

COURSE SYLLABUS
GEL 114
HISTORICAL GEOLOGY
(Labs)
1 SEMESTER CREDIT HOURS
Fall 2007

Professor: Dr. Chris Baldwin
(SHSU Tel: 41593)
(e-mail: baldwin@shsu.edu)



Rainbow Bridge, Utah, 1957. (From USGS Archive)

COURSE SYLLABUS

GEL 114 HISTORICAL GEOLOGY LABS

1 Semester Credit Hours

Fall 2007

Room: LDB 318

Classes meet: Lab Section (01) M12-2 (02) M2-4
(03) T12-2 (04) T2-4 (05) T4-6

Professor: Chris Baldwin

Office: LDB 300

Tel: 41593

e-mail: baldwin@shsu.edu

Office Hours: M-days 8am-8.30am; Tu/Th 11am-12; M 12-1pm; W 1pm-2pm; or by appointment

TA: (details will be given at first class meeting)

Name: _____ Tel: _____ E-mail _____
Office: LDB _____ Office Hours _____
Tutoring times _____

Course Description

The aim of the course is to introduce you to some of the more practical aspects of historical geology and stratigraphy. This includes an introduction to various types of rocks (their appearance and defining characteristics) and the fossils that are typically contained in the sedimentary portions of those rocks. But more than just some sort of “show ‘n tell” we want you gain some experience with making interpretations and using geological information. The ultimate test of this is field work where nothing is “pure” or precise and where you will have to make lots of judgment calls.

The course acts to support the lecture course GEL134 and as far as possible we will try to make these two courses mutually supportive. However, please note that it is impossible to link them with any degree of precision and some of the lab material will be essentially stand-alone.

Prerequisites: None

Methods: Lab & Field Instruction

Assessment: Lab (8x25 points each; 1x50) & Field Project (1x50 points), Final cumulative exam (100 points)
Total lab score: 400 points – A ≥360; B ≥ 320; C ≥ 280; D ≥ 240; F ≤ 239

Grading Policies: All lab exercises must be completed with care and precision and with the incorporation of all relevant data. **Each Lab Exercise is due at the end of the relevant lab period** and only in exceptional circumstances that have the agreement of your lab TA will exercises be accepted at a different time **A quiz that covers the covered lab material will be held at the start of the next class** It is your responsibility to make sure that your TA collects your completed exercises for grading.

Objectives:

- Introduction to practical aspects of Earth Science
- Data collection and classifications
- Field data collection and observation
- Processing raw data

Course text: None. All lab instruction materials and exercises will be handed out week-by-week.

Supplies: You will be involved in laboratory and field research and you will need the following basic equipment:

Ruler with inches and cm. Scantron sheets (815-E)
Colored pencils (yellow, blue, green, red, purple, etc.)

Lab Assignments:

Lab Exercise # 1

Week 4 (5 points)

Classification principles

Lab Exercise # 2

Week 5 (25 points)

Fossils

(Note: lab specimens will be available for study throughout the semester)

Lab Exercise # 3

Week 6 (25 points)

Classification of Rocks

(Note: lab specimens will be available for study throughout the semester)

Lab Exercise # 4

Week 7 (25 points)

Geological Time and Ordering of Geological Events

Lab Exercise # 5

Week 8 (25 points)

Primary Sedimentary Structures

Lab Exercise # 6

Week 9 (25 points)

Trace Fossils

Field Exercise # 7 (50 points)

Week 10

Field Work (SHSU Fish Hatchery)

Lab Exercise # 8

Week 11 (45 points)

Topographic and Geological Maps

Lab Exercise # 9

Week 12 (25 points)

Plate Tectonics

Lab Exercise # 10

Week 13 (April 4) (50 points)

San Luis Pass Environments and Paleoenvironments

Week 14 THANKSGIVING BREAK (NO LABS THIS WEEK)

Lab Reviews

Week 15

Lab Final (100 points)

Week 16

Total 400 points

Grading Scheme: 400 ÷ 100 (≥90% = A; ≥80% = B; ≥70% = C; ≥60% = D; ≤59.9 = F)

Due Dates and Timetables: I do not give makeup exams.

Lab exercises are designed to be completed during the lab period and you should not assume that a lab can be taken home and completed at your convenience. Should this be appropriate you should get the specific approval of your TA.

