

<b>Course ID:</b>	<b>Course Title:</b>	<b>Winter 2020</b>
<b>GEO 109 -1</b>	<b>Introduction to Geology</b>	<b>Prerequisite: none</b>
		<b>Credits: 3</b>

Class Information		Instructor Information		Important Dates	
<b>Days:</b>	Mondays	<b>Instructor:</b>	Dr. Stephen Jeans	<b>First day of classes:</b>	Tue., Jan 7
<b>Time:</b>	5:30 - 8:30 p.m.	<b>Email:</b>	sjeans@ambrose.edu	<b>Last day to add/drop, or change to audit:</b>	Sun, Jan. 19
<b>Room:</b>	A2131	<b>Phone:</b>	403-284-3630	<b>Last day to request revised final exam:</b>	Mon, Mar. 9
<b>Lab/ Tutorial:</b>	within class time and	<b>Office:</b>	by arrangement	<b>Last day to withdraw from course:</b>	Fri, Mar. 20
	<b>one full Saturday</b>	<b>Office Hours:</b>	by appointment	<b>Last day to apply for coursework extension:</b>	Mon, Mar. 30
<b>Final Exam:</b>	Final Exam Schedule will be available January 30 through the Office of the Registrar.			<b>Last day of classes:</b>	Thu., April 9

### Course Description

This course looks at the composition and structure of the Earth – surface and internal processes, rocks and minerals. This course includes out-of-class tutorials and field trips including a trip to the Royal Tyrrell Museum.

*This course has an existing transfer credit agreement through Alberta Council on Admissions and Transfer. Visit [www.transferralberta.ca](http://www.transferralberta.ca) for details.*

### Expected Learning Outcomes

At the conclusion of the course students will be able to:

- knowledge*
- explain the vast relative scale of geologic time and of the process of rock formation and change,
  - express an understanding of research and thought/theory about geologic and other Earth processes,
  - identify and distinguish among minerals, rock types, and fossil evidence in earth materials,
  - relate knowledge of interior processes of Earth's dynamic crust and implications for surface activity,
  - develop a working knowledge of the geologic time scale and historical planetary rock and life events,
  - explain origins of physical matter and importance of Earth resources available for human consumption,

- skill*
- conduct experiments that model geologic processes to explain stratigraphy and earth movement,
  - observe surficial material and formation to develop testable inferences of type, origin, and structure,
  - use calibrated instruments to identify and explain properties of Earth materials and their likely history,
  - enact essential research and practices to become a student of science and of geology,
- attitude*
- relate a sense of appreciation for the importance of Earth materials regarding human existence, and
  - express an understanding of the significance and coexistence of science and of faith.

### Textbooks

Wicander, Reed, and Monroe, James S., (2013). *GEOL2: Student Edition*. Brooks/Cole: Belmont, CA -Cengage. ISBN-13: 978-1-133-10869-6 [and includes Printed Access Card (12 Months) for CengageNow]

### Course Schedule

A tentative schedule is proposed below, and is therefore subject to change, because of learning exercises and opportunities that may take advantage of resources, outdoor activity, and/or guest speakers interjected at the instructor's discretion. Planned for the course are readings and topics in the following order:

<u>Date</u>	<u>Reading</u>	<u>Topic</u>	<u>Note</u> [information for that activity]
01-13	Chapter 01	Science, Belief, and Dynamic Earth	
01-20	Chapter 02 & 03	Tectonics and Minerals	
01-27	Chapter 04 & 05	Igneous Rock, Volcanos and Volcanism	
02-03	Chapter 06	Sedimentary Rock, Laboratory work	
02-10	Chapter 07 & 08	Metamorphic Rock, Quakes and the Interior	
02-17		<b>NO CLASS - Family Day and Reading Break</b>	
02-24	Chapter 12 +extra	Groundwater, Fossilization and Fossils	
03-02	Chapter 09	Deformation and Building	<b>Midterm Exam</b> [~1 h.], then classwork
03-09	Chapter 10, 11, 14	Mass Movement, Water, Wind and Desert	
03-16	Chapter 13	Glaciation and Glacier Material	<b>Dig Deeper Due</b> , present, then classwork
03-23	Chapter 15	Ocean and Shore Processes, Science Models	
03-30	Chapter 16 & 17	Geologic Time, Earth History	possible outdoor activity, bring jacket
04-04*	+extra reading	<b>*SATURDAY</b> Fieldtutorial, travel to Drumheller	8:00 am sharp to 6:00 pm approx. return
04-06	Chapter 18	Life History and the Fossil Record	
04-??**		<b>** Final Exam</b> , at regular class time →	<b>5:30 pm</b> to 8:30 pm
		Final Exam Schedule will be available January 30 through the Office of the Registrar.	

## **Requirements:**

### *Assignments*

During the progress of most every lesson in this course, in-class assignments and/or an exit slip will be expected before a student leaves for the evening. The content and marking of each day's work will depend on the type of assignment. However, exit slips will typically consist of two to five questions that can be answered in about 5 to 10 minutes.

