Route**

**Environmental Route**

**Geophysics Route**

**Geoscience Route**

### **3. Geology Route Levels 1 - 3**

#### **Level 1 (Certificate)**

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

		<b>Credit value</b>
Earth Materials	<a href="#">GEOL1021</a>	20
Field Studies	<a href="#">GEOL1051</a>	20
Understanding Earth Sciences	<a href="#">GEOL1101</a>	20
Environment and Resources Ψ	<a href="#">GEOL1111</a>	20
Geoinformatics Ψ	<a href="#">GEOL1131</a>	20

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

#### **List A:**

		<b>Credit value</b>
Mathematical Methods in Geosciences Φ	<a href="#">GEOL1061</a>	20
Further Mathematics for Geoscientists	<a href="#">GEOL1081</a>	20
Modules up to the value of 20 credits offered by any other Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		20

#### **Level 2 (Diploma)**

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

		<b>Credit value</b>
Structural Geology and Tectonics	<a href="#">GEOL2011</a>	20
Palaeoecology and Sedimentology	<a href="#">GEOL2031</a>	20
Fieldwork (Geological)	<a href="#">GEOL2191</a>	20
Igneous and Metamorphic Geochemistry and Petrology	<a href="#">GEOL2231</a>	20

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

#### **List B:**

		<b>Credit value</b>
Geophysical Methods for Geoscientists	<a href="#">GEOL2081</a>	20
Hydrology and Climate	<a href="#">GEOL2171</a>	20
Modelling Earth Processes	<a href="#">GEOL2251</a>	20
Geoinformatics Ψ (only available 2018/19)	<a href="#">GEOL2281</a>	20
Modules up to the value of 20 credits offered by any other Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		20

### Level 3 (Degree)

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

		<b>Credit value</b>
Dissertation	<a href="#">GEOL3022</a>	40

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

<b>List C:</b>		<b>Credit value</b>
Petrology, Geochemistry and Global Tectonics $\Psi$	<a href="#">GEOL3011</a>	20
Petroleum Geoscience	<a href="#">GEOL3031</a>	20
Environmental Geochemistry	<a href="#">GEOL3041</a>	20
Volcanology and Magmatism $\Psi$	<a href="#">GEOL3051</a>	20
Palaeobiology	<a href="#">GEOL3071</a>	20
Deformation Processes in the Lithosphere	<a href="#">GEOL3091</a>	20
Earth Structure and Dynamics	<a href="#">GEOL3151</a>	20
Advanced Geophysics	<a href="#">GEOL3221</a>	20
Earth System and Climate $\Psi$	<a href="#">GEOL3231</a>	20
Earth Sciences into Schools	<a href="#">GEOL3251</a>	20
Environmental Management $\Psi$	<a href="#">GEOL3281</a>	20
Modules up to the value of 20 credits offered by any other Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		20

### 10. Environmental Route Levels 1 - 3

#### Level 1 (Certificate)

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

		<b>Credit value</b>
Earth Materials	<a href="#">GEOL1021</a>	20
Field Studies	<a href="#">GEOL1051</a>	20
Understanding Earth Sciences	<a href="#">GEOL1101</a>	20
Environment and Resources	<a href="#">GEOL1111</a>	20
Geoinformatics $\Psi$	<a href="#">GEOL1131</a>	20

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

<b>List A:</b>		<b>Credit value</b>
Mathematical Methods in Geosciences $\Phi$	<a href="#">GEOL1061</a>	20
Further Mathematics for Geoscientists	<a href="#">GEOL1081</a>	20
Modules up to the value of 20 credits offered by any other Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		20

#### Level 2 (Diploma)

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

		<b>Credit value</b>
Palaeoecology and Sedimentology	<a href="#">GEOL2031</a>	20
Hydrology and Climate	<a href="#">GEOL2171</a>	20
Fieldwork (Environmental)	<a href="#">GEOL2201</a>	20
Geoinformatics (only available 2018/19)	<a href="#">GEOL2281</a>	20

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

<b>List B:</b>		<b>Credit value</b>
Structural Geology and Tectonics	<a href="#">GEOL2011</a>	20
Geophysical Methods for Geoscientists $\Psi$	<a href="#">GEOL2081</a>	20
Igneous and Metamorphic Geochemistry and Petrology	<a href="#">GEOL2231</a>	20
Modelling Earth Processes	<a href="#">GEOL2251</a>	20

