

# GEOLOGY MAJOR

Minimum credits for degree: **120** (version: SEPTEMBER 2020)

FAMILY NAME: _____	GIVEN NAME: _____
STUDENT NUMBER: _____	E-MAIL: _____
TELEPHONE: _____	DATE PREPARED: _____

**PLEASE NOTE:** This is a **GUIDELINE ONLY**. You are responsible for checking that you meet all requirements explained in detail in the UBC CALENDAR and with the SCIENCE INFORMATION CENTRE for the most up-to-date regulations

For EGBC requirements to become a **PROFESSIONAL REGISTERED GEOLOGIST**, refer to <https://www.egbc.ca/> for additional required course content.

To Register for Geology Major (3193) in second year, you will need 2 out of the courses shaded in the table below or their equivalents.

**NOTE:** Refer to the UBC Faculty of Science "Credit Exclusion lists" in the calendar before completing.

## TO REGISTER IN GEOLOGY MAJOR

Requires an application to the Faculty of Science normally prior to registration in the summer following yr1 or, for transfer students, before you first register for courses. Early contact with an EOAS advisor to discuss intended specialization is recommended. **NOTE: YOU must meet all graduation requirements within 180 credits. Those who do not will be required to withdraw from the FoS.**

**I) FIRST-YEAR REQUIREMENTS:** 2 of 3 shaded required to register for Geology Major in 2<sup>nd</sup> yr

COURSES	CREDIT	COURSES TAKEN	Total
Communication Requirement* <sup>1</sup> 100 LEVEL (Communication: 6cr of Communication Requirement required by end of 3 <sup>rd</sup> year)	3		/ 3
PHYS* <sup>2</sup> 117 (or 101 or 107)	3		/ 3
PHYS* <sup>2</sup> 118 (or 108 or 102)	3		/ 3
CHEM* <sup>3</sup> 121 or 111 (Structural Chemistry)	4		/ 4
CHEM 123 or 113 (Organic Chemistry)	4		/ 4
MATH 100 / 102 / 104 or equivalents (Differential Calculus)	3		/ 3
MATH 101 / 103 / 105 or equivalents (Integral Calculus)	3		/ 3
EOSC 110 * <sup>4</sup> (Solid Earth: Physical Geology)	3		/ 3
EOSC 116 * <sup>4</sup> (Mesozoic Earth: Historical Geology)	3		/ 3
EOSC 111 * <sup>4</sup> (Laboratory Exploration of Planet Earth)	1		/ 1
<b>TOTAL CREDITS</b>			<b>/ 30</b>

**NOTE: You must have two lab-based courses in your first year courses.**

\*1 ENGL 112 is recommended. A total of 6 credits of coursework are required to meet the Communication Requirement. **All 6 credits must be completed by the end of year 3.** For full list of acceptable courses, see Communication Requirement in the UBC calendar. NOTE: Communication courses CANNOT be used towards the 12 Credit Arts Requirement.

\*2 Students without credit for Physics 12 must take PHYS 100 prior to any other 100-level PHYS courses. PHYS 100 will count as an elective. Qualified students are encouraged to add PHYS 119 or 109 by decreasing electives in other years by 1 credit. Students may delay taking 3 credits of PHYS 100-level to second year.

\*3 Students without Biology 11 or 12 must ALSO take 3 credits of 100-level BIOL.

\*4 A total of 3 credits may be deferred until second year. The requirement for these courses may be waived if a student has completed upper-level courses in each of the solid and fluid earth sciences.

**NOTE:** in addition to the two MATH courses your degree must include an ADDITIONAL 3 credits in computational science (MATH / STAT / CPSC / EOSC 211). Can be 100-level if approved as computational credit by FoS.

**NOTE:** only 3 credits of lower-level requirements may be carried beyond the first 60 credits; MATH 100 (and equivalents) may not be deferred.

**NOTE:** check also the Science Breadth Requirements, see Section IVD below.

## PROMOTION BEYOND FIRST YEAR

See the calendar for information on FoS promotion requirements:

<http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,215,410,1467>

In addition you need to consider the following Geology Major specific requirements:

To register in Geology Major: must have completed 2 out of (or the equivalents of) MATH 101 (or equivalent), 1 of CHEM 121/111, and 1 of PHYS 101/107

To be promoted to year 3: 60% (10.8 credits) of the 18 credits of named second year credits in the Calendar are required for promotion. Of these, 9 credits must come from EOSC 220, 221, 222, or 223.