An assignment called '*Dig Deeper*' will be demonstrated and discussed in class. The assignment is a term project that is due a few weeks prior to the end of the course. *Dig Deeper* is an opportunity for students to fully engage in the course material through conducting research into an aspect of geology that connects with their academic interest and/or personal passion for learning. This assignment includes a geology-interpretation product that the student researches and creates along with a written-explanation component (a few pages in length), both of which are of a geology-related topic chosen by the student and must be approved by the instructor. Depending on the topic chosen, demonstration of WHMIS knowledge will be necessary if use of the laboratory and University equipment is required.

### *Fieldtutorial*

Mandatory for this course is a one-day Fieldtutorial trip to southern Alberta stops, from Ambrose campus to the Badlands. Late in the term on a Saturday, students will travel together by bus and, during stops, apply much of their learning toward examining the geology of the prairies and on an educationally enriched tour of the Royal Tyrell Museum of Paleontology in Drumheller. Due to the latter being in a climate controlled facility, Field Study will likely take place regardless of weather--so dress appropriately, in layers to keep warm!

Occasionally, class may include moving outdoors on campus and/or within the Mahood Commons (Ambrose campus green space) for field work and laboratory experiments (weather permitting, e.g., no snow storm). Every attempt will be made to inform students about such opportunities before class begins. Watch for an email from your instructor and posting on Moodle for updates.

### *Cautions and Student Equipment*

To reinforce concepts encountered during this course, participants will be asked to observe and/or take part in multiple demonstrations and laboratory work that will include the use of equipment. Safety is an expectation of each student for themselves, for the well-being of others in the class, and for the preservation of Ambrose facilities, apparatus, and sample materials. When conducting work in the classroom or in the field, be observant of proper procedure and check that others around you are not at risk. Report any concerns or incidents immediately to your instructor.

## **Attendance:**

Class attendance is mandatory. Participation in class activities is mandatory. Points lost through excused absence can be discussed with the instructor and suitable alternate arrangements made at the instructor's discretion.

Exit-slip Journal and Assignment marks (30%) -- A component for marking is handed-in each class, and each component has a count of 5 marks. Points will be summed up at the end of term and divided in half to produce the 30% grade.

## Grade Summary:

### Grading Schedule

Exit and/or class assignments	30%	
Mid-term examination	20%	multiple-choice with possible practical component (e.g., classify rock)
Dig Deeper assignment	25%	
Final written examination	25%	multiple-choice with practical component, (mostly non-cumulative)
Total: 100%		

The available letters for course grades are as follows:

<u>Letter grade</u>	<u>Cut-off value</u>	<u>Numeric equivalent</u>	<u>GPA</u>	<u>Description</u>
A+	96	100		
A	91	95	4.0	Excellent
A-	86	90	3.7	
B+	82	85	3.3	
B	77	81	3.0	Good
B-	72	76	2.7	
C+	68	71	2.3	
C	63	67	2.0	Satisfactory
C-	60	62	1.7	
D+	56	59	1.3	
D	50	55	1.0	Minimal Pass
F		49	0.0	Failure

Late assignments may be accepted at instructor's discretion --if contact and arrangements are made, however the mark achieved may be reduced by 5%/day (up to 10%/day if no contact is attempted prior to the due-date-class or if that class is not attended).

Because of the nature of the Alpha 4.00 system, there can be no uniform University-wide conversion scale. The relationship between raw scores (e.g. percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously.

Please note that final grades will be available on the student registration system. Printed grade sheets are not mailed/emailed out.

### Resources:

Some general class resources may be available online through the University Moodle site. Resources to be printed and brought to class will be posted and announced at least a week before. For help on how to access these files please see the computer helpdesk.

## Ambrose University Academic Policies:

### Communication

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, they will need to forward all messages from the Ambrose account to another personal account.

### Registration

During the **Registration Revision Period** students may enter a course without permission, change the designation of any class from credit to audit and /or voluntary withdraw from a course without financial or academic penalty or record. Courses should be added or dropped on the student portal by the deadline date; please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.

Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a "Request to Withdraw from a Course" form or by sending an email to the Registrar's Office by the **Withdrawal Deadline**; please consult the List of Important Dates on the my.ambrose.edu website. Students will not receive a tuition refund for courses from which they withdraw after the Registration Revision period. A grade of "W" will appear on their transcript.

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

### Exam Scheduling

Students, who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

### Electronic Etiquette

Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to use electronics for purposes unrelated to the course during a class session. Turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Do not use iPods, MP3 players, or headphones. Do not text, read, or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. Some professors will not allow the use of any electronic devices in class. The professor has the right to disallow the student

to use a laptop in future lectures and/or to ask a student to withdraw from the session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

### Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at [privacy@ambrose.edu](mailto:privacy@ambrose.edu).

### Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a course Extension from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the deadline date; please consult the List of Important Dates. Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

### Appeal of Grade

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Registrar's Office in writing and providing the basis for appeal within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of \$50.00 must accompany the appeal. If the appeal is sustained, the fee will be refunded.

### Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university college. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

**Note:** Students are strongly advised to retain this syllabus for their records.