

EOS 831. Systems Approach to Biological Ocean Science
Fifty Years of Ocean Discovery*

Spring Semester (Tuesdays 2:10 - 5:00)
Instructor: Ann Bucklin (Professor of Zoology / EOS)

This graduate-level course is a structured, integrated series of presentations. The focus of the course changes each time it is taught, but all topics use a "systems" approach that is intended to focus attention on the major problems facing ocean science in the near future. Previous offerings included: ocean, estuarine ecosystem dynamics, and ecosystem dynamics of Georges

During Spring Semester 2001, the course focus was: Fifty Years of Ocean Discovery. The syllabus included here is meant to serve as an example of how the course is organized. This syllabus was based on a book of the same title prepared by the National Research Council (Nat. Acad. Press, Washington; 2000).

Class sessions include lecture, discussion, demonstration, and laboratory. Assigned readings are selected by each guest; class sessions include discussion of the assigned reading. Grades are based on midterm and final writing assignments based on the reading.

Undergraduate students with at least two prior courses in oceanography should consider taking the course this year; particular effort will be made to accommodate students of diverse background and interest.

* Title from the publication: Fifty Years of Ocean Discovery: National Academy Press, Washington (2000)

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 Fifty Years of Ocean Discovery
 Course Syllabus - Spring Semester 2001

Topic	Speaker
Introduction to the Class (Week 1)	Ann Bucklin
I. Biodiversity (Weeks 2 and 3)	
- microbial food webs	Jon Zehr
- zooplankton	Ann Bucklin
II. Technologies (Weeks 4 - 6)	
- in situ sampling technologies	Peter Wiebe
- ocean color from satellites	Janet Campbell
- ocean observing systems / AUVs	Scot Glenn
Spring Break	
Take-home midterm exam (Week 7)	
III. Functional ecology: bio-phys (Weeks 8 and 9)	
- turbulence and contact rates	Jeanette Yen
- IBM of plankton	Chris Naimie
IV. Climate Change (Weeks 10 and 11)	
- vertical migration / cycles	Mike Roman
- uv and coral reefs	Mike Lesser
V. The deep (Week 12)	
- deep sea bacteria	Andreas Teske
VI. Ecosystem dynamics (Weeks 13 and 14)	
- marine snow	Cindy Pilskaln
- ecological theory / complex effects	Heidi Forman
VII. Human impact (Week 15)	
- fisheries / Marine Protected Areas	Archie Rosenberg
Take-home final exam (during exam week)	