

Field Studies in Subtidal Ecology
MSL 421/623 Spring 2015

Fees: \$300 This covers: limited gear rental, tanks, lodging and food during spring break
This does not cover: travel to the lab, extra certifications

Instructor: Brenda Konar
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Open office hours – Tuesday 930-1030 or call/email for appointment
Scientific Diving Web Site: <http://www.sfos.uaf.edu/dive/>

TA :
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Lecture: Wednesday 5pm 201 ONL

Learning Objectives: It is expected that this course will allow students to develop their own research question involving nearshore systems in Kachemak Bay Alaska and conduct their proposed research using scuba as a tool.

Course Description: Students in this course will propose a hypothesis that they will experimentally test during a one-week field trip to the Kasitsna Bay Marine Lab. Associated with their hypothesis, they will develop a proposal, dive plan, and materials list. The proposal will be orally defended in front of the class prior to turning in a written 3-4 page proposal. Field work can not occur until a satisfactory written proposal, dive plan, and materials list is complete. After finishing the fieldwork, undergraduates will present their findings in a poster while graduate students will present theirs in a poster *and* public seminar. Posters may be turned in one week prior to their due date for feedback. Practice talks are highly recommended for graduate students.

Prerequisites: Scientific Diving (or AAUS certification), basic biology/ecology
Students *must* be current in CPR, First Aid, O2 Administration, have a current AAUS medical physical, and be a current UA AAUS diver.

Grading:

Grading will be apportioned as follows:

Oral presentation of proposal:	20%
Written proposal:	30%
Dive plan:	10%
Materials list:	10%
Final presentation/poster:	30%

Absolute scores will be used to determine final grades, which will be on the +/- scale.

	A = 93-100%	A- = 90-92%
B+ = 87-89%	B = 83-86%	B- = 80-82%
C+ = 77-79%	C = 73-76%	C- = 70-72%
D+ = 67-69%	D = 63-68%	D- = 60-62%
	F = 59% and lower	

Course Detail:

3-4 Page Written Proposal: Undergraduates and graduate students will write a proposal. Arial 10 font with line spacing at 1.5 lines is required. Figures can be added but do not count towards the page count. This proposal will include 1) a title, 2) a brief introduction, which will introduce the reader to the general topic, 3) a general rationale explaining why the proposed question/hypothesis is scientifically interesting, 4) a detailed methods section, including a site description, and 5) a reference cited section.

For undergraduates: The proposal must cite at least five papers (from peer-reviewed journals, not websites or books) in the introduction and/or methods sections.

For graduates: The proposal must cite at least ten papers (from peer-reviewed journals, not websites or books) in the introduction and/or methods sections.

Oral Proposals: Undergraduates and graduate students will do an oral proposal presentation. Oral proposals will be done in Powerpoint. They should be 10 minutes long with 5 minutes for questions. They should include a title slide, 3-4 slides that introduce the topic (ie what is known about this subject and why should we care), one slide that states the question/hypothesis, and then 4-5 slides clearly explaining the methods (include a study site slide). Include a slide or two on expected outcomes/implications. Students will help evaluate each others proposals.

Posters: Undergraduates and graduate students will complete a poster on their research results. These should follow a typical conference poster style (see the many posters in the halls of the ONL building or the Kasitsna Bay Lab for examples). Posters should have a short introduction and methods section (including a study site figure). The bulk of the poster should be a results/discussion section. Remember that the best posters have less text and more images (graphs, etc...) but also remember that some text is needed to explain results so do not show many result graphs with no associated text. It is recommended that posters be turned in at least one week prior to their due date for feedback.

Posters should specifically include:

- Title
- Your name and affiliation
- Introduction section (ie why is this interesting and why should we care)
- Study site map
- Section on Methods
- Section on Results with graphics
- Section on Conclusion/Implications
- Acknowledgments (who helped?)

Oral presentations (Graduate students only): These will be done in Powerpoint. They should follow a typical conference style presentation. They should be 15 minutes with 3 minutes for questions. These should include: a short introduction (what is known, why we should care), state your question/hypothesis, Show your study area, explain your methods, and finish with your results/discussion/implications. Don't forget acknowledgments.

Powerpoint Presentations should specifically include:

- A title slide
- Approx 3-4 slides on background/introduction..
ie why is this interesting and why should we care
- 1 slide specifically stating your objective/hypothesis
- 1 slide showing your study site(s)
- 2-3 slides on methods
- 1 slide on expected outcomes (or 3-4 on results and implications of the results if it is the final presentation)
- Acknowledgments (who helped?)

SCHEDULE

DATE	TOPIC
Jan 21	Orientation, paper work, requirements.
Jan 28	Discuss project ideas. Talk about sampling
Feb 4	Discuss project ideas

	Present Observation, Question, and Hypothesis
Feb 11	Discuss project ideas Present Observation, Question, and Hypothesis Preliminary Experimental Design
Feb 18	Discuss project ideas Present Observation, Question, and Hypothesis Preliminary Experimental Design
Feb 25	Discuss project ideas Experimental Design
Mar 4	Present Proposals (oral Powerpoint) Presentations should be 10 minutes with 5 minutes for questions dive plan (timeline) and materials list due
Mar 11	2-3 page written proposal due, pass out materials, check out gear
Mar 14-22	SPRING BREAK: complete projects at Kasitsna Bay Laboratory
April 15	Practice Talk
April 22	Posters due. Turn in by noon (email is fine if small)
April 29	Final presentations at the IMS. Seminar 330-430 in 201 ONL

Course readings/materials: All students must be familiar with the Scientific Diving Manual: <http://www.sfos.uaf.edu/dive/manual/contents.html>
Students are expected to do literature searches and outside reading of the primary literature as related to their class project.
Organism keys and field guides will be provided while at the Kasitsna Bay Laboratory.

Boating: Any student wanting to use boats for their project must take the on-line boating class prior to spring break and bring their completion certificate with them to the lab. A practical exam and orientation will be given at the lab.
<http://www.boatus.org/onlinecourse/Alaska.asp>

Course policies: Attendance is expected unless there is a good reason for the absence (illness or research-related travel). Students must contact the instructor prior to a planned absence. Plagiarism will not be tolerated in any form. Any paper that contains plagiarized material will receive a grade of zero, and may possibly be grounds for flunking the class. Be sure you understand what constitutes plagiarism. For an explanation of what constitutes plagiarism see: <http://www.uaf.edu/library/instruction/handouts/Plagiarism.html>

Turning in late assignments will result in the reduction of the grade by one full grade (A becomes B) for each 2 days that it is late.

Support and Disability Services: At UAF, the Office of Disability Services (203 WHIT; 474-5655; TTY 474-1827; fydso@uaf.edu) ensures that students with physical or learning disabilities have equal access to the campus and course materials. If you have specialized needs, please contact this office or the instructor to make arrangements.

The class is a field course. Facilities at the lab are disability accessible. However, SCUBA diving excursions are required.