GEOS 322: Introduction to Geophysics  
Spring 2009 Syllabus

Lectures: M-W 9:00 - 9:50 am  Gould Simpson Rm 209  
Lab Section #1: Th 1:00 - 3:50 pm  Gould Simpson Rm 213  
Lab Section #2: Fr 1:00 - 3:50 pm  Gould Simpson Rm 213

Instructor: Rick Bennett  
Office: Gould-Simpson Rm 530  
Office Hours: Monday & Wednesday 10:00 – 11:00 am & by appointment  
Phone: 621-2324  
Email: rab@geo.arizona.edu  
URL: http://geodesy.geo.arizona.edu/pages/people/rick-bennett.php

Teaching Assistant: Austin Holland  
Office: Gould-Simpson Rm 546  
Office Hours: Thursday and Friday 10:00-11:00 am & by appointment  
Email: holland1@email.arizona.edu  
URL: http://geodesy.geo.arizona.edu/pages/people/austin-holland.php

COURSE DESCRIPTION: GEOS 322 is a 3-unit introductory geophysics course, which provides students an understanding of applications of physics to studies of Earth structure and dynamics from crust to core. Laboratory sessions provide hands-on experience in measurement and analysis of geophysical data. Prerequisites: One semester of introductory physics and introductory calculus.

REQUIRED TEXT: Whole Earth Geophysics by Robert Lillie, 1999 (Prentice Hall Inc.). This text is available at the bookstore.

LISTSERV: A listserv has been established for the course. The listserv address is <geos322@listserv.arizona.edu>. If you do not have a computer account allowing access to email, you can establish an account through CCIT at no charge.

WEBSITE: A website has been established for the course. The website URL is <http://geodesy.geo.arizona.edu/pages/courses/geos-322-introduction-to-geophysics.php>. Rather than typing all of this into your browser, you may find it easier to navigate toe the web page by following the links on my lab web page <http://geodesy.geo.arizona.edu/>. Many of the handouts including the syllabus and course schedule will be accessible form the website.

LABORATORY SESSIONS: The purpose of the lab session is to provide a variety of hands-on experiences with geophysical methods and data. Lab sessions will involve: (1) problem solving with pencil, paper, and a calculator; (2) using instruments (e.g. gravimeter) to make geophysical measurements; and (3) computer programs for exercises in modeling geophysical data to obtain a geologic interpretation. Attendance at lab sessions is absolutely mandatory. There will not be opportunities to make up missed lab sessions and a major portion of the course grade is based on lab performance. In most cases, it should be possible to complete the lab assignment within the three-hour lab session. In some cases, final analysis and/or written work may be completed after the lab
session.

**LAB MATERIALS:** Each student should have the following materials for lab sessions: pencil and sharpener, eraser, calculator, graph paper (standard x-y style), protractor, ruler, tracing paper, some type of read-write computer storage media (memory stick). We will inform you each week what materials will be required for that week's lab session.

**ATTENDANCE:** Attendance at lectures and laboratory sessions is required. Exams emphasize material covered in lecture as well as information in the text. Your ability to earn a high grade depends on attending lectures, taking careful notes, doing all of the required reading, and completing all laboratory assignments. It is very unlikely that students with poor attendance will obtain a passing grade.

**READING QUIZZES:** On the first day that a new chapter is to be started in lecture (date indicated on schedule), we will have a short reading quiz on the material in that chapter. The reading quizzes are designed to be easy for those who have carefully read the chapter and virtually impossible for those who have not. The obvious point is that you will get much more out of lectures and labs having read carefully the corresponding textbook chapter.

**LITERATURE REVIEW:** During the semester, you will read nine articles published in scientific journals. These articles are classic works in geophysics. Reading these articles is included to: (1) develop your ability to read scientific literature; and (2) familiarize you with the history and process by which geophysical science operates. The due date for reading each article is indicated on the course schedule. You will write a short review of each article and hand this in at the beginning of lecture on the due date. Reviews will not be accepted after the due date. Grades will be based in part on your ability to identify the application of geophysical concepts from the lectures/book in the journal articles. We will have a class discussion of each article at the beginning of lecture on the due date. The lowest Literature Review score for each student will be dropped from grade calculation.

**EXAMS:** Three exams will take place on the dates shown on the class schedule. The two midterm exams will concentrate on the material since the previous exam — they are not cumulative. The final exam will be comprehensive but will emphasize material covered after the second midterm exam. Make-up exams will only be given in cases of verifiable illness or family emergency.

**GRADING:**

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<tr>
<th>Component</th>
<th>Points</th>
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<tbody>
<tr>
<td>Two midterms (100 points each)</td>
<td>200</td>
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<tr>
<td>Comprehensive Final exam</td>
<td>100</td>
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<tr>
<td>Reading Quizzes (8 @ 25 points each)</td>
<td>200</td>
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<tr>
<td>Literature Reviews (8 @ 25 points each)</td>
<td>200</td>
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<tr>
<td>Laboratory Exercises</td>
<td>300</td>
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**COURSE GRADES**

A: 900 - 1000; B: 800 - 899; C: 700 - 799; D: 600 - 699; E: <600

**GRADING OF EXAMS AND ASSIGNMENTS:** We will attempt to grade exams and assignments promptly to provide timely feedback on your performance. All materials will be graded carefully and consistently. We encourage you to bring possible numeric errors (adding scores, etc.) to our attention immediately after you receive graded papers so any error can be corrected. If you do not understand the concepts or details on an exam...
question or a lab assignment for which you did not receive full credit, we will work with you so you can understand those concepts or details. However, we will not entertain debates of a "points badgering" nature.

**CHEATING: DON’T DO IT!**
Cheating is any attempt to represent someone else’s work (on exams, labs, or any other course work) as your own. Cheating can result in a failing grade for this course and expulsion from the university. Refer to the Code of Academic Integrity posted in the Learning Center and available in the Geosciences Main Office (Gould-Simpson Rm 208). This class operates on the honor system but we monitor exams carefully and read all submitted material in detail. Never underestimate our ability to recognize cheating when we see it. A number of students have made that mistake and paid for it. We consider ourselves "user-friendly" instructors but we are insulted by attempts to cheat in our class. We react swiftly and harshly when cheating occurs.

**SPECIAL NEEDS?**
Students requiring accommodation in testing or note taking must deliver to Bennett the Disability Resource Center faculty letter specifying accommodations within the first few days of the course.