

Syllabus

Analysis of Utah Landforms

GEOG 5810/6810-ENVST 5810

Spring 2011

Genevieve Atwood, Ph.D.: OSH 172; genevieve.atwood@geog.utah.edu; office hours Thursdays 2-4 and by appointment; 801-534-1896.

Tim Edgar, M.S.: OSH 109; tim.edgar@geog.utah.edu, office hours Monday & Wednesday 3:00 PM to 4:30 PM and by appointment; 801-581-4963

Prerequisite: Exposure to foundation concepts of Earth systems science and geography. This can be demonstrated by a combination of geography, environmental science, and geology courses such as: geography of Utah (GEOG 3600); or, geography major with at least two courses in physical geography; or, environmental science major with introductory geology and physical geology courses; or, geology/geophysics major; or, geography or geology / geophysics graduate students; or permission of instructor.

Credit Hours: 4. Participants MUST go on field excursion.

Class Time and Location:

Thursdays, 4:35 PM – 5:50 PM, OSH 131

Class dates:

Last day to drop (delete) classes	Wednesday, January 19
Last day to register, elect CR/NC, or audit classes	Monday, January 24
Last day to withdraw from classes	Friday, March 4

Required texts:

Hamblin, W. K. (2004). *Beyond the Visible Landscape: Aerial Panoramas of Utah's Geology*. Provo, UT: BYU Geology.

Hintze, L.F. (1997). *Geological Highway Map of Utah*. Provo, UT: BYU Geology.

Optional text:

Wyckoff, Jerome (1999). *Reading the Earth: landforms in the making*. Mahwah, N.J.: Adastra West, Inc.

Hintze, L.F. (2005). *Utah's Spectacular Geology: How it Came to Be*. Provo, UT: BYU Geology.

Course fee covers 4 credit hours, vehicle cost. **Participants should expect to pay an additional \$100 to cover food costs, campsites and state/national park user fees.**

Course Overview and Objectives

Course catalogue listing:

5810 Field Seminar (4) Cross listed as ENVST 5810.

Meets with GEOG 6810. Graduate students should enroll in GEOG 6810 and will be held to higher standards and/or more work. Repeatable for credit. One or more field trips. Student responsible for selected aspects of cultural and/or environmental patterns and processes.5810 -

Course objectives:

GEOG 5810/6810, Analysis of Utah Landforms, is a physical geography field course designed to teach skills and concepts of geomorphology and apply those skills to reading Utah's landscapes. Analysis of landscapes includes identifying landforms, describing them, observing clues of their origins, and interpreting their tectonic setting and the erosional and depositional processes that have sculpted them. Sessions before the field excursion review of foundations of Earth science (materials, the rock cycle, tectonics, and the hydrologic cycle), present concepts of geomorphology, and teach landform nomenclature. In the field, students will observe, describe, and analyze landforms of Utah's Colorado Plateau, Basin and Range, and Rocky Mountain physiographic provinces. Graduate students for GEOG6810 will investigate research methods and field investigations appropriate to their research interests. They will demonstrate a field technique as part of the field excursion and write a brief report. The 8 day field excursion is over Spring Break (March 20-27, Saturday to Saturday).

Expected Time Commitment

In accordance with university, school, and department policies, this is a 4-credit course; participants should expect about 3 hours per week of homework for the weeks preceding the field excursion. In past years, some class sessions preceding the field excursion have lasted two hours with concurrence of participants. Attendance for the entire field excursion is required. If you are unable to attend classroom sessions and the entire Spring Break field excursion, you are urged to take this course another year.

Course Requirements and Grading Policy

Requirements	Percent
Glossary Handout	5
Glossary Presentation	5
Session Participation	4
In-class worksheets (twenties)	4
Field worksheets (twenties)	20
Group field report	5
Group field presentation	10
Individual field report	5
Individual field presentation	10
Field trip participation	10
Post-field trip exam	20
Driver Training Course	2
Additional for grad students: research methods report and demonstration	25
Total	100

Glossary Terms Presentation and Handouts

Students are expected to understand all terms of the textbook glossary. Each student will be responsible for giving an in class presentation explaining a few terms in the glossary of the textbook. In addition to the in class presentation, students will prepare a handout that explains each of the terms, and identify examples in the field to the class. Terms include vocabulary of Earth materials, geomorphic processes, and landforms. Glossary term handouts, one per term, form the core of the course field guide. Handouts are to be typed, no hand written work will be accepted. Class participation during presentations is expected. Students who are not prepared to present on their assigned date will be penalized

Worksheets (Twenties)

“Twenties” is jargon for the worksheets filled out to encourage observation and analysis of landscapes and landforms. There will be four graded twenties before the field excursion, and at least 20 twenties during the field excursion.

