



**Course Syllabus -**  
**Coastal**  
**Disasters and**  
**Hazards**

**EARTH 101H (3) GN**  
**Fall 2002**

**Penn State University Delaware County**

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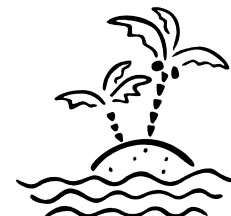
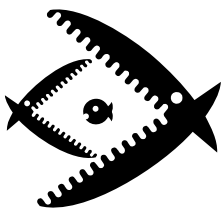
Web site: <http://www.personal.psu.edu/uxg3/>

Office hours: 9:00AM-10:00AM, 1:00PM–3:00PM Mondays and Wednesdays

Lecture: 1:30PM – 2:20PM Mondays, Wednesdays and Fridays in CLASS 101

Textbooks: *Against the Tide*, by Cornelia Dean (Columbia University Press, 1<sup>st</sup> edition, 1999); *The Corps and the Shore*, by O.H. Pilkey and K.L. Dixon (Island Press, 1<sup>st</sup> edition, 1996); *The Evolving Coast*, by R.Davis (Scientific American Library, 1<sup>st</sup> edition, 1997)

**What's in store for you...** For the majority of you enrolled in EARTH 101H, this is your first true introduction to the fascinating subject of coastal disasters and hazards! There are no prerequisites for this course, all you need is an open mind, and you will learn things about the threats to our coastal environment you never knew before. Stay tuned, and find out why our planet is referred to as the "Blue Planet!" You will gain insight into the formation and structure of hurricanes and tsunamis. Get the scoop on beach stabilization and shoreline renourishment projects. We'll examine oil and chemical spills. And of course, we'll be focusing on the local coast and coastal issues. You'll even have the opportunity to visit Assateague National Seashore!



## **FIELDTRIP!!!!**

This course has one REQUIRED fieldtrip. The required field trip will take place on a Saturday, September 28<sup>th</sup>, for a full day. The fieldtrip will involve a visit to the Lifesaving Museum in Ocean City, MD, and Assateague National Seashore, VA. The purpose of the fieldtrip is to see for ourselves the coastal “disaster” taking place between these two locations. The class will collect information they can use for the group presentation during the semester.

## **Now for all the necessary, important information....**

### **My expectations of you...**

I expect every student to come to every class and lecture on time and ready to go. You should have read the corresponding chapters for each lecture BEFORE coming to class. Be sure to bring something to write with to every lecture. I encourage everyone to ask questions and work with your fellow students in lecture. All assignments must be turned in on time (no exceptions).

- **Classroom Participation**

Class participation is required! This course is to be an interactive course, filled with questions, discussions, stories on your favorite ocean experience, etc. There is much we can learn from each other! Although I will be lecturing during much of this course, what you will be doing during class time is a vitally important aspect of how you will learn in this course – whether you be an “active” participant or just come to class and be a “passive” participant. You will also be working in groups during some lecture periods, which places on you serious responsibility to other students in the class. **ATTENDANCE IS STRONGLY ENCOURAGED**, and I will be looking for your presence at every class meeting. I will make exceptions when missing a class discussion for legitimate emergencies when I am **notified AHEAD OF TIME** (such as health, family emergencies, etc.). If you miss lecture for any reason, I will expect you to get in touch with me ASAP and make up all the work that you missed *before* the next class meeting. If you do not get in touch with me before the next class meeting, you will NOT be able to receive credit for the work or make it up.

- **Classroom Etiquette**

Let's work together on this one. Please do not have conversations going on with other students while I am lecturing. No passing notes, no reading the newspaper. Please turn cell phones off before lecture begins. **NO FOOD OR BEVERAGES ARE ALLOWED IN CLASS 101 OR ANY COMPUTER ROOMS** (no pretzels, and nothing from the coffee cart in the Classroom Building lounge, OK?) And do NOT get up and leave the room while I am lecturing. We will be having class discussions where I want you to volunteer your interpretation and opinion on certain coastal

issues. Be open, be honest, and show respect for the opinions your fellow students have. The class will be much more enjoyable if we show respect for one another!

### **What you can expect of me...**

I will be prepared every day with a full lecture and will start on time. I will keep you updated if there are to be any changes to the syllabus (for example, if the class wants to explore a topic further). I will make myself available during and outside of class to answer any question you may have – don't hesitate to ask anything! I will not only teach you "the material" but why we are learning it, the applicability of this course to your everyday lives. After approximately the first week, I should have all of your names memorized and I will recognize you by name during class discussions. I will not give any makeup or extra credit work, for this is not fair to everyone that is staying on top of the course work and handing material in by the deadlines. If you have a medical/family emergency and cannot come to class for a discussion or to turn in an assignment, contact me **PRIOR** to make arrangements.

