



University of California, Santa Barbara  
Program Learning Outcomes

**PhD in Ecology, Evolution, and Marine Biology**

***Upon graduation with a PhD in Ecology, Evolution, and Marine Biology:***

*Core Knowledge and Breadth Requirements in EEMB*

---

- Students will be capable of demonstrating broad knowledge within our departmental disciplines, including areas outside their specific areas of research.
- Students will have a deep understanding and expertise in one or more areas within our department such as community ecology, evolution, ecological physiology, biological oceanography, and ecosystem processes.
- Students will be able to review and judge the quality, relevance, and originality of scientific papers in their areas of specialization.

*Analytical Tools and Research Methodology*

---

- EEMB PhD students will be capable of generating hypotheses, testing them, analyzing the final data and synthesizing the results into papers for peer-reviewed scientific journals.
- Students will have a suite of analytical abilities and a variety of research methods sufficient to test hypotheses and analyze results in their field.
- Students will use these tools to be able to work independently.
- EEMB students will be able to search and understand the scientific literature to generate and implement new research methods and analytical approaches and procedures.

*Science Communication*

---

- Students will be capable of presenting their research results to a range of audiences in a variety of oral presentation formats including seminars and less formal presentations and discussions.
- Students will be capable of communicating the results of their original research with scientific peers in their core disciplines.
- Students will have the ability to write effectively at the levels found in relevant, first-rank, peer-reviewed journals, conference proceedings, and other written formats.
- Possible revision: Students will be capable of designing and leading EEMB classes.