



A M B R O S E

GEO 109 Introduction to Geology (3) Winter 2014

Course Description

This course looks at the composition and structure of the earth – surface and internal processes, rocks and minerals.

Further Course Information

Introduction to Geology connects your understanding about the Earth to the body of knowledge and scientific study on the fields of Geology. Topics include: the formation of the Earth, its internal and external structure and major features; minerals and rock composition; processes controlling the formation, breakdown, reformation, and redistribution of rock material; the significance of earthquakes, water, glaciation, fossils, and geologic time; and, an awareness of the research, impacts, and issues of geologic forces and resources on Canada and around the world.

Class Schedule

Time/Location: Mondays, 5:30 – 8:30 p.m. in room A2133

Instructor Information

Instructor:	Dr. Stephen L. Jeans
Office hours:	by appointment (typically before or after class)
Email address:	sjeans@ambrose.edu (checked once a day on average)
Office:	L2098
Private Phone:	403-284-3630

Textbook

Students are required to obtain a reputable source of information to familiarize themselves with the concepts and topics encountered in each class. In some cases, text sources will be supplied, and in other cases, students will be given links to freely downloadable sources from vetted government and educational sites on the Internet. Where possible, it is highly recommended that a current text for introducing geology to the undergraduate be purchased. Discussion of text sources for this reading material will be conducted during the first class and an analysis of the vetted resources provided for dialogue.

Fieldtrip

A mandatory component of this course is a one-day Field Study trip to the Badlands of Alberta. 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, the Field Study will likely take place regardless of weather.

Course Outline (subject to change at instructor's discretion)

January	13	The Introduction to Geology Introduction
	20	Interior of the Earth and Plate Tectonics
	27	Geologic Methods and Minerals
February	03	Igneous and Sedimentary Rock
	10	Metamorphic Rock and Fossils
	--	17th Family Day / to 21st Mid-Semester Break -- NO CLASS
	24	Mid Term Exam and Surficial Materials Introduction
March	03	Water Cycle, Oceans, and Deserts
	10	Climate Change and Glaciation
	17	Sedimentation and Stream Processes
	24	Structural Geology, Volcanoes and Stratigraphy; Rock Classification Due
	31	Faulting, Folding, and Geologic Dating
April	(05)	Field Study trip to Drumheller, Alberta -- SATURDAY event
	07	Geologic Resources, Distribution, and Issues
	14	Final Exam Geology 109 Room A2133 5:30-8:30 p.m.

Class Resources

Some general class resources for the course may be available online through the Ambrose 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.

Moodle site: <http://moodle.ambrose.edu/login/index.php>

Moodle enrollment key: **GEO109**

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 mineral, animal, and vegetable matter. It is therefore necessary to inform the instructor of any concerns or life-threatening conditions such as allergies.

Each student is required to own, and wear, their own protective eye wear. Safety glasses are available in the bookstore. Additionally, there will be classes that require extensive hands-on work with 'messy' substances such as rock material, sand, clay, and water. Such messy classes will be announced at least a week before so that students can choose appropriate attire.

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.

Assignments

Assignment 1: Field Journal (ungraded fieldtrip and Exam support)

Given the practical nature and hands-on investigations that are part of Geology 109, it is highly recommended that students build their own version of a geologist's field journal to use on our planned fieldtrip. Some journal resources will be supplied in class, and others will be collected by the student for themselves and for sharing in class with their instructor and peers.

The finished, annotated, geologist's field journal is not marked. However, the journal may be used by students on practical portions of the Exams. As a result the journal is considered a public document that the instructor may review at any time during the term or examinations.

Assignment 2: Rock Classification (30% of course grade)

Each student will be provided with an unclassified rock specimen by the instructor. According to the instructions provided by the instructor, and along with decisions reached by the class as a whole, a paper will be written that classifies the rock. Geologic procedures will be standardized in class for describing rocks in technical terms, along with an accompanying paper written in common terms to further describe each rock sample and the conditions of formation.

Although it is important to strive for accuracy in correctly naming the rock sample, this assignment is marked more on the conduct of geologic procedures, on citing and properly referencing sources of information, and on a concise, cleanly formatted and written document.

Assessments

Two exams will be given to the class, a mid-term exam (30% of the course grade) and a final exam (40% of course grade).

The mid-term exam may consist of +/- 60 multiple choice questions, some fill-in-the-blank or diagram questions, and/or a practical component classifying rocks or other discipline task.

The final will consist of +/- 70 multiple choice questions, some fill-in-the-blank or diagram questions, and/or a practical component. The final exam will address mostly new material (~90%) since the mid-term examination.

Grading Schedule

Mid-term written examination	30%
Rock classification assignment	30%
Final written examination	40%

Final Grade Equivalent

<u>Letter Grade</u>	<u>Mark</u>	<u>Description</u>
A+	96-100	
A	91-95	Excellent
A-	86-90	
B+	82-85	
B	75-81	Good
B-	72-74	
C+	68-71	
C	63-67	Satisfactory
C-	60-62	
D+	56-59	
D	50-55	Minimal Pass
F	0-49	Failure

Important Notes/Dates:

The last day to enter a course without permission and/or voluntary withdrawal from a course without financial penalty is Friday, January 19.

The last day to voluntarily withdraw from a course or change to audit without academic penalty is Friday, March 21.

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Student Handbook and Academic Calendar. Personal information, that is information about an individual that may be used to identify that individual, may be collected as a requirement 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.

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 appropriate deadline (as listed in the Academic Calendar <http://www.ambrose.edu/publications/academiccalendar>). Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. 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 and the Student Handbook 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.

Students are advised to retain this syllabus for their records.

Course changes, including adding or dropping a course, may be made during the Registration Revision period, as outlined in the Calendar of Events. All course changes must be recorded on a Registration form, available from the Office of the Registrar. Due to

circumstances such as class size, prerequisites or academic policy, the submission of a Registration form does not guarantee that a course will be added or removed from a student's registration. Students may change the designation of any class from credit to audit up to the date specified in the Calendar of Events, although students are not entitled to a tuition adjustment or refund after the Registration Revision period.

Withdrawal from courses after the Registration Revision period will not be eligible for tuition refund. Students intending to withdraw from some or all of their courses must submit a completed Registration form to the Registrar's office. The dates by which students may voluntarily withdraw from a course without penalty are listed in the Calendar of Events. A grade of 'W' will be recorded on the student's transcript for any withdrawals from courses made after the end of the Registration Revision period and before the Withdrawal Deadline (also listed in the Calendar of Events). 'W' grades are not included in grade point average calculations. A limit on the number of courses from which Academic a student is permitted to withdraw may be imposed. 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.

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 Office of the Registrar in writing 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 to review final grades. If the appeal is sustained, the fee will be refunded.

Academic dishonesty is taken seriously at Ambrose University College 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 give credit 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 Ambrose. Students are expected to be familiar with the policy statements in the current academic calendar and the student handbook 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.