Attendance:

All labs are compulsory and each lab involves a graded exercise. **To encourage attendance you can earn 5 points as long as you stay for the complete lab period and complete all the required work.** It is difficult to schedule makeups for normal labs but field labs cannot be repeated for logistical reasons. The University requires each instructor to keep a record of student attendance. Attendance based on a seating chart will be recorded at the beginning of the class period. **Tardies count as an absence.** Please do not be late – it disturbs other members of the class.

An absence from a lab or field project (including for religious reasons) may be approved, dependent upon the merits of the case, and will only be approved in cases of the utmost emergency such as the death or injury of an *immediate* family member. In such cases the onus is upon the student seeking the absence to show supporting evidence as to the nature of the emergency. Unless another solution is agreed to with the class TA a class average grade for the particular quiz or exam will be awarded. Missed lab exercises can only be made up with the written approval of your TA and all missed work (if approved) must be made before the Final Exam

Academic Conduct

University statement: *All students are expected to engage in all academic pursuits in a manner that is above reproach. Students are expected to maintain complete honesty and integrity in academic experiences both in and out of the classroom. Any student found guilty of dishonesty in any phase of academic work will be subject to disciplinary action. The University and its official representatives may initiate disciplinary proceedings against a student accused of academic dishonesty including, but not limited to, cheating on examinations or other academic work which is to be submitted, plagiarism, collusion and the abuse of resource materials.*

I assume that a basic honor system applies to this course and that you must take care to respect your fellow students. Part of our coursework will take place out in the field and you will be representing Sam Houston State University in a public setting so that special care will be necessary. Also, whether in the lab or in the field, take care to safeguard your own safety and the safety of all the other members of this class.

A large amount of your lab and fieldwork in this course will be absolutely original in character. You will be collecting new data: it is yours and you are free to use it as you see fit. But this original work must be placed into some sort of context, and for this you will be using all sorts of published material – text books, scientific papers and articles, film and video, and of course, web materials – all the work of others. I explicitly assume that you have read and understood the sections on Academic Conduct in the current SHSU Student Handbook and that you particularly are aware of the issues surrounding **plagiarism**. If you are in doubt – ask first. I will pay particular attention to proper citation and referencing of web material.

A number of tasks that you will be completing and which will be part of your course assessment will be best worked in groups. This is strongly encouraged because this is the way that most of science is actually done – in strong interactive groups. However, I will not accept group submissions of work. You need to keep your own unique set of notes and you need to clearly document your individual role and contribution to any task.

Classroom Rules and Conduct

University statement: *Students are expected assist in maintaining a classroom environment that is conducive to learning. Students will refrain from behavior in the classroom that intentionally or unintentionally disrupts the learning process and, thus, impedes the mission of the university. Cellular telephones and pagers must be turned off before class begins. Students are prohibited from eating or drinking in class, using tobacco products, making offensive remarks, reading newspapers, sleeping, talking at inappropriate times, wearing inappropriate clothing, or engaging in any other form of distraction. Inappropriate behavior in the classroom shall result in a directive to leave class. Students who are especially disruptive also may be reported to the Dean of Students for disciplinary action in accordance with university policy.*

- Come to class on time—there is no reason to be late to class on a frequent basis. **Habitual tardiness is unacceptable.**
- Remain in class until it is finished. **Leaving early will count as an absence unless you have cleared it with your TA or unless it is an emergency.**
- **You cannot leave the lab during an exam** unless there is a medical emergency.
- **If you arrive after the first person has left an exam you will not be permitted to take the exam.** (Note: makeup exams are not given).
- **No cell phones in labs or exams**

VISITORS IN THE CLASSROOM:

University statement: *Unannounced visitors to the classroom must present a current, official SHSU identification card to be permitted in the classroom. They must not present a disruption to the class by their attendance. If the visitor is not a registered student, it is at the instructor's discretion whether or not the visitor will be allowed to remain in the classroom. This policy is not intended to discourage occasional visiting of classes by responsible persons.*

Americans with Disabilities Act:

University statement: *It is the policy of Sam Houston State University that no otherwise qualified disabled individual shall, solely by reason of his/her handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any academic or Student Life program or activity. Disabled students may request assistance with academically related problems stemming from individual disabilities by contacting the Director of the Counseling Center in the Lee Drain Annex or by calling (936) 294-1720. Any student seeking accommodations should go to the Counseling Center and Services for Students with Disabilities in a timely manner and complete a form that will grant permission to receive special accommodations.*

