

**GLY 150 Section 300 - Lecture for Honors - Introduction to Oceanography**  
**Fall Semester 2011, T & Th, 11:00 am - 12:15 pm , DeLoach Hall 120**  
**COURSE SYLLABUS**

**Instructor:** [Dr. Lewis Abrams](#)

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Office Hours: 10:00 - 11:00 am, 3:15 - 4:30 pm (T, Th) (or by appointment)

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[Department of Geology and Geography](http://www.uncw.edu/earscei/index.htm): <http://www.uncw.edu/earscei/index.htm>

**Textbook:** *Essentials of Oceanography* (9th edition) by Thurman & Trujillo. Selected articles in [Scientific American](#) and [The New York Times](#).

**Course Description and Goals:** “An introduction to the geology, physics, chemistry and biology of the oceans; instruments and techniques of oceanography; resources of the ocean” (UNCW Undergraduate Catalog). In other words the goal of this class is to provide you with some degree of what is now referred to as “ocean literacy”, to make you an ocean-literate person. To what degree and how literate, is of course up to you. “Ocean literacy is the awareness and understanding of fundamental concepts about the history, functioning, contents, and utilization of the ocean. An ocean-literate person recognizes the influence of the ocean on his or her daily life, can communicate about the ocean in a meaningful way, and is able to make informed and responsible decisions regarding the ocean and its resources. (Garrison, 2009)

Oceanography is inherently an interdisciplinary subject (the geology, physics, chemistry, and biology of the oceans). Furthermore, it is the study of a particular part of the Earth, the oceans. However, all parts of the Earth, including the atmosphere, hydrosphere, lithosphere and biosphere, are intimately linked, and therefore some understanding of all the parts is necessary for a fuller understanding of any of the individual parts. This course fulfills a basic studies physical science requirement.

**Differences between this Honors lecture and the regular section offered to 300 students:**

- Small class size (14)
- No exams - quizzes after each chapter or portion of chapters.
- Additional reading assignments in *Scientific American* and *The New York Times*
- Additional writing assignments
- Attendance in select seminars from other science departments at UNCW
- Close alignment with lecture material with the Laboratory section

**Student Learning Outcomes:**

GLY 150 has been designed to satisfy the University Studies Component: Scientific Approaches to the Natural World. Accordingly, the course addresses the following three broad student learning outcomes.

SAN 1. Demonstrate an understanding of basic scientific principles, theories, and laws as well as an awareness of the changing nature of science.

SAN 2. Analyze, interpret, and evaluate scientific hypotheses and theories using rigorous methods (including statistical and mathematical techniques).

SAN 3. Demonstrate the ability to write and speak critically about the essential questions addressed by the natural sciences, using the conventions and language of one of those disciplines.

Further, the course has been designed to address three course specific student learning outcomes.

SLO 1: Understand the history of oceanography, how it illustrates the scientific method, and how it was shaped by man's use of the oceans and by ocean "geography" (SAN 1, 3)

SLO 2: Understand the origins of the Earth, ocean basins and ocean waters, and how they have evolved through time (SAN 1, 2)

SLO 3: Understand the composition, origin, and distribution of marine sediments, what they indicate about the history of the oceans, and what important resources they contain (SAN 2)

SLO 4: Understand the basic chemical and physical nature of seawater and how it impacts life in the ocean (SAN 2)

SLO 5: Understand the basic physical processes of the ocean including the interaction of the atmosphere and the oceans, formation and maintenance of ocean currents, waves and tides

SLO 6: Understand the nature and importance of the coastal zone including responsible use of this sensitive environment

SLO 7: Understand marine biodiversity and the basic processes that form and maintain that diversity

SLO 8: Understand the natural resources of the oceans and basics principles of responsible use and management of them

**Academic Honor Code:** The University's Honor Code is enforced in this class. Please do your own work. Complete details of the Code are in the current Student Handbook.

**Attendance:** Attendance is recorded in every lecture and lab. Students are responsible for all changes to the class schedule and assignments that are announced during lecture (changes may or may not be updated on the web page). No unexcused absences for quizzes/exams.

**Grading:**

1) Attendance and class participation (Come to class prepared to discuss assigned reading, 1 point each class = 10%)

2) In class quizzes based on lectures, assigned reading and class discussions (quizzes directly after we finish each chapter worth 15 - 25 points each = 80%).

3) Attend a seminar given in any science department (Geology, Biology, Chemistry, Physics) and write a 2 page (double spaced) summary of the seminar (15 points = 10%).

**Seminar reviews are due no later than Tuesday, November 22, 2011.** See the following URLs for lecture schedule:

[Geology & Geography Seminar Series](#)

[Biological Sciences Seminar Series](#)

[Chemistry Seminar Series](#)

[Physics and Physical Oceanography Seminar Series](#)

Course letter grades will be assigned as follows:

<u>Percentage Score</u>	<u>Final Grade</u>
<b>100 - 91</b>	<b>A</b>
<b>90.9 - 88</b>	<b>A-</b>
<b>87.9 - 84.1</b>	<b>B+</b>
<b>84 - 80.1</b>	<b>B</b>
<b>80 - 77</b>	<b>B-</b>
<b>76.9 - 73.1</b>	<b>C+</b>
<b>73 - 68</b>	<b>C</b>
<b>67.9 - 66</b>	<b>C-</b>
<b>65.9 - 63.1</b>	<b>D+</b>
<b>63 - 59</b>	<b>D</b>
<b>58.9 - 55</b>	<b>D-</b>
<b>54.9 - 0</b>	<b>F</b>

**TENTATIVE LECTURE SCHEDULE**

Textbook reading - Thurman & Tuijillo 9th Ed.	Topics addressed
Class 1 - Introduction Chapter 10 Drowning New Orleans - Scientific American	Beaches and Shorelines,
Chapter 5	Water and Seawater
<b>Mon. Sept. 5 - No Classes</b>	<b>Labor Day</b>
Chapter 9	Tides
Chapter 8	Waves
Chapter 3	Marine Provinces
<b>Tues. Oct. 11 - No Classes</b>	<b>FALL BREAK</b>
Chapter 2	Plate Tectonics
Chapter 6 & Physical Science of Climate Change - Scientific American	Atmospheric Circulation - Air-Sea interactions
Chapter 7 &	Ocean Circulation - Gulf Stream - El Nino

The Unquiet Ice - Scientific American	
Chapter 4	Marine Sediments
<b>Tues. Nov. 22</b>	<b>Seminar Reviews are Due</b>
<b>Wed. Nov. 23-25 - No Classes</b>	<b>THANKSGIVING BREAK</b>
Tues. Dec. 6 - Last Class	
<b>*Final Exam: Tues. Dec. 13</b>	<b>11:30 am - 2:30 pm - Room DL 120</b>

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