Modules up to the value of 20 credits offered by any other Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study). 20

### Level 3 (Degree)

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

		<b>Credit value</b>
Dissertation	<a href="#">GEOL3022</a>	40
Environmental Geochemistry	<a href="#">GEOL3041</a>	20
Environmental Management	<a href="#">GEOL3281</a>	20

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

<b>List C:</b>		<b>Credit value</b>
Petroleum Geoscience	<a href="#">GEOL3031</a>	20
Volcanology and Magmatism	<a href="#">GEOL3051</a>	20
Palaeobiology	<a href="#">GEOL3071</a>	20
Deformation Processes in the Lithosphere	<a href="#">GEOL3091</a>	20
Earth Structure and Dynamics	<a href="#">GEOL3151</a>	20
Advanced Geophysics	<a href="#">GEOL3221</a>	20
Earth System and Climate	<a href="#">GEOL3231</a>	20
Earth Sciences into Schools	<a href="#">GEOL3251</a>	20
Modules up to the value of 20 credits offered by any other Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		20

### 17. Geophysics Route Levels 1 - 3

#### Level 1 (Certificate)

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

		<b>Credit value</b>
Earth Materials	<a href="#">GEOL1021</a>	20
Field Studies	<a href="#">GEOL1051</a>	20
Further Mathematics for Geoscientists	<a href="#">GEOL1081</a>	20
Environment and Resources	<a href="#">GEOL1111</a>	20
Understanding Earth Sciences	<a href="#">GEOL1101</a>	20
Geoinformatics Ψ	<a href="#">GEOL1131</a>	20

#### Level 2 (Diploma)

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

		<b>Credit value</b>
Structural Geology and Tectonics	<a href="#">GEOL2011</a>	20
Geophysical Methods for Geoscientists	<a href="#">GEOL2081</a>	20
Fieldwork (Geophysical)	<a href="#">GEOL2241</a>	20
Geophysical Data Applications	<a href="#">GEOL2291</a>	20

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

<b>List A:</b>		<b>Credit value</b>
Palaeoecology and Sedimentology Ψ	<a href="#">GEOL2031</a>	20
Hydrology and Climate	<a href="#">GEOL2171</a>	20
Igneous and Metamorphic Geochemistry and Petrology Ψ	<a href="#">GEOL2231</a>	20
Modelling Earth Processes	<a href="#">GEOL2251</a>	20
Modules up to the value of 20 credits offered by any other Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		20

### Level 3 (Degree)

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

		<b>Credit value</b>
Dissertation	<a href="#">GEOL3022</a>	40
Earth Structure and Dynamics	<a href="#">GEOL3151</a>	20
Advanced Geophysics	<a href="#">GEOL3221</a>	20

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

<b>List B:</b>		<b>Credit value</b>
Petrology, Geochemistry and Global Tectonics	<a href="#">GEOL3011</a>	20
Petroleum Geoscience	<a href="#">GEOL3031</a>	20
Environmental Geochemistry	<a href="#">GEOL3041</a>	20
Volcanology and Magmatism	<a href="#">GEOL3051</a>	20
Palaeobiology	<a href="#">GEOL3071</a>	20
Deformation Processes in the Lithosphere	<a href="#">GEOL3091</a>	20
Earth System and Climate	<a href="#">GEOL3231</a>	20
Earth Sciences into Schools	<a href="#">GEOL3251</a>	20
Environmental Management	<a href="#">GEOL3281</a>	20
Modules up to the value of 20 credits offered by any other Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		20

### 23. Geoscience Route Levels 1 - 3

#### Level 1 (Certificate)

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

		<b>Credit value</b>
Earth Materials	<a href="#">GEOL1021</a>	20
Understanding Earth Sciences	<a href="#">GEOL1101</a>	20

25. Candidates shall study and be assessed in modules to the value of 80 credits from List A:

<b>List A:</b>		<b>Credit value</b>
Field Studies	<a href="#">GEOL1051</a>	20
Mathematical Methods in Geosciences	<a href="#">GEOL1061</a>	20
Further Mathematics for Geoscientists	<a href="#">GEOL1081</a>	20
Environment and Resources	<a href="#">GEOL1111</a>	20
Geoinformatics Ψ	<a href="#">GEOL1131</a>	20
Modules up to the value of 40 credits offered by any other Boards of Studies (including up to 20 credits of appropriate language modules offered by the University's Centre for Foreign Language Study).		