Religious Holidays:

Students who are absent from class for the observance of a religious holy day are allowed to take an examination or complete an assignment scheduled for that day within reasonable time after the absence. The period of time during which assignments and exams will be excused includes travel time associated with the observance of the religious holy day. A student who wishes to be excused for a religious holy day must present the instructor of each scheduled class that he/she will be absent from class for religious reasons with a written statement concerning the holy day(s) and the travel involved. The instructor should provide the student with a written description of the deadline for the completion of missed exams or assignments. In such cases, the student will be required to take the test or submit the assignment early—unless there are good reasons for not being able to do so and the instructor has agreed to those reasons.

Lab and Field Safety

Labs and field sites are inherently dangerous places – and places in which you are encouraged to be active and inquisitive. Consequently you need to take particular care of your self and others around you. In lab you will very infrequently handle drops of dilute acid. Do so with special care and avoid splashes on your skin. In the field special instructions apply and these will be emphasized at the time you start the individual field lab. At the Fish Hatchery you will walk down a steep muddy slope and climb around on and in the shallow creek. Wear appropriate footwear – sneakers and boots are appropriate; flip-flops are not (unless you want to wear them for wading in the stream). Insect repellent may be very useful.

If you need special accommodations of any sort let your TA know in plenty of time.

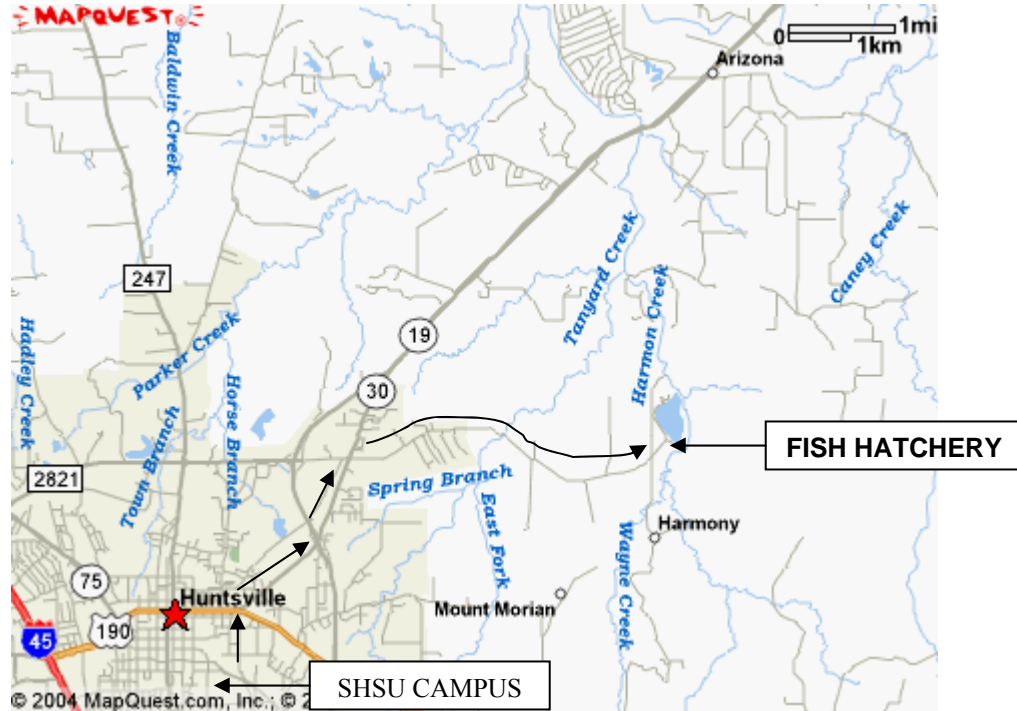
Lab Feedback

On a daily basis Labs are run and supervised by undergraduate TA's who are individuals who have previously excelled in these same labs and who show an interest and skill at teaching others. However, the content of the labs and the content of the exams and other forms of assessment associated with the labs are all the responsibility of the instructor (Dr. Baldwin). Final grades are also the exclusive responsibility of Dr. Baldwin.

If you have any comments or feedback concerning the way that your TA is performing his or her duties then you may do so in a private and confidential meeting with Dr. Baldwin or you may make use of the anonymous feedback form that you will find in the course pages on Blackboard.

