

BEACHES AND COASTS
GLY 250
SPRING 2010

INSTRUCTORS: Dr. Lynn A. Leonard DL 102
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Office Hours M&T 10-11 or by appointment

TEXT BOOK: Beaches and Coasts by Richard A. Davis, JR and Duncan M. Fitzgerald. Blackwell Publishing.

COURSE OBJECTIVE and EXPECTED OUTCOMES: This course is a 3 credit hour introductory course. Students will: 1) learn terminology and processes related to coastal environments, 2) communicate their understanding of presented concepts in writing (exams and quizzes) and verbally (class discussions and question/answer), and 3) apply their knowledge of other disciplines (i.e. mathematics, life sciences, or social sciences) to course topics as appropriate.

COURSE FORMAT: The course format will consist of lectures, discussions, quizzes, and exams.

GRADES: Grades will be determined as follows:

Quizzes	10%
Exams (highest 3 out of 4)	90%

Grade Policy: The plus/minus system will be applied as follows:

A	>94	B-	79.5-82.5	D+	67-69.5
A-	89.5-93.5	C+	77-79.5	D	63-66.5
B+	87-89.5	C	73-76.5	D-	59.5-62.5
B	83-86.5	C-	69.5-72.5	F	< 59.5

Four exams will be given. This includes a Final Exam which is a comprehensive exam of all material covered during the semester. You may drop the lowest grade and this may include the Final Exam. The exam portion of your total grade (90%) will consist of the average of the three highest individual exam grades. Please note that **NO MAKE-UPS WILL BE GIVEN OR SCHEDULED**. If you miss an exam during the semester, you must take all remaining exams and apply those grades to your exam average. All students are required to take the Final Exam even if they do not intend to apply this grade to their exam average.

The quiz grade will be determined from short UNANNOUNCED quizzes given during the semester. Students are strongly encouraged to attend all classes so that they do not miss an unannounced quiz. On occasions there may be opportunities to attend special seminars related to this course. When these opportunities arise, students may attend these lectures and submit a brief written summary to receive credit for a missed quiz. In some instances, extra credit may be given for participation in these activities. These will be the only opportunities to make-up quizzes or receive extra credit.

Honor Code: "The University of North Carolina at Wilmington is committed to the proposition that the pursuit of truth requires the presence of honesty among all involved. It is therefore this institution's stated policy that no form of dishonesty among its faculty or students will be tolerated. Although all members of the university community are encouraged to report occurrences of dishonesty, honesty is principally the responsibility of each individual." *UNCW Undergraduate Catalogue*.

TENTATIVE SCHEDULE
(Readings in Pareds)

January

7	Introduction
<u>SECTION 1 PLATE TECTONICS AND THE COAST (Chapter 2)</u>	
12	Earth's Interior, Plate Boundaries
14	Plate Tectonics
19	Tectonic Coastal Classification, Tectonic Effects on Sediment Supply
<u>SECTION 2 MATERIALS OF COASTAL ENVIRONMENTS (Chapter 3)</u>	
21	Rock Types and Sediment Texture
<u>SECTION 3 SEA LEVEL CHANGE AND THE COAST (Chapter 4)</u>	
26	Tectonic and Climatic causes
28	Holocene Rise in Sea Level and Future trends

February

<u>SECTION 4 COASTAL PROCESSES</u>	
2	Waves (Chapter 6)
4	Tides (Chapter 11)
9	EXAM 1 (Sections 1-3 and waves)
<u>SECTION 5 BEACHES, BARRIERS and TIDAL INLETS</u>	
11	Beach morphology, types, and processes (Chapter 7)
16	Barrier Islands – Morphology and Evolution (Chapter 8)
18	Tidal Inlet morphology, formation and migration (Chapter 12 – 12.1-12.5)
<u>SECTION 6 ESTUARIES and RIVER DELTAS</u>	
23	Estuary Classification and Processes (Chapter 15 –15.1 to 15.4)
25	Major Delta Elements and Processes (Chapter 16 – 16.2 to 16.5)

MARCH

2	Delta Classification (Sec. 16.6 and 16.7)
4	EXAM 2 (Tides, Section 5, and Section 6 through material covered on Feb. 25th)
9	SPRING BREAK
11	SPRING BREAK

<u>SECTION 8 TIDAL FLATS and COASTAL WETLANDS</u>	
16	Tidal Flats (Chapter 13)
18	Distribution and Types of Coastal Wetlands (Chapter 14)
23	Salt Marshes (Chapter 14)

<u>SECTION 9 ROCKY COASTS, BIOLOGICAL PROCESSES AND DISSOLUTION</u>	
25	Origins, Features, and Physical Processes (Chapter 18)
30	Biological Zonation

APRIL

1	Easter HOLIDAY
6	Dissolution Processes and rocky islands

SECTION 10 HUMAN INTERACTION

8	Erosion and Coastal Protection (Chapter 20 and 21)
13	Coastal Protection and Dredging (Chapter 21)
15	EXAM 3 (Delta classification, Sections 8 & 9, and material covered on April 8th)
20	Dredging and Mining (Chapter 21)
22	Water Quality and Other Coastal Issues (Chapter 21)

FINAL EXAM – COMPREHENSIVE APRIL 29TH 3:00 TO 6:00