#### Level 2 (Diploma)

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

<b>List B:</b>		<b>Credit value</b>
Structural Geology and Tectonics	<a href="#">GEOL2011</a>	20
Palaeoecology and Sedimentology	<a href="#">GEOL2031</a>	20
Geophysical Methods for Geoscientists	<a href="#">GEOL2081</a>	20
Hydrology and Climate	<a href="#">GEOL2171</a>	20
Fieldwork (Geological)	<a href="#">GEOL2191</a>	20
Fieldwork (Environmental)	<a href="#">GEOL2201</a>	20
Igneous and Metamorphic Geochemistry and Petrology	<a href="#">GEOL2231</a>	20
Fieldwork (Geophysical)	<a href="#">GEOL2241</a>	20
Modelling Earth Processes	<a href="#">GEOL2251</a>	20
Geoinformatics (only available 2018/19)	<a href="#">GEOL2281</a>	20

Geophysical Data Applications	<a href="#">GEOL2291</a>	20
Modules up to the value of 40 credits offered by any other 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)

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

Dissertation	<a href="#">GEOL3022</a>	<b>Credit value</b> 40
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28. Candidates shall also study and be assessed in modules to the value of 80 credits from List C:

<b>List C:</b>		<b>Credit value</b>
Petrology, Geochemistry and Global Tectonics	<a href="#">GEOL3011</a>	20
Petroleum Geoscience	<a href="#">GEOL3031</a>	20
Environmental Geochemistry	<a href="#">GEOL3041</a>	20
Volcanology and Magmatism	<a href="#">GEOL3051</a>	20
Palaeobiology	<a href="#">GEOL3071</a>	20
Deformation Processes in the Lithosphere	<a href="#">GEOL3091</a>	20
Earth Structure and Dynamics	<a href="#">GEOL3151</a>	20
Advanced Geophysics	<a href="#">GEOL3221</a>	20
Earth System and Climate	<a href="#">GEOL3231</a>	20
Earth Sciences into Schools	<a href="#">GEOL3251</a>	20
Environmental Management	<a href="#">GEOL3281</a>	20
Modules up to the value of 40 credits offered by any other Boards of Studies (including appropriate credit-bearing language modules offered by the University's Centre for Foreign Language Study).		40

### All Routes

#### Level 4 (Degree)

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

Research Project $\Psi$	<a href="#">GEOL4053</a>	<b>Credit value</b> 60
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30. Candidates shall also study and be assessed in modules to the value of 60 credits from List F:

<b>List F:</b>		<b>Credit value</b>
Frontiers in Earth Science	<a href="#">GEOL4061</a>	20
Earth Science Field Seminar $\Psi$	<a href="#">GEOL4081</a>	20
Earth Sciences into Industry	<a href="#">GEOL4091</a>	20
Petroleum Geoscience IV	<a href="#">GEOL4101</a>	20
Environmental Geochemistry IV	<a href="#">GEOL4111</a>	20
Deformation Processes in the Lithosphere IV	<a href="#">GEOL4121</a>	20
Advanced Geophysics IV	<a href="#">GEOL4131</a>	20
Earth System and Climate IV	<a href="#">GEOL4141</a>	20
Earth Structure and Dynamics IV	<a href="#">GEOL4161</a>	20
Palaeobiology IV	<a href="#">GEOL4171</a>	20

### Assessment, progression and award

- At Level 1 students are required to attend a residential field course that is usually held in the Easter vacation.
- At Levels 2 and 3 students are required to attend a field course if specified as part of a module.
- Students are required to take modules marked with a  $\Phi$  if they do not have AS-Level Mathematics at Grade B or above.

34. All modules marked with a  $\Psi$  must be taken by students who wish to study for a degree accredited by the Geological Society. At Level 3 students can choose either [GEOL3011](#), [GEOL3051](#) or [GEOL3281](#) to gain accreditation.
35. Students who have AS-Level Mathematics at Grade B or above are not entitled to take [GEOL1061](#).
36. 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 either Honours or Ordinary level in accordance with the Core Regulations.
37. 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.
38. 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 either Honours or Ordinary level in accordance with the Core Regulations for the award of a Bachelors degree.
39. 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**

40. This programme is accredited by the Geological Society for a period of six years with effect from March 2016, subject to students choosing modules to constitute an approved pathway as indicated above.