Field Lab Locations

Fish Hatchery



Driving Directions

Exit SHSU campus by driving up the hill, passing Bowers Stadium on your left.

Turn left on to Sycamore

Continue on Sycamore, cross straight over Rt.19 where Sycamore becomes Rt. 30 and continue to 4 way stop with flashing light.

Turn Right on to Fish Hatchery Road, continue to the end (approximately 3 miles).

Park off the road on the right

Arriving Late

DO NOT CLIMB ON OR OVER THE GATE: COMBINATION IS 1282

Drive through red gate. **Close (but do not lock) the gate after you.**

Go straight for about 150 yards.

Turn off to the right

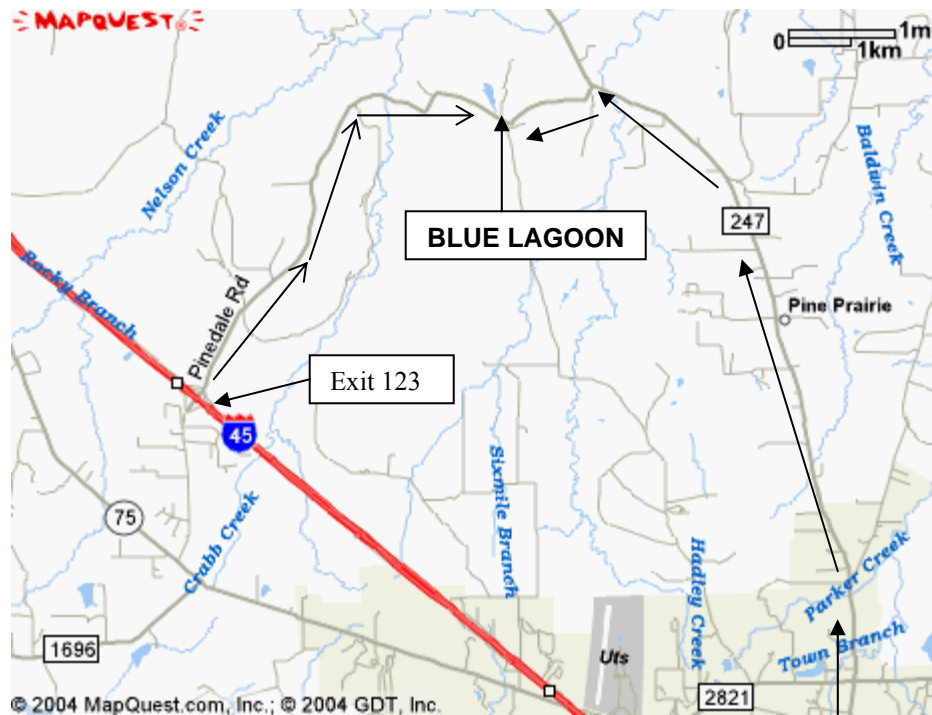
Follow grass track around to the left

Keep on grass track for about 400 yards until you see cars and trucks parked in front of you.

Park on grass road.

Look for flagged gap in trees and shrubs and climb down slope to the Creek.

Blue Lagoon



Driving Directions

1. From Campus

Drive down the hill on Sam Houston Avenue
Turn left on to Rt. 30/11th St. at court house
First Right at First National Bank building, continue north on Rt.247 until road crosses Rt. 2821
Continue straight on at traffic lights and keep in left lane. Branch left at flashing light and stay on Rt.247
Drive north on Rt. 247 for about 4 miles until you cross a small creek
Turn left on to Pinedale Road and follow it around to the right until you see the yellow metal gates on right
PARK ON THE SOUTH SIDE OF THE ROAD, AS FAR AS POSSIBLE OFF THE ROAD, and facing in the correct direction (Sheriff does take note of this!)

2. Via I45

North on I45, take exit 123
At bottom of ramp turn right on to Pinedale Road
Follow Pinedale for about 6 miles until you see yellow gates on left
PARK ON THE NORTH SIDE OF THE ROAD, AS FAR AS POSSIBLE OFF THE ROAD, and facing in the correct direction (Sheriff does take note of this!)

Arriving Late

Park off the road facing in the correct traffic flow direction
Climb through yellow gates and walk to the top of the hill, keeping to the right of the open area, turn right for about 20 yards, and then left at road that slopes down towards the north.
At bottom of slope (about 30 yards) turn left and follow cliff face until you find the Lab group