COASTAL AND OCEAN POLICY AND MANAGEMENT

A Marine Studies Consortium course (www.marinestudiesconsortium.org)

Instructor

Dr. Robert Brock, Adjunct Professor
School for the Environment
University of Massachusetts-Boston
Cell: 240-418-3490
Robert.Brock@umb.edu

Course Description

Welcome to a Marine Studies Consortium course! For many of you, this course is probably listed as *Coastal Zone Management* in your course catalogs. This course will examine major trends, issues and policy that are impacting the world's coastal and ocean resources. Scientific, economic, social and political aspects of each issue will be discussed and case studies will be used to illustrate the challenge of linking good scientific data with regulatory and management decisions. Topics include (but are not limited to) relevant coastal and ocean processes, international and national governance, coastal and marine spatial planning, marine protected areas, fishery management zones, coastal development, climate change and marine mammals.

Student Learning Outcomes

This course will give students an understanding of coastal and ocean management, policy, and laws as well as challenges in ocean protection as a public policy problem. Students will learn:

- How to define issues of concern for various target audiences
- Garner an overarching understanding of international/national/state jurisdictions and governing policies
- How to understand the political and institutional context of ocean protection and management
- What data and technical expertise are needed and the political, financial, and associated scientific challenges
- How to develop and implement tools to achieve management and policy objectives

Questions and issues to be addressed

- How does one structure management techniques based on a scientific understanding of resource values and functions?

Protecting and managing uses:

- How do the marine resources in question function? (natural ecosystems)
- How can human needs be met in an environmentally sustainable way (ecosystem services)?
- How can conflicting natural and human needs be accommodated (multiple uses)?
- How do we understand and respond to changing circumstances and needs (adaptive management)?

Class lectures and discussions will be derived largely from numerous topic-specific journal articles, Fact Sheets, topical briefings, and the like.

Weekly reading assignments

The reading assignments for each week are listed on the Wheaton College *onCourse* (for Wheaton College students) and media such as in *Dropbox or Google Drive…still considering the best method* for students from other Consortium institutions. These readings are very useful to prepare for upcoming lectures and aids in discussions. Relevant Fact Sheets and reading materials/journal articles will be assigned each week throughout the semester.

Class Attendance and Participation

The class only meets once per week so it's important to be in attendance. This course will involve active discussion and participation by all students. It will be much more interesting for all involved that way, especially with guest lecturers. Preparing for class by reviewing the assigned readings in advance is important. Students will be expected to read through assigned papers and come to class prepared to question/defend/discuss the major topical areas. If you will be unable to attend class, you will still be expected to meet assignment requirements and deadlines.

Guest Lecturers

Every effort has been made to bring in local topical experts to share their academic and professional experiences with the class. Each student should come to class on that day familiar with the guest lecturers work and institution. *Each student will submit via email 2 questions the instructor via email that deal with that week's topic and/or institution and/or instructor's academic and/or professional background by COB on that Monday.* The Instructor will pass along these questions to the Guest Lecturer. This is a great opportunity for students to ask experts about such things as graduate school education, types of careers, topics of publications, locations worked and the status of science there, possible volunteer/paid internships, job vacancies, and opportunities of interest.

Adherence to the College Honor Code at your college

As members of a Marine Studies Consortium institution, we commit ourselves to act honestly, responsibly, and above all, with honor and integrity in all areas of campus life. We are accountable for all that we say and write. We are responsible for the academic integrity of our work. We pledge that we will not misrepresent our work nor give or receive unauthorized aid. We commit ourselves to behave in a manner, which demonstrates concern for the personal dignity, rights and freedoms of all members of the community. We are respectful of college property and the property of others. We will not tolerate a lack of respect for these values. I accept responsibility to maintain the Honor Code at all times.

GRADING

Students' grades for the semester will be based on the following breakdown:

10% questions submitted for guest lecturers
15% law/policy oral presentation # 1
20% target species/assemblage research oral presentation # 2
25% mid-term examination
30% comprehensive final examination

STUDENT ASSIGNMENTS

Each student will prepare (a) two oral presentations to be delivered to the class, and take both a (b) mid-term and (c) final examination. Each of these assignments should demonstrate a good general understanding of marine resources issues (beyond just a recitation of facts) and an ability to clearly communicate that information. Ideas should be carefully organized and concisely presented, leading to thoughtful discussions.

1. Questions for Guest Lecturers (10%)

Students will submit two (2) questions to the instructor via email that deal with that week's topic and/or institution and/or instructor's academic and/or professional background by COB on that Monday.

2. Oral Topic/Policy/Law Presentation # 1 (15%)

You will select an ocean topic or critter that interests you and the associated law or policy associated with that topic/critter to prepare an oral presentation to be given to the class. Presentation visual aids are encouraged; you may prepare a Powerpoint presentation, transparency graphics for overhead projection, a slide show, posters and/or maps, or any other visuals appropriate for your topic. Class presentations should be planned for 10 minutes, with questions and class discussion to follow.

