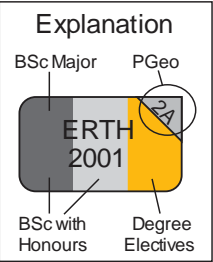


Earth Sciences – BSc, BSc Honours, PGeo

The majority of Earth Sciences students complete either the BSc Major or BSc Honours programs in Earth Sciences along with the requirements for Professional Geoscience Registration.



Year 1

Fall	ERTH 1080	CHEM 1011 ^{1A}	MATH 1000 ^{1A}	PHYC 1190 ^{1A}	Elective (Humanities/ Language)
Winter	ERTH 1090/1091	CHEM 1012 ^{1B}	MATH/ STATS Elective ^{1B}	PHYC 1290 ^{1B}	Elective* (Humanities/ Language)

*Total number of 1000-level credit-hours may not exceed 48 (16 courses). Conversely, minimum of 72 credit-hours required at 2000-level and higher.

Year 2

Fall	ERTH 2001 ¹	ERTH 2110 ^{2C}	ERTH 2203 ^{2C}	Elective (PGeo Foundation Science) ^{1B}	Elective (Social Science)
Winter	ERTH 2002 ^{2C}	ERTH 2380 ^{2B}	ERTH 2270 ² ^{2B}	Elective (PGeo Foundation Science ³) ^{1B}	Elective (Social Science)

¹Prerequisites: EARTH 1080 and 1090, CHEM 1011 and 1012.

²Prerequisites: EARTH 1080, MATH1000, PHYC 1190 and PHYC 1290 (or equiv.)

³PGeo Group 1B subjects include Math, Chemistry, Physics, Statistics, Computer Programming, and Biology.

Years 3 & 4

		ERTH 3001 Field School ⁴ ^{2A}			
Fall	ERTH 3303 ^{2A}	ERTH Elective (>1999) ⁵ ^{2B}	ERTH Elective (>1999) ^{2C}	Elective	Elective
Winter	ERTH 3140 ^{2A}	ERTH Elective (>1999) ⁶ ^{2B}	Elective (PGeo Foundation Science) ^{1B}	Elective	Elective

⁴ERTH 3001 Field School is 14 days and usually runs at the end of August

⁴ERTH 4003 + 4004 Advanced Field School is 28 days and runs in May

⁵Consider in 3rd year for PGeo (2B):
- EARTH 3010 for Geology Stream, or
- EARTH 3701 for Env. Geo. Stream

⁶PGeo Group 2B requires five courses. Consult the GKE or dept checklist to determine the various course combinations to satisfy this category.

Years 3 & 4

Fall	ERTH Elective (>1999) ^{2C}	ERTH Elective (>1999) ^{2C}	ERTH 4201 ⁷ ^{2C}	Elective	Elective
Winter	ERTH Elective (>1999) ^{2C}	ERTH Elective (>1999) ⁶ ^{2B}	ERTH 4202 ⁷ ^{2C}	Elective	

⁷Honours thesis class. For acceptance:
- Min. GPA in EARTH of 3.5, and no grade lower than C
- Students generally find their own supervisor/project in Year 3.

Checklist for PGeo Knowledge Requirements for Dalhousie Earth Sciences students

Refer to the Professional Geoscience Knowledge and Experience (GKE) handbook while filling out this document.

<https://geoscientistscanada.ca/source/GC-Knowledge-Requ-BKLT--REV--EN--web--final-.pdf>

Group 1A and 1B Compulsory and Additional Foundation Science

Group 1A - Compulsory Foundation Science (3 courses*)

*course is equivalent to a 3-credit hour course. The GKE uses the term Education Unit (EU) which is also a 1 semester course.

Chemistry		e.g., CHEM 1011 or equivalent
Mathematics		e.g., MATH 1000 or equivalent; life sciences math (1215) not accepted
Physics		e.g., PHYC 1190 (or 1290) or equivalent; life sciences physics (1300) not accepted

Group 1B - Additional Foundation Science (total of 6 courses and no more than 2 courses in any one subject)

Chemistry		
Mathematics		
Physics		
Statistics		
Computer Programming		
Biology		

General notes on Group 1 courses:

- CHEM 1012, MATH 1010, and PHYC 1290 (or 1190) recommended
- Also recommended: STAT 1060 or 2060, STAT 2080, STAT 2450, MATH 1030, MATH 2300, PHYC 2050, CSCI 1105 or 1110, CSCI 2202
- Consult the GKE handbook for individual course descriptions to compare against Dal course descriptions.
- In general, only courses that count toward a Dalhousie BSc degree in that discipline are eligible in this category. Eg., PHYC 1451: Astronomy and PHYC 2800: Climate Change do not count.

