

**Course: GE 101 – Earth Systems Science
Fall 2005 (4 Credits)**

Instructors:

Richard H. Lindemann – Dana 176, ext. 5196. Off. Hrs. M, W, & F 8:00 – 9:00 am
Email: rlindema@skidmore.edu

Audeliz Matias – Dana 178, ext. 5192. Off. Hrs. Tue & Thu 1:30 – 3:00 pm;
or by appointment. Email: amatias@skidmore.edu

Kim Marsella – Dana 174, ext. 5195, Off. Hrs. M 1:30 – 3:00 pm & W 1:30 – 2:30 pm
or by appointment. Email: kmarsell@skidmore.edu

Course Purpose: This course is designed to introduce the student to the basic concepts of geology through a series of lectures and laboratory exercises. Both lecture and laboratory focus on the processes involved in the origin, modification, and destruction of rocks examined from the perspective of the interactions between Earth processes and humans. The ultimate goal is to increase awareness of the Earth as a dynamic and holistic system.

Class: Palamountain Hall, Davis Auditorium. M, W, & F 10:10 – 11:05am

Laboratory: Dana 171.

Sec 001	M 11:20 am - 1:20 pm	K. Marsella
Sec 002	Tu 9:40 – 11:40 am	A. Matias
Sec 003	W 11:20 am – 1:20 pm	K. Marsella
Sec 004	Th 9:40 – 11:40 am	K. Marsella
Sec 005	W 2:30 – 4:30 pm	K. Marsella

Required Textbook: *Essentials of Geology*, by Stephen Marshak, 1st Ed., 2003, ISBN # 0-393-92411-4 (W.W. Norton & Co.). Other reading material will be posted on E-Reserve: <http://www2.skidmore.edu/library/reserves/index.cfm>

Evaluation Procedures: Assessment for this introductory course will be based on 2 hour exams (30%), a final exam (20%), labs (25%), writing assignments (15%), homework (5%) and participation (5%).

FINAL EXAM: Tuesday, December 20, 2005 6:00 – 9:00pm, Davis Auditorium

Course Policies: To facilitate the overall success of the course, we will expect you to: 1) attend both lecture and lab sessions fully prepared to engage the material corresponding to the date on the syllabus; 2) participate in discussion of course material with other students and the instructors; 3) turn in all assigned work on time and in a professional form; and, 4) please, turn off cellular phones when in class. **A Reminder: Academic Integrity is a Foundation for Learning.**

Labs: You must attend all labs to pass this course. Please arrive at lab on time. There are no make-up labs and you will not be allowed to attend any other lab section unless given *prior* permission by your instructor. If we are going on a field trip, we will not wait for you. Also, always assume that we are going outside if we have scheduled a field trip and DRESS APPROPRIATELY!

Make-up Policies for Missed Work: Homework projects, writing assignments, and lab activities may be made-up only if: (1) *prior* arrangements have been made with the instructor; and (2) they are completed before the graded exercises are returned to the class.

Late Assignment Policy: Homework and writing assignments will be penalized 5 points for each day they are late (excluding weekends), and will not be accepted after the graded assignments have been returned to the class.

Disability Accommodations: Any student with special needs requiring accommodations should give us his/her memo of accommodations in a timely manner. It is the student's responsibility to follow up with us regarding all accommodations that require our participation. The student is advised to ensure full use of testing accommodations by coming to talk to us at least one week before any test on the syllabus. The Coordinator for Students with Disabilities is located in the Office of Student Academic Services. You can make an appointment with her by calling extension 5180.

Writing Assignments: Because scientific disciplines change rapidly, new ideas may take years to make their way into textbooks. During the semester you will be asked to read two articles from the recent literature, then working from the premise that one of the best ways to understand something is to explain it to someone else, you will write an outline and an abstract (concise summary) of each article. Developing the ability to sort out the key concepts of an article and state them clearly and succinctly is a skill that will serve you well in any discipline. You will receive specific instructions and article assignments in lab; articles will be available through e-reserve.

The following syllabus is subject to change if and when necessary.

GE 101 COURSE OUTLINE (FALL 2005)

Week	Date	Topic	Chapter	Laboratory
1	W 9/7	Introduction	P	<i>No Labs</i>
	F 9/9	Scientific Method & Origin of the Earth	Box P.1, 1	
2	M 9/12	Earth's Interior: A Layered Cake	1	Field Trip: Kayaderosseras Creek – Streams Characteristics
	W 9/14	Continental Drift	2	
	F 9/16	Sea Floor Spreading & Plate Tectonics	2	
3	M 9/19	Cont. Plate Tectonics	2	Plate Tectonics - GIS
	W 9/21	Cont. Plate Tectonics	2	
	F 9/23	Cycles	Inter. B	
4	M 9/26	Minerals: Properties, Structures & Basic Chemistry	3	Minerals
	W 9/28	Minerals: Groups	3	
	F 9/30	Bowen's Reaction Series: Earth's Differentiation	Box 4.1	
5	M 10/3	EXAM # 1		Field Trip: Stark's Knob
	W 10/5	Up From The Inferno: Igneous Rocks	4	
	F 10/7	Cont. Igneous Rocks	4	
6	M 10/10	Sedimentary Rocks	5	Field Trip: Rock Collecting <i>(Collect unknown samples for identification)</i> NOTE: No Lab Thu 10/13
	W 10/12	Cont. Sedimentary Rocks	5	
	F 10/14	Weathering & Rock Alteration WRITING ASSIGNMENT #1 DUE	5	
7	M 10/17	What's Cooking: Metamorphic Rocks	6	Rock & Mineral Identification
	W 10/19	Cont. Metamorphic Rocks	6	
	F 10/21	NO CLASS – STUDY DAY		
8	M 10/24	Mountain Building	9	Geologic Structures
	W 10/26	Crustal Deformation & Structures	9	
	F 10/28	Seismology & Earthquakes	8	
9	M 10/31	Feeling Hot, Hot, Hot: Volcanoes	7	Geologic Hazards
	W 11/2	Beware: Hazards		
	F 11/4	EXAM # 2		
10	M 11/7	Draining The Land: Streams	14	Field Trip: Geology of Saratoga "Springs"
	W 11/9	Cont. Streams	14	
	F 11/11	Groundwater	16	
11	M 11/14	Cont. Groundwater	16	Groundwater Models
	W 11/16	Glaciers	18	
	F 11/18	Once Upon A Time: Geologic Time	10	
12	M 11/21	Cont. Geologic Time	10	<i>No Labs</i>
	W 11/23	NO CLASS		
	F 11/15	THANKSGIVING RECESS		
13	M 11/28	The Ice Age & Atmosphere WRITING ASSIGNMENT #2 DUE	18	Relative Dating
	W 11/30	Global Change	19	
	F 12/2	Cont. Global Change	19	
14	M 12/5	Cont. Global Change	19	Topographic Maps & Cross Sections
	W 12/7	The Rest Of The Story: Case Studies		
	F 12/9	More Case Studies		
15	M 12/12	REVIEW		