3. Oral Research Presentation # 2 (20%)

The final presentation is a 15-minute oral presentation that requires you to synthesize what you have learned throughout the semester and apply this knowledge to an issue of your choice. It is NOT a standard research project. Please follow these guidelines carefully:

Drawing on knowledge gained from the readings, class discussions, presentations, and contacts with outside organizations (e.g., Federal and State agencies, advisory committees, non-profits, citizen organizations) (a) identify an unresolved problem or a gap in ocean management, policy, science, or law, and (b) propose an approach to solving this problem or filling this gap.

Part A: Describe the problem or gap in detail, including:

a. Statement of the problem or gap
b. Description of the context (what is and is not known about the problem)
c. Description of the value of such knowledge (why is it important to fill the gap)

Part B: Describe an approach to solving the problem/filling the gap:

a. Give a summary of the solution (what is to be implemented?)
b. Describe the elements of the solution in detail (who does what?)
c. Describe a strategy for implementing the solution (how?)

4. ***Mid-Term Exam (25%)*** covers all material and discussions up to that point.

5. ***Final Exam (30%)*** covers all information presented and discussed during the entire semester.

Policy on Incomplete Grades

Students are eligible to receive a grade of incomplete only if circumstances beyond the student's control prevent the student from completing required course work. To receive an Incomplete Grade, the instructor, student, Consortium Board Member at the student's home school (if the student is from a member school) and a Consortium staff member must all agree that such circumstances exist. Agreement is reached when all parties listed above have signed an MSC Incomplete Grade Contract (form available from the MSC). The Contract must include a description of the circumstances surrounding the request for an incomplete grade, a list of all the work to be made up and the time by which it will be completed. The student must submit the signed Incomplete Grade Contract to the instructor by the last class meeting.

Tentative Course Schedule

WEEK*	GENERAL TOPICS
Jan 24	**Introduction and overview of the course:** Review of the syllabus, course objectives, discussions, assignments, and introductions to each other, including roles and responsibilities of each. General overview of some coastal and ocean issues and concepts using the **4 Pillars** of sustainability decision-making. Introduction to local, state, national, and international **maritime boundaries** and the **United Nations Convention on the Law of the Sea (UNCLOS);** jurisdiction and responsibilities of each party
Jan 31	**National Environmental Policy Act (NEPA) of 1969** and a flurry of **environmental legislation** that followed in the 1970s dealing with places and critters of the ocean, with discussion of many different examples. National Oceanic and Atmospheric Administration (NOAA) 101, including roles and responsibilities of the National Marine Fisheries Service (NMFS) and National Ocean Service (NOS)
Feb 7	**Offshore renewable and non-renewable energy** issues/laws/policies/agencies (*Guest Lecture*: Rachel Pachter*, Vice-President of Permitting Affairs, and Matthew Robertson*, Senior Manager of Environmental Affairs, Vineyard Wind LLC, New Bedford, MA)
Feb 14	**Marine protected areas (MPAs) and ocean zoning** issues/laws/policies/agencies (*Guest Lecture*: Ben Cowie-Haskell*, Deputy Superintendent, Stellwagen Bank National Marine Sanctuary, Scituate, MA)
Feb 21	**Oral Presentation # 1 (Introduction to laws/policies that address your favorite issue/critter)**
Feb 28	Introduction to **Coastal and Marine Spatial Planning** and practical hands-on exercises; Mid-Term review
Mar 7	**MID-TERM EXAMINATION**
March 11-15	**SPRING BREAK (Have fun!)**
Mar 21	Issues/laws/policies/agencies related to **marine mammals**: Marine Mammal Protection Act of 1972, Endangered Species Act of 1973, and relevant national and international governing bodies (*Guest Lecture*: Dr. Charles Mayo* Senior Scientist, Right Whale Ecology Program, Center for Coastal Studies, Provincetown, MA)
Mar 28	Issues/laws/policies related to current and expected **climate change** and the challenges of managing living marine resources in a changing climate
Apr 4	Issues/laws/policies related to living marine resources - **Fisheries Management and Policy:** Marine ecosystem management, State, Federal and International Management, harvest controls, management techniques, effects of fisheries on fish populations, interactions with birds and mammals (*Guest Lecture*: Douglas Christel*, Fishery Policy Analyst, NOAA Fisheries Service Greater Atlantic Regional Fisheries Office, Gloucester, MA)
Apr 11	Introduction to **deep-sea living and non-living resources** and national and international agencies/laws/ policies that address this large area of the ocean
Apr 18	**Oral Presentation # 2 (Review of laws/policies/information gaps/and recommendations to effectively manage or develop a policy that addresses critter or issue)**
Apr 25	Review of the semester: issues, management tools, policies, and laws. Where have we come and where should we go for effective ocean governance and sustainability? Review/preparation for the Final Exam

MAY 2 **FINAL EXAMINATION (*Comprehensive*)**

* Subject to change based upon the availability of guest lecturer