### **In the end...**

You must have fun in this course! (and really, you will!) I give you my word that I will put as much effort and energy into this course as I possibly can, to make this an enjoyable semester for you. In return, I hope you come to class with a positive attitude and open mind to new ideas and topics!

### **Grading**

Your grade for the semester will be based on assignments, questions through ANGEL, attendance and participation, a group project, and the final exam. The breakdown is as follows:

Assignments – 50%

Think, Think, Think.... (questions to be answered through ANGEL) – 15%

Attendance and Participation – 5%

Final Exam – 10%

Project – 20%

The final grades will be assessed at the end of the semester as follows:

A = 96 to 93; A- = 92 to 90; B+ = 89 to 87; B = 86 to 83; B- = 82 to 80;

C+ = 79 to 77; C = 76 to 70; D = 69 to 60; F = 59 and below

\* mid-semester progress reports are due in October. A class average below 70% will be reported as unsatisfactory. ***Do not expect me to curve any grades during or at the end of the semester.***

## **Note to students with disabilities**

Penn State does not discriminate against qualified students with documented disabilities in its educational programs. If you have a disability-related need for modifications in this course, contact Sharon Manco, 610-892-1461, 203A Main. This notification should occur by the end of the first week of the semester.

## **Academic Integrity**

All students are expected to act with civility, personal integrity; respect other students' dignity, rights and property; and help create and maintain an environment in which all can succeed through the fruits of their own efforts. An environment of academic integrity is requisite to respect for self and others and a civil community.

Academic integrity includes a commitment to not engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty include cheating or copying, plagiarizing, submitting another persons' work as one's own, using Internet sources without citation, fabricating field data or citations, "ghosting" (taking or having another student take an exam), stealing examinations, tampering with the academic work of another student, facilitating other students' acts of academic dishonesty, etc.

Students charged with a breach of academic integrity will receive due process and, if the charge is found valid, academic sanctions may range, depending on the severity of the offense, from F for the assignment to F for the course.

The University's statement on academic integrity, from which the above statement is drawn, is available at: <http://www.psu.edu/dept/oue/aappm/G-9.html>

**WHAT THIS MEANS... DO NOT EVEN THINK OF CHEATING!!!** Do not copy off of your fellow students, do not plagiarize (from books or from the internet). I will vigorously pursue any suspicions I have of academic integrity violations!

## **Breakdown of topics covered during each class meeting**

*\* note that this syllabus is subject to change with prior notification*

W, 08/28: Introduction, What is a coast? (Davis, Ch. 1)

F, 08/30: **SYLLABUS QUIZ**, ANGEL review, ASSIGNMENT: Plagiarism

M, 09/02: **NO CLASS – LABOR DAY**

W, 09/04: Hurricanes (computer lab), (Davis, p. 94-98; Dean, Ch. 1&7)

ASSIGNMENT: Hurricane Tracking, Part A

F, 09/06: Hurricanes – 1992 Hurricane Andrew

M, 09/09: Hurricanes – 1900 Galveston Hurricane

ASSIGNMENT: Hurricane Tracking, Part B, Top Secret ID

W, 09/11: Construction of Stabilization Structures (Davis, p. 153-166, 205-211; Dean, Ch. 3; Pilkey, Ch. 1), Galveston Seawall

F, 09/13: Construction of Stabilization Structures - Sandbridge, VA  
THINK, THINK, THINK

M, 09/16: Construction of Stabilization Structures - Folly Island, SC (Pilkey, Ch. 5)

W, 09/18: Barrier Islands, (Davis, p. 166-183; Dean, Ch. 4; Pilkey, p. 13-38)

ASSIGNMENT: Current Barrier Island Migration

F, 09/20: Barrier Islands – Morris Island Lighthouse, SC

M, 09/23: Barrier Islands – Cape Hatteras Lighthouse, NC

W, 09/25: CURRENT TOPIC IN COASTAL GEOLOGY

F, 09/27: Cheesy Coastal Movie, begins during common hour

ASSIGNMENT: Movie Review

Saturday, 09/28 - **FIELDTRIP!!!**

M, 09/30: Beach Renourishment (Davis, p. 211-217; Dean, Ch. 5; Pilkey, Ch. 4) – Miami Beach, FL

W, 10/02: Beach Renourishment – Hunting Island, SC

F, 10/04: Beach Renourishment – Ocean City, MD

M, 10/07: Oil & Chemical Spills, in computer lab, ASSIGNMENT: ESI Maps

W, 10/09: Oil & Chemical Spills – Exxon Valdez

F, 10/11: Oil & Chemical Spills – R/V Columbus, Natural Leaks in Gulf of Mexico

M, 10/14: **FALL BREAK**

W, 10/16: Harmful Algal Blooms, in computer lab

ASSIGNMENT: Summary on your favorite HAB

F, 10/18: Harmful Algal Blooms – *Gymnodinium breve*

M, 10/21: Harmful Algal Blooms – *Pseudo-nitzschia* spp.

