Objectives: This is a hands-on practical course in which you will learn how to produce and examine thin-sections. There are no set lecture slots; indeed, this will be a one-on-one situation where I instruct you personally. If all goes as planned, you will gain valuable experience as to the workings of slab saws, trim saws, grinders and thin-sectioning machine. This class has stringent pre-requisites. You must be a senior student majoring in geology who has already successfully completed GY 302 and preferably, GY 402. Others may be permitted to take this class, but only under exceptional circumstances.

TENTATIVE TIME TABLE
(subject to revision)

Week 1 INTRODUCTION TO THE MACHINES
Introducing the thin-sectioning lab and what you can and cannot do in it.
[Your responsibility]: Select 3 samples suitable for thin sectioning; one soft rock (e.g., sedimentary), one hard rock (e.g., igneous) and one unlithified or friable rock (e.g., biogenic or metamorphic like a schist).

Week 2 CUTTING AND GRINDING
Cutting and grinding of soft sample specimens.
[Your responsibility]: Begin thin-sectioning of soft specimen. By the end of the week, have at least 3 blocks of this specimen ready for mounting to glass.

Week 3 MOUNTING AND FINISHING
Mounting of specimens to glass, use of thin-sectioning machine and final grinding of soft specimen thin-section to 30 microns thickness.
[Your responsibility]: By the end of the week, have at least 1 finished (quality) thin-section of the soft specimen ready for covering/staining next week.

Week 4 FINAL PREPARATION, VACUUM IMPREGNATION
Cover slipping, staining and other final preparation nonsense. Use of vacuum impregnator for unlithified samples. Begin thin-sectioning of hard samples.
[Your responsibility]: By the end of the week, have at least 1 absolutely finished thin-section ready for examination. Begin other two thin sections including vacuum impregnation.

Weeks 5, 6, 7, 8, 9, 10
During this time, you should successfully produce at least one thin-section of each of your remaining selected specimens.

Weeks 11, 12, 13, 14, 15
During this time you will be introduced to the petrography laboratory where you will be responsible for examining each of your thin-sections. Topics to be covered include: the petrographic microscope, cathodoluminescence and photomicroscopy.

Week 16 (optional)
Oral presentation of your thin-section reports to faculty and fellow students.
Reasonably useful information:


**Assessment:**
- Thin-sections............................................................. 60%
- Written reports....................................................... 40%

100%

All assignments are due by the last day of classes. Because of the nature of this class and the time commitment required by the instructor, no incomplete grades (I) are permitted. Failure to submit reports and/or thin sections by the due date (last day of classes) may result in an F for the class.

**Grading:**
- A - 90+
- B - 80 to 89
- C - 70 to 79
- D - 60 to 69
- F - 59 and below

**The rules:** The equipment you will be using is 1) loud, 2) potentially dangerous and 3) expensive. Not surprisingly, there are a few rules that I would ask you to follow. 1) Use the machinery (especially the thin-sectioning machine and trim saws) only when there are no classes adjacent to room 010. 2) By signing the accompanying release form, you agree to **purchase certain safety equipment** (e.g. ear plugs) and to **wear all necessary** safety equipment, that is, lab coat, ear protection, goggles, ± dust mask. **FAILURE TO DO SO WILL RESULT IN AN IMMEDIATE F FOR THE COURSE.** 3) Use care on the machines. If something sounds funny, turn off the machine in question and post a sign saying "Out of order, do not use". Tell me about it and I will check it out as soon as possible. Please tell me if you or someone else killed a diamond blade or burned out one of the saws or did anything else that you are embarrassed about. Most things can be repaired. If you don't tell me about a breakdown, someone may use the machine and get hurt. Please keep the equipment and the lab room clean. This means putting things back after you are finished with them, rinsing rock dust from the saws and even mopping up the floor if necessary. **FAILURE TO DO SO WILL RESULT IN AN IMMEDIATE F FOR THE COURSE.**

**Disability disclaimer:** In accordance with the Americans with Disabilities Act, students with **bona fide** disabilities will be afforded reasonable accommodation. The Office of Special Student Services (OSSS) will certify a disability and advise faculty members of reasonable accommodations. If you have a specific disability that qualifies for academic accommodations, please notify the instructor/professor and provide certification from OSSS. (OSSS is located in room 270 of the Student Center; 460-7121).

