Elementary Oceanography: Syllabus
GEOL 3030 (00-088)  Univ. of Georgia  Spring Semester, 2005
1:25-2:15 pm MWF  200A GGS

Professor: Dr. L. Bruce Railsback
Phone: 542-3453  Office: 133 GGS  email: rlsbk@gly.uga.edu

Office Hours: Anytime LBR is in his office, which is most of the time, except for
12:00-2:20 MWF.  Feel free to call or email to set up a meeting time.

Teaching assistants (graders of exercises): Noel Heim (13 GG; naheim@uga.edu)  and
Adam Kiehn (avkiehn@uga.edu)

Textbook: Thurman, H.V. and Trujillo, A.P., 2004, Introductory Oceanography, 10th
lecture illustrations are on reserve in the Science Library as SPC R152Il.

Web Page: This syllabus, including the attached schedule, is subject to change as
posted on the course web site on the World-Wide-Web at
http://www.gly.uga.edu/railsback_GEOL3030base.html
Many essential course materials will be posted on the course web site.

Course Objectives: To acquaint students with the fundamentals of marine geology, of
physical, biological, and chemical oceanography, of paleoceanography, and of the
environmental aspects of oceanography, and to improve their skills in problem-solving
and in written communication.

By the end of the course, students should recognize the oceans as an interactive
system in which chemical, physical, and biological factors are inter-related, and for
which budgets of water, chemical substances, sediments, and even organisms can be
constructed. Throughout their lives students will enter systems or organizations and
have to discern patterns and relationships in those systems, whether they be universi-
ties, corporations, countries, or families. Students will do the same here by organizing
what at first seems like a vast bowl of water into an intelligible inter-related
framework.

Course Requirements and Grading:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Time/Date Due</th>
<th>Proportion of course grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>Monday, February 21, 2005 1:25-2:15 pm</td>
<td>22%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>Monday, April 18, 2005 1:25-2:15 pm</td>
<td>24%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>Noon - 3:00 pm Friday May 6, 2005</td>
<td>34%</td>
</tr>
<tr>
<td>Five(±) Exercises</td>
<td>As appropriate</td>
<td>20%</td>
</tr>
</tbody>
</table>

Students who have other commitments so that they cannot take exams on these days at
these times should not take the class.

Grading:  
Divisions between letter grades at 90, 80, 70, and 60% or lower are used. The
dividing points are often lowered to allow a reasonable distribution of letter grades.
There is always at least one "A", and there are usually several. Previous grade
distributions are available from the course web page.

Attendance:  
Records of attendance will not be kept, and attendance is not a factor in the
grading scheme. However, previous experience has shown that students who do not
attend class regularly will not be able to do well in the course.
Exams:
Copies of last year's exams are available on the course web page. Mid-term exams will consist of short-answer questions, matching questions, and multiple choice questions. Make-up exams are usually essay exams, because essay exams can be much more easily prepared on short notice. The first part of the final exam will resemble the mid-term exams and will deal with material covered after the second mid-term. The second part of the exam will be an essay question over any part of the course. The possible essay questions will be available before the exam via the course Web page; one question will be selected for the exam at the time of the exam by means of a random process.

Withdrawal:
The instructor reserves the right to submit statements of withdrawal for students who do not take the first mid-term examination. Students withdrawing before the midterm withdrawal deadline will be given grades of W.

Classroom etiquette: Class meetings are intended for lecture on and discussion of the subject matter, and for students to ask questions about that material. Students are strongly encouraged to ask questions and to remember that there are no stupid questions.

To allow the students to hear all the lectures and participate in all the discussions for which they are paying, no private personal conversations can take place during class. Failure to adhere to this basic maxim of civilized behavior, or repeated disruption of the class by some other means, will result in removal from the class.

Closing notebooks, putting on coats, and talking while the lecture or discussion ends are rude behaviors. Many students will still be trying to follow the lecture or discussion that they have paid to attend.

Pagers and cellular telephones should be deactivated during class time to avoid disturbing students who are trying to listen to class activities.

Seating:
Movable seats in the aisles along the walls, and the fixed seats next to those aisles, are not to be used by students in GEOL 3030.

Accommodations for students with learning disabilities:
Students with learning disabilities must inform the professor of measures needed to account for those disabilities by the end of the third class meeting. Students for whom the University provides a note-taker are reminded that note-takers are required to not deliver notes for any lecture that the disabled student does not attend.

Student Athletes:
Students wishing that their course grades be released to advisors in the UGA athletics program must give the professor a signed dated letter indicating that wish and indicating the name and address of the person to whom the grades should be sent. The course web page has a sample letter or template.

Expectations:
The professor assumes only a high-school level of knowledge of science, so that students from all majors can take the course and do well. The professor also assumes that the students want to learn and are willing to work in order to learn. Learning at the college level requires focused reading, daily review of lecture notes, and assimilation of the material covered. Students who want to learn and are willing to work will do well in the course.
Schedule and Reading Assignments:

<table>
<thead>
<tr>
<th>Topic</th>
<th>Readings in Thurman &amp; Burton</th>
<th>Tentative Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>Syllabus; pp. 1-7; Ch. 1</td>
<td>Jan 10-12</td>
</tr>
<tr>
<td>Geography &amp; Geology of the Oceans</td>
<td>Ch. 3 &amp; 4</td>
<td>Jan 14-24</td>
</tr>
<tr>
<td>Physical Oceanography: Ocean Circulation</td>
<td>Ch. 6; pp. 164-177, 183-191; Ch. 7 &amp; 8</td>
<td>Jan 24-February 16</td>
</tr>
<tr>
<td>Exam 1</td>
<td></td>
<td>February 21, 2005</td>
</tr>
<tr>
<td>Physical Oceanography: Waves &amp; Tides</td>
<td>Ch. 9 &amp; 10</td>
<td>Feb 16-March 4</td>
</tr>
<tr>
<td>Biological Oceanography</td>
<td>Ch. 13 to 16</td>
<td>March 4-April 13</td>
</tr>
<tr>
<td>Exam 2</td>
<td></td>
<td>April 18, 2005</td>
</tr>
<tr>
<td>Deep-sea sediments</td>
<td>Ch. 5</td>
<td>April 13-16</td>
</tr>
<tr>
<td>Chemical Oceanography</td>
<td>pp. 177-183</td>
<td>April 18-26</td>
</tr>
<tr>
<td>Paleooceanography</td>
<td>No readings</td>
<td>April 25-May 2</td>
</tr>
<tr>
<td>Final Examination</td>
<td></td>
<td>Noon Friday May 6, 2005 in 200A GG</td>
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Textbooks and useful reference books


Important Journals and Series:

| Journal of Geophysical Research          | Chemical Oceanography                  | Tellus                      |
| Deep Sea Research                       | Limnology and Oceanography             | The Sea                     |
| Marine Geology                          | Journal of Marine Research             | Nature                      |
| Journal of Physical Oceanography        | Oceanology                              | Science                     |
| Paleoceanography                        | Progress in Oceanography               |                            |
|                                         | Initial Reports of the Deep Sea Drilling Project |