Group 2A, 2B and 2C – Compulsory, Additional and Other Geoscience

Group 2A - Compulsory Foundation Geoscience (4 courses)

Field Practice		ERTH 3001 – Field School
Mineralogy and Petrology		ERTH 2001 – Mineralogy
Sedimentation and Stratigraphy		ERTH 3303 – Stratigraphy
Structural Geology		ERTH 3140 – Structural Geology

Notes:

Group 2B - Additional Foundation Geoscience (5 courses; min 1 & max 2 from each subgroup)

PGeo Geology Stream			PGeo Environmental Geoscience Stream		
Geochemistry		2380	Geochemistry		2380
Geophysics		2270	Geophysics		2270
Igneous Petrology		3010	Hydrology		3701
Metamorphic Petrology		3020	Hydrogeology		3401
Sedimentary Petrology		N/A	Engineering Geology		N/A
Sedimentology		2203	Geomorphology or Soil Science		3440
Geomorphology or Glacial Geology		3440	Glacial Geology		N/A
GIS		3500	GIS		3500

Group 2C - Other Geoscience (9 courses at the 2000-level or higher)

- Any EARTH course at or above the 2000-level that counts toward a BSc in EARTH
- Other courses may count as well. e.g., Oceanography, Paleobiology, Engineering
- Consult the GKE handbook for full list of options

Professional Geoscientist boards by province:

NS: <https://www.geoscientistsns.ca>

NL: <https://www.pegnl.ca>

ON: <https://www.pgo.ca>

SK: <https://www.apegs.ca>

BC: <https://www.egbc.ca>

NB: <https://www.apegnb.com>

QC: <http://www.ogq.qc.ca>

MB: <http://www.apegm.mb.ca>

AB: <https://www.apega.ca>

NWT & NU: <http://www.napeg.nt.ca>

- ERTH 1030 Physical Geography (xlist GEOG 1030)
- GEOG 1035 Human Geography
- ERTH 1060 Earthquakes, Volcanoes and other Natural Disasters (xlist GEOG 1060)
- ERTH 1080 Geology I
- ERTH 1090 Geology II (or ERTH 1091)
- GEOG 2000 Cartography
- ERTH 2001 Mineralogy
- ERTH 2002 Introduction to Petrology
- ERTH 2020 Journey Through the Solar System
- ERTH 2110 Field Methods
- ERTH 2203 Sediments and Sedimentary Rocks
- ERTH 2270 Introduction to Applied Geophysics (xlist PHYC 2270)
- ERTH 2380 Geochemistry
- ERTH 2410 Environmental Issues in Earth Sciences (xlist ENVS 2410)
- ERTH 2420 Dinosaurs
- ERTH 3001 Field School
- ERTH 3010 Igneous Petrology
- ERTH 3020 Metamorphic Petrology
- ERTH 3140 Structural Geology
- ERTH 3205 Paleobiology
- ERTH 3302 Quaternary Sedimentary Environments (xlist GEOG 3302)
- ERTH 3303 Stratigraphy
- ERTH 3401 Hydrogeology
- ERTH 3440 Geomorphology (xlist ERTH 3440)
- ERTH 3500 Geoscience Information Management (xlist GEOG 3500, ENVS 3500, ERTH 5600)
- ERTH 3601 Global Biogeochemical Cycles (xlist ENVS 3601)
- ERTH 3700 Earth Resources, Sustainability, and Society (xlist ENVS 3700, GEOG 3700)
- ERTH 3701 Fundamentals of Hydrology (xlist ENVS 3701)
- ERTH 4001 Sponsored Geologic Experience
- ERTH 4003.015 Advanced Field Geology Orientation (prep for 4004)
- ERTH 4004.045 Advanced Field Geology (4-week field school in May)
- ERTH 4010 Advanced Topics in Petrology and Geochemistry
- ERTH 4101/4102 Research Project
- ERTH 4110 Geological Oceanography (OCEA 4110, OCEA 5110)
- ERTH 4131 Advanced Petroleum Geoscience (xlist ERTH 5131)
- ERTH 4151 Mineral Deposits (xlist ERTH 5151)
- ERTH 4153 Petroleum Geology and Energy Systems
- ERTH 4157 Petroleum Geoscience Field Methods (xlist ERTH 5157*)
- ERTH 4201/4202 Honours Thesis
- ERTH 4350 Tectonics (ERTH 5350)
- ERTH 4410 Environmental Geoscience
- ERTH 4460 Geochronology and Thermochronology (xlist ERTH 6400)
- ERTH 4470 Introduction to Seismic Imaging (xlist ERTH 5470, OCEA 4470, PHYC 4470, PHYC 5470)
- ERTH 4510/4511 Directed Reading
- ERTH 4520 GIS Applications to Environmental and Geological Sciences (xlist ERTH 5530, GEOG 5520)
- ERTH 4530 Environmental Remote Sensing (xlist ERTH 5530, GEOG 4530)
- ERTH 4850 Geographic Information Science Research Project (xlist SCIE 4850, ENVS 4850, GEOG 4850)



My Plan

Year: _____

Fall term

Winter term

Year: _____

Fall term

Winter term

Year: _____

Fall term

Winter term

Year: _____

Fall term

Winter term

Year: _____

Fall term

Winter term

Notes: _____
