

# INTRODUCTION TO GEOLOGY [12:005] Fall 2012

## Syllabus

**Lectures:** 9:30 -10:20AM, MWF, in Room 134 Trowbridge Hall (TH)

**Labs:** Room 136 TH; A01 - Tuesday 10:30 -12:20; A04-Wednesday 2:30 - 4:20; A03 – Thursday 3:30 - 5:20

**Lecturer:** Prof. C. T. Foster, Room 239 TH; office hours T,W,Th, 10:45 - 11:45 or by appointment; phone 335-1801; [tom-foster@uiowa.edu](mailto:tom-foster@uiowa.edu)

**Lab instructors:** Tawny Tibbits, Room B24B TH; office hours M 1-2, Th & F 11-12 [tawny-bailey@uiowa.edu](mailto:tawny-bailey@uiowa.edu)  
Andy Grass Room 23A TH; office hours W&F 10:30-12:00 [andy-grass@uiowa.edu](mailto:andy-grass@uiowa.edu)

**Course goals:** This course introduces students to the Earth and the natural systems that work below, on, and above the Earth's Surface. We will use modern concepts of biology, chemistry, geology and physics to understand the processes and principles involved in these systems and how they affect our lives.

**Required Materials** All required materials are available at Iowa Book and Supply

**Texts:** Marshak (2009) Essentials of Geology, 3rd Edition, ISBN 978-0-393-93238-6;

**Clicker:** Student response Systems or "clickers" are required for this course. Bring it to all classes beginning with the first meeting. Each student must have their own and register it on line. See <http://its.uiowa.edu/support/srs/registering.shtml> for further information on how to do this.

DATE	LECTURE TOPIC	READING	LAB TOPIC
Aug 20 M Aug 22 W Aug 24 F	Mineral Physical Properties Planetary geology Continental Drift	Prelude Chapter 1 Chapter 2	<b>Lab #1</b> Minerals I
Aug 27 M Aug 29 W Aug 31 F	Plate Tectonics Atoms, elements, and compounds Minerals and their properties      Quiz 1	Chapter 2 Chapter 3 Chapter 3	<b>Lab #2:</b> Minerals II
Sept 3 M Sept 5 W Sept 7 F	Labor Day, No Class Types of Rocks Magma      Quiz 2	Interlude A Chapter 4	<b>Lab #3:</b> Plutonic Rocks
Sept 10 M Sept 12 W Sept 14 F	Plutons & Batholiths Volcanoes Volcanic Eruptions      Quiz 3	Chapter 4 Chapter 5 Chapter 5	<b>Lab #4</b> Volcanic Rocks
Sept 17 M Sept 19 W Sept 21 F	Soil & Sediment Sedimentary Rocks Sedimentary Environments      Quiz 4	Interlude B Chapter 6 Chapter 6	<b>Lab #5</b> Soils
Sept 24 M Sept 26 W Sept 28 F	Rivers Rivers Oceans      Quiz 5	Chapter 14 Chapter 14 Chapter 15	<b>Lab # 6</b> Sedimentary Rocks
Oct 2 M Oct 3 W Oct 5 F	Oceans Deserts Glaciers      Quiz 6	Chapter 15 Chapter 17 Chapter 18	<b>Lab # 7</b> Sedimentary Depositional Environments
<b>Oct 6 Sat</b>	<b>Optional Extra Credit Fieldtrip #1</b>	<b>Wildcat Den</b>	
Oct 8 M Oct 10 W Oct 12 F	Metamorphic Rocks Metamorphic Environments The Rock Cycle      Quiz 7	Chapter 7 Chapter 7 Interlude C	<b>Lab # 8</b> Metamorphic Rocks
Oct 15 M Oct 17 W Oct 19 F	<b>MIDTERM EXAM</b> Earthquakes Seismology      Quiz 8	Chapter 8 Chapter 8	<b>Lab EXAM: (Rocks &amp; Minerals);:</b> <b>Lab #9:</b> Earthquakes & Isostasy
<b>Oct 20 Sat</b>	<b>Optional Extra Credit Fieldtrip #2</b>	<b>Maquoketa Caves</b>	
Oct 22 M Oct 24 W Oct 26 F	The Earth's Interior Faults & Folds Mountain Building      Quiz 9	Interlude D Chapter 9 Chapter 9	<b>Lab #10:</b> Topographic maps
Oct 29 M Oct 31 W Nov 2 F	Fossils Stratigraphy and Geologic time Radiometric Dating      Quiz 10	Interlude E Chapter 10 Chapter 10	<b>Lab # 11</b> Geologic structures