Field Presentations and Written Reports

Each student will prepare two (2) written reports, a group and individual report, and present their reports during the field trip. Groups will select, from the text book, a landscape for analysis in the field. The group-written report analyzes a landscape and is due before the field excursion. Each group will describe their chosen landscapes relationships with surrounding vegetative, cultural, and climatic patterns of the region. Individual reports/presentations: each member of the class will be responsible for teaching the field trip participants about a landform, including process of formation, evolution to its current state and predictions of its future. Group landscape reports, and individual landform reports, are handed out to all participants as sections of the field excursion guidebook. Individual landform reports include a copy of a technical article about a process or processes responsible for the formation of the landform. Late reports will be penalized.

Field Participation

This course is intended to be interactive and in order for us to interact, you must be present, prepared, and participate. This is a field course and participants will sign University waivers and use common sense vis a vis safety. Illegal and unsafe activities will not be tolerated and instructors will dismiss any participant for inappropriate behavior, specifically any actions that in the instructors' opinion endanger safety.

Driver Training Course

Participants are required to complete the University of Utah approved Driver Training Video & Test, and the University off-highway driving instruction. Both videos and the test are completed in class on 18 March. While some test questions reinforce the video, most of the questions come from the "Utah Driver Handbook" and the "Utah Defensive Driving Guide/Driver Safety Guide" which can be viewed online. <http://publicsafety.utah.gov/dld/handbooks.html>

Post-Field Exam

The post-field exam tests understanding of Utah's landforms and landform processes.

For GEOG6810 – Graduate credit

Graduate students will demonstrate advanced understanding of research methods, specifically one or more field techniques appropriate to their research. Reading and a brief report are required, and a field demonstration of a technique during the field excursion.

Additional Resources

The field excursion includes long stretches of driving. Students will be provided with audio resources (e.g. CDs) that narrate portions of the trip between major field stops. Additionally, each vehicle will have a radio to facilitate class discussion when driving between field sites.

Course Schedule and Topics

Bring Hamblin textbook to all pre-excursion sessions.

Date		Topic	Action Item
Jan.	13	Course overview; Methods for analyzing Utah landforms	Step #1 Observe the scene
	20	Materials and Utah landforms; Bedrock vs. sediment; the rock cycle	Step #2 Identify materials of landscape
	27	Discrete landforms; erosional remnants versus depositional features	Step #3 Identify discrete landforms
Feb	3	Geomorphic processes; tectonics sets the scene; Utah's 3 physiographic provinces	Step #4 Interpret landform process, Compare regions <i>Form groups</i>
	10	Glossary term presentations	Practice 20 <i>Groups choose major field stops</i>
	17	Glossary term presentations	First 20 <i>Discuss Equipment</i>
	24	Glossary term presentations Groups meet with instructors	Second 20 <i>Contact Information</i>
March	3	Glossary term presentations Groups meet with instructors	Third 20 <i>Bring check or cash to pay for field expenses</i>
	10	Glossary term presentations Groups meet with instructors	Fourth 20 <i>Groups decide on food and schedule expeditions for it</i>
	17	Drivers Training – Mandatory!!	Excursion reports and glossary terms due <i>Logistics</i>
	19-26	Field Excursion	
	31	No Class	
April	7	Review for Exam	Bring your field notebook and Hamblin
	14	Post-Field Exam	Field worksheets (twenties) due EXAM
	21	No Class	

***Note that the above schedule is subject to change.**

OTHER:

Academic Honesty

Students are expected to comply with all university, school, and departmental policies and to pursue the highest standards of academic honesty in the course of carrying out all assignments. This includes, but is not limited to, refraining from cheating, plagiarizing, research misconduct, misrepresenting one's work, or inappropriately collaborating. Plagiarism specifically refers to the use of another's work, ideas and words as your own. All class work is expected to be original, unless there is appropriate acknowledgement of sources. All factual information reported is expected to be true (at least according to reliable sources); fabricated information is considered a form of academic dishonesty. Students that are found engaging in the above activities will receive a failing grade for the specific assignment and may fail the course.

Americans with Disabilities Act

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the instructor and to the Center for Disability Services, <http://disability.utah.edu/>, 160 Olpin Union Building, 581-5020 (V/TDD) to make arrangements for accommodations. All written information in this course can be made available in alternative format with prior notification to the Center for Disability Services.

Student Responsibility

It is the student's responsibility to communicate with instructors when problems arise and to submit necessary forms in a timely manner. Field trips require teamwork. If you have a problem, please deal with it immediately and please communicate openly with instructors.