**Changes in Course Requirements:** Since all classes do not progress at the same rate, instructors may wish to change the number and frequency of exams, or the number and sequence of assignments. Inclement weather (e.g., hurricanes) may also force rescheduling of lectures, assignments or exams. When ever possible, this material will be made up. Students will be given adequate written notice of any changes in lecture sequence, assignment due dates and/or exam date changes.

**Academic Disruption:** USA’s policy regarding academic disruption is published annually in The Lowdown, the student handbook. I expect students to be cordial, courteous and respectful of faculty members and fellow students. Conduct that violates these policies may result is expulsion from the class.

**Student Academic Conduct:** USA’s policy regarding cheating is published annually in The Lowdown, the student handbook.

**Academic disruption:** I expect university students to be familiar with USA’s academic disruption policy (i.e., what it is, how it is handled). If you aren’t, please visit the following site:

[http://www.southalabama.edu/lowdown/academicdisruption.shtml](http://www.southalabama.edu/lowdown/academicdisruption.shtml)

**In the event of an emergency, call me at home any time:**

454-0376.
D. Haywick Contact Information, Office Hours and Schedule

*How & where to find Doug:* I reside in LSCB room 049. I believe in open office hours, so feel free to pay me a visit anytime between 9:00 am & 5:00 pm (except on my research days!). However, I will generally be in my office during the times posted on my schedule. Should you be unsuccessful in your attempts to find me, fear not! You have two options: 1) check the Where's Doug note on my door for my location during normal office hours, or 2) leave a message for me:

**Telephone:** 460-7569 (Haywick’s office – you can leave a message).
**E-mail:** dhaywick@jaguar1.usouthal.edu
**Internet:** http://www.southalabama.edu/geology/haywick

### D. Haywick Hours (Fall 2010 Semester)

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<tr>
<th>Time</th>
<th>Monday</th>
<th>Wednesday</th>
<th>Friday</th>
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<td>Office</td>
<td>GY 112L (LSCB 335)</td>
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<td>1:25-2:15</td>
<td>Reserved for GY Majors</td>
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### Tuesday

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<td>9:30-10:45</td>
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Note: shaded areas are research\committee\personal times: STAY AWAY!

Laptops, cellphones, PDAs, Wii/PS3/Xboxes can **NOT** be used once the GY 112 lecture starts. The first time I see you playing with anything electronic, I will politely ask you to turn it off. The next time, I will be less polite. Don’t try it 3 times.
I, __________________, fully realize that the manufacturing of thin-sections involve uses power tools including rock saws, grinding laps and cutting machines and that I use these devises at my own risk. I agree not to use any devices until I have been fully instructed as to their operation. I will not knowingly allow anyone who has not been previously instructed by Dr. Haywick to use any thin-sectioning equipment in the laboratory. I do hereby agree that Dr. Douglas W. Haywick, the Department of Earth Sciences at the University of South Alabama and the University of South Alabama, will not be held responsible for any accidents, injuries or mishaps that might occur during my enrolment in GY 450 (Thin-sectioning). I agree to purchase personal ear protection. I also agree to always wear appropriate eye and ear protection and a lab coat while in the lab, and a dust mask when necessary. I realize that failure to wear the before-mentioned safety equipment while I am using the thin-sectioning equipment in room 338 will result in immediate loss of access to these devices.

Student signature__________________________________

Date:_____________________________________________

Witness:____________________________________________

Date:______________________________________________