

MARS6910-1: CURRENT TOPICS IN MARINE SCIENCE

HAWAII PACIFIC UNIVERSITY
WINDWARD CAMPUS
SPRING SEMESTER, 2010

TIME: ----- 15:00 – 16:00
DAY: ----- Monday
ROOM: ----- HLC AC 204

INSTRUCTOR:

David Hyrenbach, Ph.D.

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Office: CTSA Building 112, at Oceanic Institute (http://www.pelagicos.net/images/office_map.JPG)

OFFICE HOURS:

Available by appointment

TITLE: Spatial Management of the High-Seas: from Marine Protected Areas to Multiple-use Zoning.

TEXT: We will use articles from the scientific literature and book chapters, selected by the students.

CREDITS: 1 (Pass / Fail)

PRE-REQUISITES: Enrollment in the Marine Science / Environmental Science Graduate Program or permission of the instructor.

COURSE DESCRIPTION: This is a graduate seminar course for students in the MSMS program. Current topics seminars are designed to expose graduate students to new developments and discoveries in Marine Science by taking advantage of seminars and other educational opportunities inside and outside HPU. While this flexible structure may vary with instructor and topic, most will be structured as seminar courses. Students will be assigned readings in the current literature of the course topic and required to critique the readings and relate the materials to their own research or the instructor's area of expertise.

This course focuses on the importance of critically reading, understanding, and discussing the original scientific literature. Furthermore, the students will gain an overview of the history, developments, and future directions of the use and application of marine spatial planning for conservation and resource management.

Class meetings will be devoted to discussing papers from the original ecological literature (journal articles and book chapters). Students will take turns leading these group discussions and facilitating the critical evaluation of the readings. The number of class presentations and readings will be dictated by the enrollment in the class. Specific readings will be selected together by the students and the instructor.

SEMINAR TOPIC: This seminar, designed to complement the concurrent *Marine Conservation* course (MARS 6920) will review the conceptual and technological advances that have facilitated the design and implementation of Marine Protected Areas in the open ocean, and will look ahead towards the future developments in high-seas conservation. Students will read the scientific literature and discuss case studies designed to highlight the principles underlying the theory and practice of spatial management in the open ocean.

Student Learning Outcomes: By the end of this course students are expected to:

- Read and relate information verbally from papers published in the scientific literature. Students will verbally present assigned papers to the class with following a scientific seminar environment. Presentations will include a synopsis of background materials, statement and explanation of hypotheses, descriptions of methods, explanation and critical analysis of results, and synopsis and critical analysis of conclusions.
- Critically evaluate and discuss assigned papers from the scientific literature. Following seminar presentations of papers, the class will discuss the appropriateness of methods, data analysis, data presentation, and conclusions, and the implications of the research for marine protected area concepts and resource management and conservation in the open ocean.
- Find relevant published information from a variety of printed and electronic sources. Students will augment the readings suggested by the instructor with additional materials of their choosing.

GRADING: This seminar will be graded on a Pass / Fail basis. 60% of points are required to pass.

Grades are based on the following criteria:

Class presentations	30% (2 presentations; up to 15 points each)
Class participation	70% (14 meetings; up to 5 points each)

Participation points will be evaluated on the basis of your effort and commitment to learning. Evidence of this includes promptness and attendance in class, participating in discussions (and showing evidence of having carefully done the assigned readings) and seeking extra help when needed. Students are expected to read any assigned papers and book chapters prior to coming to class. Failure to do so will lead to the loss of your participation points for the class meeting.

Absence due to documented medical emergencies (showing a note from your physician indicating that you are too ill to attend classes) will be partially (no points for participation) excused if you complete a make-up assignment (lead an additional paper discussion). Students with more than five absences, documented or undocumented, will be dropped from the course.

Seminar Schedule

Date	Lead	Topic
1 / 25	Hyrenbach	Intro to seminar & MPA terminology
2 / 1	Michael / Titmus	MPAs for sessile habitats - mangroves / seamounts
2 / 8	Thomas	MPAs for sedentary / benthic species - reef fish
2 / 22	Rose	MPAs for marine vertebrates - the concept
3 / 1	Lopez	Marine mammal MPAs
3 / 8	Michael / Titmus	Marine bird MPAs
3 / 15	Elkjer	Pelagic MPAs - design principles
3 / 29	Barton	Pelagic MPAs - implementation
4 / 5	Thomas	Assessment of biodiversity MPAs
4 / 12	Rose	Assessment of fisheries MPAs
4 / 19	Barton	Creating MPA networks
4 / 26	Elkjer	Creating EBM MPAs
5 / 3	Lopez	Marine Spatial Planning - the way forward