

Last Updated: January 27, 2010

HAWAII PACIFIC UNIVERSITY
NSCI 6110B – Spring 2010
Graduate Seminar I
http://www.pelagicos.net/classes_graduate_seminar_sp10.htm

Course Location: Oceanic Learning Center (Oceanic Institute)
Course Times: Wednesday, 12:30 – 14:30

Instructors: **Dr. David Hyrenbach**
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COURSE DESCRIPTION:

This course is designed to help MSMS students plan their thesis research project by writing a detailed proposal outlining their proposed research project. This will include developing a testable hypothesis, designing a sampling and analytical plan, and developing a time-line for data analysis and presentation.

More specifically, students will:

1. Review the format and content of a scientific proposal
2. Develop a conceptual model of a research question and its implementation
3. Formulate one or more working hypotheses and devise a study to test them
4. Outline the resources and time-line needed to complete the proposed research
5. Write a proposal outlining the need, value and approach for the proposed research
6. Present this proposal in an oral format

COURSE STRUCTURE:

Students take this course during the second semester of the MSMS program, after they have successfully developed a literature review of their area of research. The class requires the student to develop a research proposal, under the direction of the thesis committee and with input from the course instructors and fellow students enrolled in this course. This proposal will serve as the basis of their master's research and thesis work. The students will defend their proposal in an exam scheduled with their thesis committee.

The students enrolled in this course are expected to attend weekly meetings to discuss, present and critically evaluate research concepts with the other students enrolled in the course. As part of this course, students will develop a complete and detailed research proposal and will present an oral summary of their proposed research. Furthermore, students will peer-review each other's research proposal and provide feedback on the oral presentations of fellow students.

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LEARNING OUTCOMES: After completion of this course students will be able to:

1. Demonstrate interdisciplinary knowledge of their field of research through discussion of the pertinent scientific literature
2. Apply and integrate the relevant literature, scientific principles and observations to solve complex problems in marine systems
3. Articulate the implementation of observational, theoretical and experimental studies
4. Write a professional quality research proposal that describes their proposed research
5. Deliver a professional quality oral presentation on their proposed research
6. Defend their proposed research to others in the scientific community, during both class discussions and the question / answer period after the proposal presentation

COURSE POLICIES:

Attendance and participation: The successful completion of a written proposal and an oral presentation of the research proposal are the only requirements of the course. However, students are expected to attend all class meetings, read assigned readings, and participate in discussions.

Late work: To facilitate the timely completion of the proposal, this course will follow a schedule of milestones and deadlines. Failure to meet these deadlines could result in failing the course.

ACADEMIC HONESTY:

Graduate students are expected to comply with HPU's academic honesty policies and are furthermore required to internalize the principles of scientific integrity. In particular, it is academically dishonest to **plagiarize** (i.e., to pass off someone else's intellectual work as your own). Directly quoting others, even with proper attribution of the source, is never done in scientific writing, so **there are no circumstances in which including someone else's writing in your papers will be acceptable in this course**. Any single occurrence of academic dishonesty in any form whatsoever may result in a grade of FD for the course. The grade of FD represents an F for academic dishonesty and it will remain a permanent part of your academic record, and is not subject to HPU's normal retake policy. For more information on what constitutes plagiarism, see the links in Campus Pipeline under the Libraries folder. Another excellent site on this topic can be found at Purdue University's Online Writing Lab at:

http://owl.english.purdue.edu/handouts/research/r_plagiar.html

ASSIGNMENTS:

The written assignments will consist of the completed research proposal, involving a justification section, a sampling plan with a schedule of research milestones, and a discussion of possible research outcomes and implications. A formal 20-minute presentation of the research proposal to the class is the other major requirement of this course.

GRADE DETERMINATION:

The students will be graded on a Pass / Fail basis. If the proposal is approved by the thesis advisor and the presentation is deemed acceptable, the student will pass the course. A lack of progress, as judged by the instructors, can be sufficient reason to fail the course. Despite acceptable progress during the course, failure to finish the proposal by the end of the semester will result in an incomplete grade (I)

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COURSE SCHEDULE: The class meetings and submission dates are presented below.

week	dates	topics	assignment (for class)	assignment (with advisor)
1	27-Jan	Course expectations and goals; Format and content of thesis proposal		
2	3-Feb	Conceptualizing research Select groups for student presentations (Feb 17-24)	Submit one paragraph update on thesis ideas	Discuss scope and focus of thesis
3	10-Feb	Research design	Submit preproposal (signed by advisor)	Advisor reads and signs preproposal
4	17-Feb	Student presentations (Group 1)	Present conceptual model (mind map) of research approach and steps	Discuss conceptual model with advisor
5	24-Feb	Student presentations (Group 2)	Present conceptual model (mind map) of research approach and steps	Discuss conceptual model with advisor
6	3-Mar	Experimental design	Submit hypotheses (signed by advisor)	Discuss hypotheses with advisor
7	10-Mar	Discussion of experimental designs (Group 1)	Present ideas for design of your research and experiments	
8	17-Mar	Discussion of experimental designs (Group 2)	Present ideas for design of your research and experiments	
9	24-Mar	Holiday: Spring Break	Submit research timeline and list of resources	Discuss resources / timeline with advisor
10	31-Mar	Discussion of Logistics (Equipment / Timeline)	Present timelines and needed resources	
11	7-Apr	Group Discussion: Problems & Dilemmas Select groups for student presentations (Apr 28 – May 5)	Forward questions to instructors before class, to allow for feed-back	Discuss problems / dilemmas with advisor
12	14-Apr	NO CLASS (individual meetings)	Write-away	
13	21-Apr	NO CLASS (individual meetings)	Write-away	Draft proposal due to advisor - for review
14	28-Apr	Student proposal presentation (Group 1)	Submit draft proposal (signed by advisor)	Draft proposal returned by advisor
15	5-May	Student proposal presentation (Group 2)	Write-away	Final proposal due to advisor - for review
Final Exams	12-May	NO CLASS (individual meetings)	Submit final proposal (signed by advisor)	Final proposal returned by advisor