Nov 5 M	The pre-Cambrian Eons	Chapter 11	<b>Lab # 12</b> Fossils
Nov 7 W	The Paleozoic Era	Chapter 11	
Nov 9 F	The Mesozoic Era	Chapter 12	
		Quiz 11	
Nov 12 M	The Cenozoic Era	Chapter 12	<b>Lab #13</b> Dating Geologic Events
Nov 14 W	Groundwater	Interlude F	
Nov 16 F	Water Resources	Chapter 13	
		Quiz 13	
<b>Nov 17-25</b>	<b>Thanksgiving BREAK</b>		
Nov 26 M	Landscapes & Landslides		<b>Lab # 14</b> Groundwater <b>Powerpoint Presentations Due</b>
Nov 28 W	Oil & Gas		
Nov 30 F	Coal & Other Energy Sources	Chapter 16	
		Quiz 14	
Dec 3 M	Ore Deposits & Mineral Resources		<b>Lab #15</b> Discussion of student powerpoint presentations
Dec 5 W	Global Earth Systems		
Dec 7 F	"" "" ""		

REVIEW SESSION [optional]: Sunday, Dec 9 at 4:00-5:00 PM, in Room 134 TH

**FINAL EXAM Date: TBA, in Room 134 TH**

**Modifications:** Please see Dr. Foster during his office hours the first week of class if you have any disability that may require some modification of seating, testing, or other class requirements, so that appropriate arrangements can be made. Also, please talk with Dr. Foster if you have questions about the lectures or problems with the course.

**Grading:** 1000 points total. **Lecture (60%):** Quizzes/Assignments/Participation = 300 points (30%), Midterm Exam =100 points (10%), Final Exam =200 points (20%). **Lab (40%):** Assignments=280 points (28 %), Rock & Mineral Exam: 50 points (5%), Powerpoint Project=70 points (7%). Quizzes may be announced or unannounced and can be given at any lecture or lab meeting. Mid-term exam dates and times are given below. Final exam time/date TBA. Exams and quizzes are comprehensive and may include any class and reading topics to date, including the reading assignment for the week. Approximate grading scale: A=900 to 1000 points, B=800 to 900 points, C=700 to 800 points, D=600 to 700 points, F=below 600 points (*note: +/- grades will be used in the upper and lower portions of each grade range*).

**Attendance and class participation:** *Students are expected to attend all lectures and labs and participate in class exercises.* Each unexcused absence will result in loss of quiz/assignment /participation points from your point total. If you miss a lab or lecture, you are expected to get the pertinent information from another student who attended the class. Make-up assignments/quizzes/exams and late homework exercises will be allowed only because of illness, mandatory religious obligations, certain University activities, or unavoidable circumstances. You should discuss absences with Professor Foster (missed lecture) or your TA (missed lab) prior to missing class or an assignment due date unless it is due to a sudden, unanticipated event. In the latter situation, please notify Professor Foster (missed lecture) or your TA (missed lab) of the circumstances by email as soon as possible.

**Cell phone use and other social activities (texting, facebook, email etc)** are not permitted during class time. Students violating this rule will be required to leave class and accumulate an unexcused absence for each offense.