Check that you meet promotion requirements by contacting the FoS Science Information Centre.

**NOTE:** You must meet all graduation requirements within 180 credits. Those who do not will be required to withdraw from the Faculty of Science.

### II) 200-LEVEL EOSC GEOLOGY COURSES: 18 CREDITS

**NOTE:** 6 credits may be delayed to 3<sup>rd</sup> year if 300+ courses used (see advisor).

**NOTE:** EOAS requires 3 out of the 4 shaded courses below for promotion to 3<sup>rd</sup> year; FOS requires a total of 10.8 credits (60%) of all of the following 200-level courses for promotion to 3<sup>rd</sup> year.

COURSE NUMBER	COURSE NAME
1. EOSC 211* <sup>5</sup> or GEOB 270	Computer Methods* <sup>5</sup> or GIS (circle one)
2. EOSC 212	Topics in the Earth and Planetary Sciences
3. EOSC 220	Introductory Mineralogy
4. EOSC 221	Introductory Petrology
5. EOSC 222	Geological Time & Stratigraphy
6. EOSC 223	Field Techniques
<b>TOTAL</b>	<b>/ 18</b>

\*<sup>5</sup>Note: if EOSC 211 not taken, you will need an addition 3 credits of either MATH / STAT / CPSC).

### III) 300+ LEVEL EOSC GEOLOGY COURSES: 33 CREDITS

COURSE NUMBER	COURSE NAME
1. <b>ALL</b> of EOSC 320, 321, and 322	Sedimentology / Igneous / Metamorphic
2. <b>ONE</b> of EOSC 333 <b>or</b> 350* <sup>6</sup>	Geochemistry / Geophysics (circle one)
3. EOSC 323	Structural Geology

4. EOSC 328	Field Geology
5. EOSC 329	Groundwater Hydrology
6. EOSC 330	Principles of Geomorphology
7. EOSC 332	Tectonic Evolution of North America
8. EOSC (geology) 400+	EOSC 420-425 and EOSC 428-432
9. EOSC (geology) 400+	EOSC 420-425 and EOSC 428-432
<b>TOTAL NUMBER OF CREDITS:</b>	<b>/ 33</b>

\*6 may take EOSC 250, but 350 recommended – this slot must still be filled with EOSC 300+

#### **IV. OTHER ELECTIVES:**

**REMEMBER you still require a total of 48 300+ cr to graduate – see over.**

##### **A. ADDITIONAL COMMUNICATION REQUIREMENT**

NOTE: All communication requirements (6 credits) must be completed by the end of Year 3.

<b>COURSE NUMBER</b>	<b>COURSE NAME and NUMBER</b>
1 Communication: Credit* <sup>1</sup> 1XX	
<b>TOTAL CREDIT</b>	<b>/ 3 (total of 6 required)</b>

##### **B. 12 CREDITS ARTS (Communication credits cannot be used for this requirement)**

<b>COURSE NUMBER</b>	<b>COURSE NAME and NUMBER</b>
1 ANY 100+	
2 ANY 100+	
3 ANY 100+	
4 ANY 100+	
<b>TOTAL CREDIT</b>	<b>/ 12</b>

##### **C. 3 ADDITIONAL EOSC / ATSC / ENVR (NB: make sure courses are for credit in EOAS)**

<b>COURSE NUMBER</b>	<b>COURSE NAME and NUMBER</b>
ANY 300+	
<b>TOTAL CREDIT</b>	<b>/ 3</b>

**D. FoS MAJORS SCIENCE BREADTH REQUIREMENT (new in Sept 2019, see <http://www.calendar.ubc.ca/vancouver/index.cfm?tree=12,215,410,1663>):** students in a major or honours specialization must successfully complete at least 3 credits from any 6 of the 7 identified categories (Mathematics, Chemistry, Physics, Life Science, Statistics, Computer Science, Earth & Planetary Science). For Geology Major students, this means 2 additional courses selected from Life Science, Statistics, or Computer Science (EOSC 211 does not count as a Computer Science course for this breadth requirement). These Science Breadth courses can be used to satisfy the Group 1B: Additional Foundation Science EGBC requirements.

