Fall 2005

SEMINAR AND RESEARCH IN MARINE ECOLOGY
Biology 474

Class: 429Carnegie
Lab 444 Carnegie
Monday 1300-?

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The object of this course is to conduct original research in marine soft-sediment ecology. Each semester, work focuses on designing a field program consisting of experiment and sampling to address a question of current interest concerning soft-bottom community structure and function and then implementing these plans on nearby intertidal mud and sand flats. This semester we will build upon work done several years ago by a thesis student. In addition to experimental design and field work, we will also read and critically evaluate primary literature, analyze data and prepare figures and tables, and learn to write scientifically. The goal of the course is to prepare a poster for presentation at a professional meeting and to possibly submit a scientific paper to a peer-reviewed journal.

Reading: Day, RA 1998. How to Write and publish a Scientific Paper, 5th ed. Oryx Press. 223 pp.

Research articles are listed by author's last name in the syllabus and are in a box in Carnegie 444. Very few articles have been selected because as part of course work students will find relevant articles for the entire class to read and discuss.

Class Meetings: Class meets on Monday beginning at 1300 for fieldwork, lab work, or discussion.

Field Work: Everyone is expected to participate in the fieldwork scheduled for class times. Fieldwork is dependent on low tide and we will often work into the early evening and at times other than Monday afternoon. In addition, there will often be considerable time required immediately after field work for measurements. **Additional fieldwork will be necessary** and will be scheduled according to the field program you design. This additional work will be conducted independently by individuals or groups of students. For all fieldwork, be prepared for cold, rainy weather and mud which will remove most footwear. Always bring rain gear, a sweater, wool hat, and long pants. Hip waders or wet suit booties work best in mud, though rubber boots will work if they are tight. The department has a variety of sizes of hip waders and wet suit booties.

Lab work: Some lab work will be scheduled for class time, but there will be **considerable** lab work outside of regular class hours. All students are expected to contribute their fair share to this work.

Grading: Everyone is expected to contribute to field and lab work, data analyses, writing, and editing. Each student will write a different section of the paper and poster and everyone will edit all sections.

Field and lab participation	50%
Class, writing and editing contribution	50%

Office Hours: I have no official office hours. My office is always open and I am generally available for students anytime I am on campus from **Monday-Thursday**. It is best to make an appointment if you want to be sure to see me. Please do not to try and meet with me the hour or so before class. I reserve Fridays for my thesis students. I am most easily reached by e-mail, but don't expect an instantaneous response. In the case of a crisis, you can call me at home at a reasonable hour.

TENTATIVE SCHEDULE
(Subject to change due to fieldwork)

DATE	TOPIC	READING
Week 1		
Sept. 5 Mon.	Orientation Overview of Soft-Sediment Communities	Peterson 1991 Lenihan & Micheli 2001
Week 2		
Sept. 15 Thur.	Discussion of Project	Chs. 1-3 Day Ambrose *et al*. 1998; Brown & Wilson 1997; Clough *et al*. 2005
Week 3		
Sept. 22 Thur.	Proposal due .	Stenton-Dozey et al. 2001; Watling, *et al*. 2001.
Week 4		
Sept. 29 Thur.	Filed work: set up plots (L: 1519, 1.6 ft.)	
Week 5		
Oct. 6 Thur.	Data & Lab analysis	Ch 7, Timme*r et al*. 2001
Week 6		
Oct. 13 Thur.	Field work (L:1353, 0.9 ft.)	
Week 7		
Oct. 20 Thur	Data & Lab analysis	Ch 8; Hiddink 2003; Student paper
Week 8		
Oct. 27 Thur.	Field work (L:1349 2.0 ft.)	
Week 9		
Nov 3 Thur.	Methods Due Data & Lab analysis	Ch. 9 Castaldelli *et al*. 2003; Viaroli *et al*. 2003; Student paper

DATE	TOPIC	READING
Week 10		
Nov. 10 Thur.	Methods Edit Data analysis, lab work	Ch. 10, Student paper
Week 11		
Nov. 17 Thur.	Results due	Chs. 6 & 4, Student paper
Week 12		
	THANKSGIVING BREAK	
Week 13		
Nov. 28 Mon.	Discussion Due, Results Edit **Draft Poster Due**	
Week 14		
Dec. 5 Mon.	Final Draft Edit Final Poster Due Oral, power point presentation	Tufte 2003

December 9: Final Paper Due