Course Title: **Advanced Marine Environmental Science** (**Lab**)
Course Number: **ENV 415L**
Term: **Spring 2023**
Course Credits: **1**
Class Meeting Times: **Thur 8:30-11:20**
Class Location: **Henry Hall Lab 4 & in the field**

Instructor Name: **Dr. Lupita Ruiz-Jones**
You can call me Dr. Lupita or Professor Lupita
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Office Location: **Wesselkamper 104**
Cell Phone (welcome to text, lmk who you are): **505.603.1985**
Office Hours: **Tues 11:00-1:00 / Wed 12:00-2:30 / Thur 11:30-1:00 in-person or zoom** (zoom link in Canvas - text me to lmk you want to zoom)

Course description from University catalogue
The lab portion of the course will be an opportunity for students to practice and cultivate the skills involved in the Hawaiian concept of kilo (keen observation), collaboration, data collection, and data analysis. Students will visit field sites and collaborate with community members on specific restoration projects. For the project component, students will work in teams to develop research questions, determine a data gathering plan, collect data, analyze data, and communicate their findings. Laboratory activities will be conducted in the field and on the Chaminade campus. Co-requisite: ENV 415

Course overview
A running theme in the lab portion of the course will be the Hawaiian concept of kilo or keen observation. We will visit a coastal site where members of the community are actively working on restoration projects. The field visits will be opportunities for you to practice kilo ~ being observant of what is going on in the environment and asking critical questions. After field visits where you collaborate with locals and contribute to restoration projects, you will submit short reflections on Canvas.

A second running theme for the lab will be data collection, analysis, and visualization. We will deploy environmental loggers at two loko i'a (fishpond) sites. You will gain experience of what it is like to do field work by doing everything necessary to acquire and visualize environmental data from start to finish.

Types of lab activities and projects:

- Photographing what you observe in the marine environment
- Collaborating with community members on restoration projects
- Calibrating, deploying, and retrieving environmental loggers
- Organizing and visualizing data with R
- Reflecting on your experience with community members through Canvas reflections

Classroom etiquette (in the time of the COVID)

If and when it is deemed safe for us to unite in the same physical classroom, our primary goal will be to keep each other safe. No eating during class. Keep physical space between you, your peers and me. And if you test positive for COVID, be responsible and stay home, and let me know your situation.

Environmental Science Program Learning Goals

This course is part of the Environmental Science program. These are the Program Learning Outcomes for the program.

Upon completion of the undergraduate B.S. program in Environmental Science, students will be able to:

1. Authenticate their commitment to service, justice and peace through experiential project-based activities that enhance the condition of the integral ecology, care for creation and value all voices.
2. Apply scientific reasoning and methodology to environmental problems.
3. Identify the major physical, chemical and biological components, interactions and cycles of earth systems and ecosystems.
4. Propose, design and participate in scientific research projects that document, describe and/or help solve environmental problems and foster sustainability.
5. Pursue throughout their education new scientific knowledge and techniques that prepare them for the adaptation and change essential to environmental problem solving.

Course Learning Outcomes and their evaluation

By the end of the course, you will be able to:

1. Think like a scientist by developing research questions and analyzing different types of sources.
    a. Evaluated during lab activities and via Final Scientific Research Poster Project.
    b. Satisfies part of Program Learning Outcome 2 and 4.
2. Analyze data figures and draw conclusions founded in evidence.

    a. Evaluated during lab activities and via Final Scientific Research Poster Project.
    b. Satisfies part of Program Learning Outcome 2.
3. Explain the significance of local marine restoration projects
    a. Evaluated via Kilo Field Reflections post field visits.
    b. Satisfies part of Program Learning Outcome 1.

See Canvas Modules for the tentative schedule

Grading breakdown

* The grade listed in Canvas is NOT accurate because it does not include Participation. If you are ever curious about your grade ASK ME :)

10% = Attendance (roll call in Canvas)
10% = Engaged participation with peers, me, and guests (requires arriving to class prepared); also includes some canvas discussion posts.

- To earn an A involves:
    - Regularly asking questions and responding to questions.
    - Being prepared for lab activities.
    - Engaging attentively in lab activities.
- To earn a C involves:
    - Being present.
    - Demonstration of lack of preparedness for lab activities.

20% = Kilo Field Reflections submitted on Canvas after field visits
30% = Field data collection, including, but not limited to, note taking, photographing, data science workshops, and maintenance of field equipment
30% = Final Lab Project: Scientific Research Poster ~ data analysis and science communication

A = >90%: Outstanding scholarship and an unusual degree of intellectual initiative
B = 80-89.9%: Superior work done in a consistent and intellectual manner
C = 70-79.9%: Average grade indicating a competent grasp of subject matter
D = 60-69.9%: Inferior work of the lowest passing grade
F = <59.9%: Failed to grasp the minimum subject matter; no credit given

Late work policy

This policy applies to components of the major projects: Final Lab Project: Scientific Research Poster. If something happens and you know you need an extension on an assignment, contact me. If we do not make a prior arrangement, 10% of the assignment points will be deducted for each day after the assignment due date. Generally canvas discussion posts are not accepted late.

Workload expectations (Credit Hour Policy)

Students are expected to devote a minimum of 2 hours of focused work out of class for each 1 hour of class time per week.

Attendance and your grade

As an enrolled student in the course, I expect that you will attend every class unless you test positive for COVID or have another type of medical emergency. If you have more than two unexcused absences your grade will be negatively impacted. An important aspect of learning is active engagement. There is no substitute for being in class when it comes to understanding and thinking critically about the material. Unexcused absences occur when playing hooky to go surfing, to sleep, to cram for an exam in another class, etc.

Course website

We will use Canvas and google drive.

Course Policies - same as those listed in the lecture syllabus

This syllabus and course schedule are living documents: they are free to change. I try to adhere as closely as possible, but there will be times in which we will take longer on a particular topic or add or delete a topic to enhance the course. I like to be able to react to you as the course proceeds and go with the flow a bit in order to make the course experience sort of custom fit to you!

You are responsible for all of the information in this document: not reading it does not make you exempt from knowing what's in it!

Use this syllabus to keep you organized and how your grade is determined.