Lock Haven University
GEOS451-Coastal Environmental Oceanography
Summer Session, July 2-20, 2012

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Lecture/Lab/Field Trips: We will have to be flexible. We will go out in the field most every day, but will depend on weather, availability of van/boat, and access. You will have to work in the lab most every evening. Work in a group and coordinate with other groups about the usage of lab equipment.

Textbook/Lab Manual: There will be no textbook, but all reading materials will be available on reserve with me. Supplemental reading materials are posted online through web links.

Objectives: The course will deal with advanced topics in coastal geomorphology and environmental issues pertinent to coastal settings, including human impacts on coastal landforms, shoreline erosion, wetland loss, sea-level fluctuations, nutrients in estuaries, metals in bays, and climate change. Lecture, field trips, and laboratory exercises are designed to provide students with hands-on experience with field and laboratory equipment used to solve real-world problems in diverse coastal settings.

Grade Breakdown:

Two exams (2x20%)	= 40%
Three lab assignments (3x15)	= 45%
One reading assignment	= 5%
Term-paper	= 10%
Total	---
	100%

Date	Lecture Content	Field Trips, Lab Exercise and Other Assignments
July 2	Introduction; modern depositional environments	Field trip to D-Dikes; Chincoteague Island and Delmarva relict environments; sediment/soil samples
3	Coastal landforms	Greenbackville marsh coring and survey
4	The Independence Day – No classes	The Independence Day – No Field Trip Students work on their own on lab/reading assignments
5	Coastal landforms	Field trip to DE and MD coasts
6	Coastal processes	Monitor boat trip to Queens Bay; sediment, water; biological samples
9	Coastal processes	CNWR tour; Sonde in MSC creek; sediment samples
10	Coastal erosion and beach protection	Field trip to Wallops Island
11	Wetlands processes	Trip to Horn Point lab; Chesapeake Bay samples; soil samples from Ag fields
12	Estuarine processes	RV Parker trip to ocean; Ponar grab; biological samples
13		Mid-term Exam; Monitor boat trip
16	Environmental issues	Monitor boat trip to Mosquito Creek; Sonde recovery; water/sediment
17	Soil quality in Delmarva	Field trip to Accomack soil/water samples; Greenbackville
18	Water quality in Delmarva	Field trip to ocean by RV Parker
19	Water quality in Delmarva	Revisiting Greenbackville; Monitor boat trip; D-Dikes; Sonde recovery
20		Final Exam; Return of MSC equipment; Leave MSC