<b>COURSE NUMBER</b>	<b>COURSE NAME and NUMBER</b>
1 ANY 100+ (science only – see restrictions above)	
2 ANY 100+ (science only – see restrictions above)	
<b>TOTAL CREDIT</b>	<b>/ 6</b>

**E. 15 ADDITIONAL CREDITS – MAY BE IN ANY FACULTY**

**NOTE: Although these can be at 100 level, you still need 48 x 300+ credits total**

COURSE NUMBER	CREDITS	
	FACULTY OF SCIENCE / ARTS	ANY OTHER FACULTY
1. ANY 100+ *		
2. ANY 100+		
3. ANY 100+		
4. ANY 100+		
5. ANY 100+		
<b>TOTAL</b>	<b>/ 15</b>	

\*NOTE: If EOSC 211 not taken, the course in this space must fulfill the FoS Computational Science requirement. See Calendar for details of acceptable courses.

## IMPORTANT: FoS REQUIREMENTS

YOU MUST ALSO MEET THE FOLLOWING FACULTY OF SCIENCE REQUIREMENTS:

*NOTE: You must meet all graduation requirements within 180 credits.  
Those who do not will be required to withdraw from the Faculty of Science.*

CREDITS	YOUR COUNT	FoS REQUIREMENTS
TOTAL		120
TOTAL 300+ (any subject)		48* (see note below)
TOTAL 300+ SCIENCE		30
TOTAL SCIENCE		72
TOTAL ARTS		12
TOTAL COMMUNICATION		6
TOTAL COMPUTATIONAL		9
MIN SCIENCE BREADTH (see IV/D)		6
MAX NOT IN ARTS / SCIENCE		18**

\* If this is your 2<sup>nd</sup> degree, NONE of the 300+ courses from your 1<sup>st</sup> degree count towards this 48 credits

*NOTE: it is at the discretion of the FoS how many (if any) credits will transfer: contact the Science Information Centre for more information if you are in this situation: [advising@science.ubc.ca](mailto:advising@science.ubc.ca)*

\*\* You are not required to have any courses out of Arts or Science, but you may take up to 18 credits

## OTHER IMPORTANT NOTES

**DIRECTED STUDIES (EOSC 448):** topics must be approved by an EOAS department advisor. We would **prefer** a maximum of 6 credits in your geology major taken as 2 x 3 credit courses – please consult your specialization advisors. Note that Directed Studies cannot be used to satisfy the 2 x 400-level Geology courses required (these must be EOSC 420-425 and EOSC 428-432).

**EOAS 449 THESIS:** Some majors students may take a thesis, **however**, strict conditions apply – please see EOAS web site for more information: <http://www.eos.ubc.ca/courses/eosc449/eosc449.htm>

**GRADUATE CLASSES:** You may take a maximum of 6 credits of graduate courses (500 level). Permission must be sought from the Faculty of Science AND the Faculty of Graduate Studies (contact the Science Information Centre for information)

**ENGINEERS & GEOSCIENTISTS BC ELECTIVES:** You do not have to complete EGBC electives to graduate. However, if considering a career in geology you are advised to choose electives that maximize your compliance with EGBC course requirements. See: <https://www.egbc.ca/>. **PLEASE NOTE:** although we can discuss registration with EGBC, UBC cannot provide any official advice or decisions regarding registration and compliance. Any uncertainties should be directed to EGBC and are the responsibility of each individual student.

### **ADVISORS**

Please make an appointment to confirm availability. For an emergency, contact the EOAS undergraduate coordinator: Alicia Warkentin: ESB 2020, 604-827-5284, [awarkent@eoas.ubc.ca](mailto:awarkent@eoas.ubc.ca)

**PLEASE USE E-MAIL** to set up appointments or ask general questions. Place 'advising' in the subject field **AND INCLUDE YOUR FULL NAME AND STUDENT NUMBER** on all communications.

**Geology Major: Dr. James Scoates: [jscoates@eoas.ubc.ca](mailto:jscoates@eoas.ubc.ca): EOS-South 352**

**Geological Sciences Honours: Dr. Ken Hickey: [khickey@eoas.ubc.ca](mailto:khickey@eoas.ubc.ca): ESB 5119**