

## **Bachelor of Science, Majors, Minors and Transfer**

# **Earth Science**

- **A Minor is offered**
- **Program Fees: Domestic Students, International Students**
- **Apply for Admission: Forms and Information**

**Note:** VIU also offers a Bachelor of Arts, Minor in Earth Science

## **General Description**

The Minor in Earth Science is designed to provide foundational knowledge about the Earth's materials, processes, resources and history. Earth Science is a multidisciplinary field in which the principles of chemistry, physics, mathematics, and biology are applied to understand how the Earth works. Earth Science literacy is of critical importance in understanding and solving challenges facing us regarding energy and resource availability and environmental sustainability.

The Minor in Earth Science is designed to be taken as part of a Double Minor or as a Major and Minor combination for a Bachelor of Science or Bachelor of Arts. The program provides a solid foundation in the physical sciences and the flexibility to create individualized programs of study.

The Minor in Earth Sciences combines with Minors or Majors in Biology, Chemistry, Geography, Mathematics, and Computer Science. The Minor in Earth Sciences also complements studies in Anthropology, Business, Economics, Creative Writing, and Liberal Studies. Career directions for students with a Minor in Earth Science are varied, but could include work in variety of fields employed with environmental consultants, resource companies or government agencies. The program will be of particular interest to students proceeding towards a career in Primary and Secondary Education, with plans for teaching a science curriculum.

Many of the courses taken to satisfy the Minor of Earth Science requirements can contribute towards the academic requirements of the Association of Professional Engineers and Geoscientists of BC (APEGBC) for a Professional Geoscientist. However, a significant number of other courses may be required. Check the APEGBC syllabus requirements for a Professional Geoscientist for more details at Professional Engineers and Geoscientists of BC.

## **Requirements for a Minor**

Students must fulfill all Institutional B.Sc. Degree Requirements, including Degree English Requirements and courses listed below.

<b>Years 1 and 2</b>	<b>Credits</b>
GEOL 111 - (Discovering Planet Earth)	4
GEOL 112 - (Understanding Earth's History)	4
GEOL 115* - (Laboratory and Field Studies in Earth Science)	3
GEOL 200 - (Mineralogy)	3
GEOL 201 - (Sedimentology and Stratigraphy)	3
GEOL 202 - (Earth Structures)	3
GEOL 206** - (Geological Field Methods and Mapping)	3

\* *Students who completed both GEOL 111 and GEOL 112 prior to September 2011 are exempt from taking GEOL 115 as a prerequisite for 200-level GEOL courses.*

\*\* *GEOL 206 is a field course that includes approximately 72 hours of instruction over a two week period.*

<b>Years 3 and 4</b>	<b>Credits</b>
Minimum of <i>eighteen</i> credits of Earth Science* courses numbered 300 and above from the following list, of which a minimum of <i>nine</i> credits must be GEOL courses:	
CHEM 301 - (Aqueous Environmental Chemistry)	3
CHEM 302 - (Atmospheric Environmental Chemistry)	3
GEOG 326 - (Remote Sensing)	3
GEOG 328 - (Geographic Information Systems)	3
GEOG 372 - (Climatology)	3
GEOG 373 - (Biogeography)	3
GEOG 374 - (Hydrology)	3
GEOG 376 - (Geomorphology)	3
GEOG 428 - (GIS Applications)	3
GEOL 300 - (Igneous and Metamorphic Petrology)	3
GEOL 301 - (Cave & Karst Landscapes and Systems)	3
GEOL 302 - (Mineral Resources and Earth Materials)	3
GEOL 304 - (Hydrogeology)	3
GEOL 305 - (Quaternary Geology)	3
GEOL 308 - (Geochemistry)	3
GEOL 312 - (Environmental Geology)	3
GEOL 380 - (Earth Science Work Experience)	3
GEOL 390 - (Special Field Studies)	3
GEOL 412 - (Climate Change: Past, Present, and Future)	3
GEOL 470 - (Earth Science Issues in British Columbia)	3
GEOL 480 - (Earth Science Senior Work Experience)	3
GEOL 490 - (Directed Studies in Earth Science)	3
GEOL 491 - (Research Project in Geoscience)	3

\* *Earth Science courses are approved lab science courses from the departments of Geology, Chemistry, and Geography.*

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