**Kelp Forest Ecology**
MSL 456

**Summer XXXX**
Dates:

CREDITS: 2
PREREQUISITES: upper division undergraduate marine science and current UA AAUS certification
MEETING TIME/COURSE TYPE: This is a field course that meets daily at the Kasitsna Bay Lab
INSTRUCTOR: Brenda Konar

## *COURSE DESCRIPTION*

Introduction to knowledge, hypotheses, and disputes regarding kelp forest ecology, including the environmental and ecological interactions that influence their distribution, structure, and function. Course includes lectures, discussions, labs, and scuba diving field trips. We take a global perspective but focus on local Alaska subtidal flora and fauna.

## *STUDENT LEARNING OUTCOMES*

For 456 undergraduates:

You will have an understanding of the existing knowledge, hypotheses, and disputes regarding kelp forest communities and the ecological interactions that influence their structure and dynamics,

You will be able to identify common Alaska subtidal fish, invertebrates, and macroalgae,

You will be able to sample for various metrics in kelp forests,

You will be able to conduct research in kelp forests.

For 656 graduates:

You will have a deep understanding of the existing knowledge, hypotheses, and disputes regarding kelp forest communities and the ecological interactions that influence their structure and dynamics,

You will be able to identify common Alaska subtidal fish, invertebrates, and macroalgae,

You will be able to analyze, synthesize, and present data (in an oral presentation) from the long term monitoring sampling that will be completed by all students during the course

You will be able to lead labs (set-up, data organization, and analysis, and present results to the class);

You will be able to critically evaluate and then lead paper discussions of current relevant literature;

You will show mastery of different sampling methods and the ability to choose and

conduct the correct type of sampling for a given question.

## *COURSE READINGS/MATERIALS*

There are multiple peer-reviewed scientific papers that we will read and discuss during the course. These will be supplied to you in electronic format.

## *TECHNICAL REQUIREMENTS FOR COURSE*

Students must have regular access to a laptop computer. There is (limited) internet at the Kasitsna Bay Lab.

## *INSTRUCTIONAL METHODS*

This is a field course at the Kasitsna Bay Lab. Lectures, labs, and field excursions will all be done while at the lab. Facilities at the lab are disability accessible. However, SCUBA diving excursions are required.

## *COURSE POLICIES*

**All assignments must be completed by the date they are due**.
No late assignments will be accepted, and you will receive 0 points for any assignment not submitted by the due date. I may grant exceptions under very rare circumstances (e.g., severe sickness over prolonged periods).

## *ACADEMIC INTEGRITY*

As described by UAF, scholastic dishonesty constitutes a violation of the university rules and regulations and is punishable according to the procedures outlined by UAF. Scholastic dishonesty includes, but is not limited to, cheating on an exam, plagiarism, and collusion. Cheating includes providing answers to or taking answers from another

attribution. Collusion includes unauthorized collaboration with another person in preparing written work for fulfillment of any course requirement. Scholastic dishonesty is

For more information go to Student Code of Conduct.

## *GRADES*

| | |
|---|---|
| Paper Discussions | 10 |
| Organism Exam | 25 |
| Herbarium | 20 |
| Final Exam | 25 |
| Labs | 20 |

Paper Discussions

Students will read assigned papers and contribute at least one criticism or one positive attribute for each paper. Students should be able to relate the paper to field observations.

Organism Exam

The class will keep a running list of common organisms (fish, invertebrates, and seaweeds) found during field trips. Each student will be expected to identify and

your transcript.

## ***OTHER PERTINENT INFORMATION***

### *BOATING*

Any student wanting to drive boats for their project must take the on-line boating class prior to the start date of the course 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**

### *STUDENT PROTECTIONS STATEMENT*

UAF embraces and grows a culture of respect, diversity, inclusion, and caring. Students at this university are protected against sexual harassment and discrimination (Title IX). Faculty members are designated as responsible employees, which means they are required to report sexual misconduct. Graduate teaching assistants do not share the same reporting obligations. For more information on your rights as a student and the resources available to you to resolve problems, please go to the following site: https://catalog.uaf.edu/academicsregulations/students-rights-responsibilities.

I will work with the Office of Disability Service to provide reasonable accommodation to students with disabilities. Contact information: uaf-

## *COVID*

Students should keep up-to-
related to COVID-19 by regularly checking this website:
https://sites.google.com/alaska.edu/coronavirus/uaf/uaf-students?authuser=0

mandates and are subject to disciplinary actions if they do not comply.

## *SAMPLE COURSE SCHEDULE:*

| | | | | |
|---|---|---|---|---|
| | | | | |
| DATE | | morning | afternoon | evening |
| | | | arrive at the lab | Meet and chat |
| 1 | | Lectures:<br>-Kelp Forest Introduction | | |

| | | | | |
|---|---|---|---|---|
| 10 | | off | **Organism Exam** | Planet |
| 11 | | Dive: (Kasitsna Bay) chemosensory ability and sea star movement | Dive: (Kasitsna Bay) chemosensory ability and sea star movement | Paper Discussion: Brewer and Konar 2005 |
| 12 | | Dive: Hezketh<br>Resample tagged plants | Examine growth data | off |
| 13 | | off | **Herbariums due**<br>**PSS Presentations (grad students)** | off |
| 14 | | off | **Final Exam** | |
| | | Leave lab | | |