



Course Title: **Advanced Marine Environmental Science (Lab)**

Course Number: **ENV 415L**

Term: **Spring 2024**

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**

Email: guadalupe.ruiz-jones@chaminade.edu

Office Location: **Wesselkamper 104**

Cell Phone (welcome to text, lmk who you are): **505.603.1985**

Office Hours: **Tues 12:00-1:00 / Wed 12:30-3:00 / 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 catalog

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 (with data science), and visualization. We will deploy environmental loggers at a loko i'a (fishpond) and a spring in the community. 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:

- Collaborating with community members on restoration projects
- Photographing what you observe in the marine environment
- Calibrating, deploying, and retrieving environmental loggers
- Organizing and visualizing data with programming language R in the platform RStudio
- Communicating your field observations and data analysis with a scientific research poster

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.

15% = Attendance (roll call in Canvas)

20% = Engaged participation in the lab and in the field 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.

15% = Kilo Field Reflections submitted on Canvas after field visits

10% = Presence Reflections submitted for Service Learning Project at Kalauha'īha'i and Kānewai

15% = Data Science Workshops and submission of R code and graphs generated

25% = 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.

Attendance and your grade

As an enrolled student in the course, I expect that you will attend every class unless you are sick. **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.

Workload Expectations ~ Credit Hour Policy

- ENV415L is a 1 credit class requiring a MINIMUM of 45 clock hours of student engagement, per the official CUH Credit Hour Policy.
- We will meet once a week: 2h 50min each week for 15 weeks = ~42h for the semester
- Most weeks you will have reflections (Kilo Field Reflections and/or Presence Service Reflections) that are expected to take you ~1h per week (15h).
- It is expected that background research and preparation of your Final Scientific Research Poster will take you ~15h.

The unit of semester credit is defined as university-level credit that is awarded for the completion of coursework. One credit hour reflects the amount of work represented in the intended learning outcomes and verified by evidence of student achievement for those learning outcomes. Each credit hour earned at Chaminade University should result in a minimum of 45 hours of engagement, regardless of varying credits, duration, modality, or degree level. This equates to one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work each week for approximately fifteen weeks for one semester. Terms that have alternative lengths, such

as 10 week terms, should have an equivalent amount of faculty instruction and out-of-class student work to meet each credit hour. Direct instructor engagement and out-of-class work result in total student engagement time of 45 hours for one credit. The number of engagement hours may be higher, as needed to meet specific learning outcomes.

Specific Credit Situations

The minimum 45 hours of engagement per credit hour can be satisfied in fully online, internship, or other specialized courses through several means, including (a) regular online instruction or interaction with the faculty member and fellow students and (b) academic engagement through extensive reading, research, online discussion, online quizzes or exams; instruction, collaborative group work, internships, laboratory work, practica, studio work, and preparation of papers, presentations, or other forms of assessment. This policy is in accordance with federal regulations and regional accrediting agencies.

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.