

Marine Science 304
Geological Oceanography
Spring 2004; TTh 10:00-11:15; Science 106

*What happens to us is irrelevant to the world's geology
but what happens to the world's geology is not irrelevant to us.
We must reconcile ourselves to the stones, not the stones to us.*
- Hugh MacDiarmid -

*Climb High, Climb Far
Your Goal The Sky, Your Aim The Star*
- Unknown -

Instructor	Eric Wright	Phone	349-4017
Office	Atlantic Center	Email	ewright@coastal.edu
Office hours	TTh 9:00-9:50; W 9:00-11:00; or by appointment	Web	http://kingfish.coastal.edu/marine/304/
Text	Kennet, James, 1982, Marine Geology		

Course objective:

This class is intended to provide a foundation in the geological aspects of marine science. By nature, geology is multidisciplinary, borrowing ideas and tools from biology, chemistry and physics to understand earth/ocean history. In most applications, the marine geologist reconstructs past habitats, processes or events and studies the changes of the earth/ocean/atmosphere through time. It is often through reconstruction of the past that we can better understand systems in the present or infer future changes.

Grading:

The course component of your grade will consist of:

Three Tests (24 % each, lowest one will count 14 %)	62 %
Quizzes, Assignments, Reading	26 %
Final Exam	12 %

Make-up tests, quizzes, and assignments will only be given for a medical reason, a death in the family or for an appropriate reason, which has been cleared by me before the test.

Attendance:

There is no formal attendance requirement for this course. However, you are strongly encouraged to attend classes. Some of the exam content may be drawn from information only covered in class and not presented in the textbook. Attendance and participation may also be used in situations where your final grade is borderline.

Etiquette:

I ask that you be courteous and attentive during classes. I will ask you to leave if you are talking or are otherwise disruptive. I also ask that you arrive on time for class.

A few words on learning:

Try to participate in class as much as possible. Learning at the University should not be a passive process. It will be assumed that you have read the assigned readings before the associated class meeting. It is also assumed that concepts touched on in MSCI 111 and MSCI 112 are familiar and mastered. Do not allow yourself to fall behind. If you are experiencing difficulty, please see me directly. Do not wait until near the final exam to alert me of problems

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Tentative Daily Schedule

<i>Day</i>	<i>Date</i>	<i>Topic</i>	<i>Reading</i>
The Subsurface & The Past			
Th	15-Jan	Introduction, Time & Cycles	
T	20-Jan	Ocean Basics	Ch. 8
Th	22-Jan	Stratigraphy	Ch. 3
T	27-Jan	Correlation & Time Scale	Ch. 9 (p. 275-282)
Th	29-Jan	Correlation & Time Scale (quiz)	Ch. 3
T	3-Feb	Age Dating & Time Scale	Ch. 3
Th	5-Feb	Interior of the Earth	Ch. 2
T	10-Feb	Test 1	
The Container			
Th	12-Feb	<i>Celebration of Inquiry</i>	
T	17-Feb	Sea Floor Spreading	Ch. 4
Th	19-Feb	Plate Tectonics	Ch. 5
T	24-Feb	Ocean Crust	Ch. 7
Th	26-Feb	Wilson Cycle & Tectonic History (quiz)	Ch. 6
T	2-Mar	Margins	Ch. 11 & 12
Th	4-Mar	Plate Tectonic Effects	
T	9-Mar	Catch-up	
Th	11-Mar	Test 2	
The Sediments			
T	16-Mar	<i>Spring Break</i>	
Th	18-Mar	<i>Spring Break</i>	
T	23-Mar	Sea-Level Change	Ch. 9
Th	25-Mar	Deltas	Ch. 10/Reserve - Barriers
T	30-Mar	Barrier Island	Ch. 10/Reserve – Deltas
Th	1-Apr	Estuaries, Reefs, Shelf (quiz)	Ch. 10/Reserve – Reefs
T	6-Apr	Marine sediments - Terrigenous	Ch. 13
Th	9-Apr	Marine sediments - Biogenic	Ch. 14
T	13-Apr	Marine sediments – Authigenic	Ch. 14
Th	15-Apr	Catch-up	
T	20-Apr	Test 3	
The Changing Oceans			
Th	22-Apr	Atlantic Paleo-oceanography	Ch. 19
T	27-Apr	Atlantic Paleo-oceanography	Ch. 19
Th	29-Apr	Review	