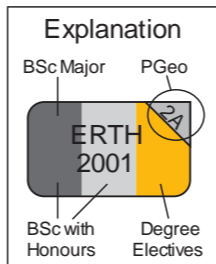


Earth Sciences – BSc, BSc Honours, PGeo

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 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 (>2999) 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

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 (>2999) ^{2C}	ERTH Elective (>2999) ^{2C}	ERTH 4201 ⁷ ^{2C}	Elective	Elective
Winter	ERTH Elective (>2999) ^{2C}	ERTH Elective (>2999) 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-Req-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, 1021 or equivalent
Calculus		e.g., MATH 1000, 1280 or equivalent; life sciences math (1215) may not be accepted
Physics		e.g., PHYC 1190 (or 1290) or equivalent; life sciences physics (1310/1320) may not be 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.
- OCEA 2001/2002 (Blue Planet) may count as Biology courses
- 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		CIVL 2200
Sedimentology		2203	Geomorphology or Soil Science		3440 or SOIL 2000
Geomorphology or Glacial Geology		3440 or 3302	Glacial Geology		3302
GIS or Remote Sensing		3500	GIS or Remote Sensing		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
- For students in combined degrees, up to 2 courses not counted in Group 1B can count in 2C

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 1091 Geology II (or EARTH 1090)
- 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 3001 Field School
- ERTH 3010 Igneous Petrology
- ERTH 3020 Metamorphic Petrology
- ERTH 3140 Structural Geology
- ERTH 3205 Paleobiology
- ERTH 3270 The Solid Earth (xlist PHYC 3270, OCEA 3270)
- ERTH 3302 Quaternary Sedimentary Environments (xlist GEOG 3302)
- ERTH 3303 Stratigraphy
- ERTH 3401 Hydrogeology
- ERTH 3420 Geochemistry of Aquatic Environments (xlist OCEA 3420)
- ERTH 3440 Geomorphology (xlist GEOG 3440)
- ERTH 3500 Geoscience Information Management (xlist GEOG 3500, ENVS 3500, EARTH 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 4010 Advanced Topics in Petrology and Geochemistry
- ERTH 4040 Integrated Field Studies
- ERTH 4101/4102 Research Project
- ERTH 4110 Geological Oceanography (OCEA 4110, OCEA 5110)
- ERTH 4131 Advanced Petroleum Geoscience (xlist EARTH 5131)
- ERTH 4151 Mineral Deposits (xlist EARTH 5151)
- ERTH 4153 Petroleum Geology and Energy Systems
- ERTH 4157 Petroleum Geoscience Field Methods (xlist EARTH 5157*)
- ERTH 4201/4202 Honours Thesis
- ERTH 4320 Sea Floor Mapping (xlist OCEA 4320)
- ERTH 4350 Tectonics (ERTH 5350)
- ERTH 4460 Geochronology and Thermochronology (xlist EARTH 6400)
- ERTH 4470 Introduction to Seismic Imaging (xlist EARTH 5470, OCEA 4470, PHYC 4470, PHYC 5470)
- ERTH 4510/4511 Directed Reading
- ERTH 4520 GIS Applications to Environmental and Geological Sciences (xlist EARTH 5530, GEOG 5520)
- ERTH 4530 Environmental Remote Sensing (xlist EARTH 5530, GEOG 4530)
- ERTH 4850 Geographic Information Science Research Project (xlist SCIE 4850, ENVS 4850, GEOG 4850)

My Plan

Year: _____

Fall term

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Winter term

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Year: _____

Fall term

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Winter term

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Year: _____

Fall term

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Winter term

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Year: _____

Fall term

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Winter term

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Year: _____

Fall term

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Winter term

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Notes: _____