W, 10/23: CURRENT TOPIC IN COASTAL GEOLOGY

ASSIGNMENT: Coastal Journals

F, 10/25: CLASS MEETS W/O Dr. G (Dr. G at CWC meeting at UP)

M, 10/28: CLASS MEETS W/O Dr. G (Dr. G at meeting in Denver)

W, 10/30: Discussion, report on coastal geology sessions from Denver

F, 11/01: VIDEO – The Blue Planet

M, 11/04: Tsunamis, in computer lab

ASSIGNMENT: track runup and inundation data

W, 11/06: Tsunamis – 1946 Aleutian, 1960 Chile, (Davis, p. 78-81)

F, 11/08: Tsunamis – 1996 Peruvian, video

- M, 11/11: CURRENT TOPIC IN COASTAL GEOLOGY  
Group Outline for presentation due!
- W, 11/13: **GROUP PRESENTATION**
- F, 11/15: Presentation Breakdown and CURRENT TOPIC IN COASTAL GEOLOGY  
Logbook and questions due!
- M, 11/18: Population, in computer lab,  
ASSIGNMENT: find/plot trends in population growth for a coastal state
- W, 11/20: Population – South Florida, Puget Sound
- F, 11/22: Population – Chesapeake Bay and Maryland
- M, 11/25: Cheesy Coastal Video, Part I
- W, 11/27: Cheesy Coastal Video, Part II – THINK, THINK, THINK
- F, 11/29: NO CLASS – Happy Turkey Day!
- M, 12/02: Sea-Level Changes, (Davis, Ch. 2) – past, greenhouse warming and  
predicted future
- W, 12/04: Sea-Level Changes, THINK, THINK, THINK
- F, 12/06: Sea-Level Changes – coastal response
- M, 12/09: Protection of Coasts – What do we do? – no action (retreat and relocation)  
(Pilkey, p. 38-53)
- W, 12/11: Protection of Coasts – What do we do? – the “soft” solution  
THINK, THINK, THINK
- F, 12/13: Protection of Coasts – What do we do? – the “hard” solution

**FINAL EXAM** (cumulative) will be Wednesday, December 18th  
12:30PM-2:20PM (be sure to read Pilkey Ch. 10)

- **Grading scheme for assignments** will be provided with each assignment  
handout.

- **Grading scheme for Attendance and Class Participation:**

All students will start off with a grade of 50 (out of 100) in this category. Coming to class will raise the grade, skipping class without pre-notification will lower the grade. You are expected to be an active participant in the discussions of this course. Asking questions, volunteering information, and even initiating class discussions will give you additional points. At the end of every month, I will give you an update as to where this grade stands and where I think you can make improvement.

- **Grading scheme for THINK, THINK, THINK, questions:**

The following are the grades I will give when you answer the question(s) in this category. You must answer these questions through the course management system ANGEL (<http://cms.psu.edu/>). I reserve the right to make minor adjustments up or down to these categories. **95** – answer is well above and beyond what the question is asking. Clearly background research above and beyond the class discussions assisted in putting together this answer. **85** – well thought-out answer, logical flow, gives at least one example to support statement. **75** – basic answer, replies to just what was asked, no additional information provided to back up statements, might have spelling errors. **65** – brief answer, doesn't really address what is asked, poor reasoning or logic, wording is awkward. **55** – answer doesn't focus on the question at hand, does not address what is being asked. **0** – does not log in to answer question, or evidence of plagiarism from books or the internet.

**\*\*\* REMINDER \*\*\***

All information for this course will be available on ANGEL, Penn State's course management program. Copies of the assignments and useful URLs will be posted as the semester progresses. You are *strongly encouraged* to use ANGEL for all email communication to myself and your other classmates when questions arise pertaining to course. <http://cms.psu.edu> If you are not familiar with ANGEL, we will be doing an introduction to this program during the first laboratory session.

