



Sea Turtle Ecology and Conservation BIEB 137GS (4 UNITS)

COURSE DESCRIPTION

Course Description

This course explores the life cycle, ecology and conservation of marine turtles through hands on research in the field and analysis of data. We will explore topics in sea turtle ecology and conservation in the context of a population of Olive Ridley turtles that breeds in Ostional, Costa Rica. This population is unique in that it experiences “Arribadas”, or mass nesting events when hundreds or thousands of females come ashore to lay eggs, synchronous with the lunar cycle. We will contribute to a nearly 20 year research project studying these turtles by walking the beach at night, counting nesting females and their eggs. The course will examine the biological and social dimensions of sea turtle ecology and conservation and their relationship to human well-being. Students will gain skills in field ecology, wildlife biology, data collection and analysis, scientific communication and the interaction between people and natural ecosystems.

Grading and Evaluation:

1. Sea Turtle Field Studies Evaluation (STFSE) (20% of final grade).

Participants are assigned a rank (1-5) based on eight elements of their field work and participation for a total mark out of 20 points. Student's must involve themselves fully in the program activities and meetings/discussions. Failure to participate in any of these activities must be duly noted in the STFSE and should also be reflected in the assigned grade for their overall participation and attitude.

Several group discussions are scheduled and facilitated by the instructor or Invited Speakers, usually lasting one to two hours. Discussions are intended to encourage sharing of information and ideas, perspectives, and opinions among students and program staff. It is an open forum for learning that will assist students in accomplishing their personal and academic objectives during the project. Discussion topics will cover a broad range of issues including scientific related articles (which will be provided to participants for reading before the discussions), also current events, experiences, and conservation at local, regional and international scales. Topics for discussion will focus on sea turtle research, endangered species conservation, biology and ecology, management techniques, social-ecological systems, small-scale fisheries, common pool resources, conservation and management tools among others.

2. Participants Field Journal (PFJ) (25% of final grade):

Field journals should outline and detail the daily Field Course activities (tasks, encounters, experiences and conservation lessons learned), the issues that are presented (environmental and socio-cultural), the practical problems faced by local resource managers and how they are addressed, also reflections on research goals, applied science, challenges and opportunities. Students will be expected to record in-depth critical analysis of their experience.

3. Group experiential paper (30% of final grade, 4 pages max). The paper must be written in four sections all developed individually. The experiential memo follows up to what we learned in the field component of the experience. It should be divided into the following parts with the most weight placed on PARTS III & IV. The paper should include at least five peer reviewed articles under your references among others. All citations should use the style of [science magazine](#).

1. **Part I:** General introduction to sea turtles.
2. **Part II:** Sea turtles and Society. The historical and current connection between sea turtles and people.
3. **Part III:** A topic of your choice but more in depth from the ones we learned during the field/work. You would need to decide on one. Few examples: Sea turtle threats and solutions, sea turtle extractive and non-extractive uses (different values from economic to existence values), sea turtle mass nesting events behavior including historical data for analysis provided by our program, sea turtle international and national conservation policies/treaties. Please let your instructor know about your selected topic to provide support, materials and advice.
4. **Part IV:** Reflective experience. Finally, we would like you to wrap up your memo with a self-assessment from the experience, the personal impact it had on you and what was it that you learned. Also include an assessment and recommendations for the project and research you supported (constructive feedback and critical thinking).

4. Final Presentation (25% of final grade): Presentations will take place either individually and or in groups and students will be sharing major memo findings with images and figures. Each presentation will last a max of ~ 20 minutes (15 minutes with 5 minutes for questions and discussion).

5.

Some initial references:

[Economics of Sea Turtles](#): You can google Money Talks from WWF, Troeng and Drews and download the report.

[Arribada Mass nesting events](#): You can look up for Dr. Roldán Valverde as well as Dr. Pamela Plotkin, both topic experts. Pamela wrote an awesome book recently. [Biology and Conservation of Ridley Turtles](#).

[Marine Turtles and People](#): Dr. Jack Frazier has written about people and sea turtles extensively. A good resource, book and article writer to look-search for.

[Policy and the Interamerican Convention for Sea Turtle Conservation](#): The Convention attends to the need for implementation of harmonious measures between nations, multilateral coordination of conservation and protection actions, and oversight of the implementation of a regional agenda that will enable the recovery of these species.

Program Supervisor:

--

MSc. Wagner Quiros-Pereira
wagner@biomatravel.org

Graduate | [UCSB Bren School](#)
Lecturer | [UCSB Environmental Studies](#)

Academic Director
Summer Sea Turtle Field Course &
Expeditions | [BIOMA](#)
[LinkedIn](#) | [Google Scholar](#)

Instructor

--

Jonathan Shurin, Ph.D.
jshurin@ucsd.edu

Professor of Ecology, Behavior and
Evolution
UCSD