**Collaboration:** In this course you are expected to verbally exchange opinions and information with other students because this type of interaction helps you learn more quickly. However, you must write up your final lab reports and assignments based upon your own conclusions, without assistance from others. Copying material from another person's lab report, exam, or assignment is not permitted and will be considered cheating. Allowing someone else to do the work for you or handing in a paper written for another class is also considered cheating.

**Amount of work expected:** The College guideline is that one semester hour of credit is equivalent to three hours of work (class time + out-of-class preparation) each week over the course of the semester. This standard is the basis for the Registrar's Office assignment of credit hours for courses. This means that you should be spending about 12 hours/week on a 4 s.h. course like this one. Since there are 4.3 hours of scheduled class time per week in this course (150 minutes of lecture and 110 minutes of lab) you should be averaging between seven and eight hours per week of work for the course outside of class.

**Course Web Page:** <http://icon.uiowa.edu> Log in with your HAWK ID and password. Course information (lecture materials, syllabus, lecture and lab schedules, office hours and email addresses, grades etc.) can be found on the course ICON web site at <http://icon.uiowa.edu> Check it regularly as course announcements will be posted here as

well. We will use your official University of Iowa email, and no other address, as your contact email. If you use another email, it is your responsibility to check your U Iowa email regularly.

**Extra Credit Field Trips:** There will be two optional fieldtrips to examine geology in eastern Iowa. Participants will receive extra credit. Further details will be provided during the second week of classes

This syllabus and/or course policies may be modified as the semester progresses, if unforeseen circumstances develop. Any changes will be presented in class and on ICON announcements.

## **Department of Geoscience Syllabus Information:**

**Department Office:** 121 Trowbridge Hall  
**Department Chair (DEO):** Prof. M.K. Reagan  
DEO Telephone: 319-335-1820

Telephone: 319-335-1818  
DEO Office: 121C TH  
DEO Email: [geology-deo@uiowa.edu](mailto:geology-deo@uiowa.edu)

### **Administrative Home**

The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, and other related issues. Different colleges may have different policies. Questions may be addressed to 120 Schaeffer Hall, or see the CLAS Academic Policies Handbook at <http://clas.uiowa.edu/students/handbook>.

### **Electronic Communication**

University policy specifies that students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for correspondences. (*Operations Manual*, III.15.2. k.11.)

### **Accommodations for Disabilities**

A student seeking academic accommodations should first register with Student Disability Services and then meet privately with the course instructor to make particular arrangements. See [www.uiowa.edu/~sds/](http://www.uiowa.edu/~sds/) for more information.

### **Academic Honesty**

All CLAS students have, in essence, agreed to the College's Code of Academic Honesty: "I pledge to do my own academic work and to excel to the best of my abilities, upholding the IOWA Challenge. I promise not to lie about my academic work, to cheat, or to steal the words or ideas of others; nor will I help fellow students to violate the Code of Academic Honesty." Any student committing academic misconduct is reported to the College and placed on disciplinary probation or may be suspended or expelled ([CLAS Academic Policies Handbook](#)).

### **CLAS Final Examination Policies**

The final examination schedule for each class is announced around the fifth week of the semester by the Registrar. Final exams are offered only during the official final examination period. No exams of any kind are allowed during the last week of classes. All students should plan on being at the UI through the final examination period. Once the Registrar has announced the dates and times of each final exam, the complete schedule will be published on the Registrar's web site.

### **Making a Suggestion or a Complaint**

Students with a suggestion or complaint should first visit the instructor, then the course supervisor, and then the departmental DEO. Complaints must be made within six months of the incident ([CLAS Student Academic Handbook](#).)

### **Understanding Sexual Harassment**

Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI [Comprehensive Guide on Sexual Harassment](#) for assistance, definitions, and the full University policy.

### **Reacting Safely to Severe Weather**

In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. For more information on Hawk Alert and the siren warning system, visit the Public Safety [web site](#).

### **Rights and responsibilities in the classroom**

The College's statement on student rights and responsibilities can be found at: <http://www.clas.uiowa.edu/students/handbook/x/>.