# **Semester Project – Status of the Coast at Ocean City, MD, and Assateague National Seashore, VA**

First, you'll want to go to the campus bookstore and purchase a composition notebook (the kind where you cannot tear out the pages). This will be your log book for the project. You **MUST** bring this book with you to every class – I will be doing random spot checks.

So what is this project? This will be the class working as a group to give a presentation to the campus community about the coastal processes occurring at Ocean City, MD, and Assateague National Seashore, VA. We will be doing some discussions about this topic in class, and our fieldtrip will be to both of these sites for you to see what is happening to the shorelines.

The class **MUST** work together! Your primary source of information **MUST** come from scientific magazines and journals, and online sources as secondary. Use your log book to record any information you research, and to record the time you spent working on the project. Also record any conversations and email messages with fellow classmates about the project. I will be explaining this project in detail in class, so take good notes (ideally, in your log book!).

## **PROJECT DUE DATE:**

Detailed presentation outline due by 1:30PM Monday, November 11<sup>th</sup>

Presentation during common hour on Wednesday, November 13<sup>th</sup>

Final self-assessment by answering questions in log book, due Nov. 15<sup>th</sup>

## **PROJECT GRADE:**

Your grade for this class project will be determined in two parts. 50% of your grade is based on the group presentation. Everyone will receive the same grade for this portion, although I reserve the right to modify grades if I see someone not prepared the day of the presentation or does a poor job speaking. The remaining 50% of the project grade is determined independently for each student and will be based on your log book entries and how you answer post-project questions (listed in grading scheme). Grading schemes for both parts are presented below. Note that everyone will start with an average grade (3). From there, I will determine if you have not satisfied my expectations or if you have gone above and beyond expectations.

# ***Evaluation Form for Group Presentation***

0 = unacceptable    1 = poor    2 = fair    3 = average    4 = very good  
5 = superior

## Structure:

- \_\_\_\_\_ The introduction gained audience interest
- \_\_\_\_\_ The core idea was made clear in the introduction
- \_\_\_\_\_ The body of the speech was well-planned, easy to follow
- \_\_\_\_\_ Forms of support were clear, varied and well-placed
- \_\_\_\_\_ The conclusion reinforced the main theme
- \_\_\_\_\_ The conclusion was memorable

## Content:

- \_\_\_\_\_ Title for presentation was meaningful
- \_\_\_\_\_ The speech added to listener knowledge or offered a new perspective of the topic
- \_\_\_\_\_ The ideas of the speech were well-supported
- \_\_\_\_\_ The topic was made easy to understand and was interesting
- \_\_\_\_\_ The message was adapted to the audience
- \_\_\_\_\_ The subject was handled fairly, ethically
- \_\_\_\_\_ The topic was tied back in with themes of this course

## Presentation:

- \_\_\_\_\_ Terminology used appropriately
- \_\_\_\_\_ Speaker confident and comfortable with material being presented
- \_\_\_\_\_ Grammar, pronunciation, and articulation
- \_\_\_\_\_ Speaker's voice was expressive, sincere, "passionate"
- \_\_\_\_\_ Facial expression, gestures, movement, posture contributed to the speech
- \_\_\_\_\_ The pace, rhythm, transitions during the speech were effective

## Overall Assessment:

- \_\_\_\_\_ The speech met time constraints
- \_\_\_\_\_ The speaker was well-rehearsed
- \_\_\_\_\_ The topic was researched well and went beyond course information
- \_\_\_\_\_ Visual aids added to clear understanding, interest
- \_\_\_\_\_ The speaker handled the assignment creatively
- \_\_\_\_\_ Audience interest was aroused and satisfied

## Comments:

# ***Grading Outline for Logbooks, Coastal Presentation***

<b><u>CONTENT</u></b>	poor	satisfactory			excellent
Subject material itself proves knowledge (depth)	1	2	3	4	5
References used (not just internet)	1	2	3	4	5
Shows leadership role in part of project	1	2	3	4	5
Range of scientific information, not too specific	1	2	3	4	5

## **JOURNAL ENTRIES**

Frequency of entries	1	2	3	4	5
Amount of information/detail in entries	1	2	3	4	5
Were there conversations with all class members	1	2	3	4	5
Number of emails/conversations with classmates	1	2	3	4	5

## **POST-PROJECT SUMMARY**

Does your summary CLEARLY ANSWER the following questions with supporting detail...

Do you think this was a good subject to choose? why?	1	2	3	4	5
How easy/difficult to track down info	1	2	3	4	5
What you learned about this subject	1	2	3	4	5
Has your perspective of coastal disasters changed	1	2	3	4	5
Do you feel you helped get the word out about MD/VA	1	2	3	4	5

## **NOTES:**