

# UCLA

## Student Learning Outcomes for the B.S. in Marine Biology

The Marine Biology major is a designated capstone major. Students apply theory and technique learned through four years of classroom and laboratory experience to their own independent projects. The main purpose of the capstone is to provide a unique field experience that involves designing and executing a research project. Students are expected to:

- demonstrate broad-based knowledge of the fundamentals of Ecology, Behavior and Evolution or Marine Biology acquired through coursework, including general knowledge as well as developing skills in library research, interpreting data, synthesis, and scientific writing.
- utilize the current primary scientific literature, including searching data bases, identifying appropriate sources, and reading and understanding papers. This includes understanding key questions and hypotheses, interpreting results and conclusions, and discriminating quality through critique.
- use knowledge gained in classroom and during discussions to conceive and execute their own project, including developing their own questions and hypotheses, designing an appropriate theoretical or empirical/experimental approach, executing that approach, and analyzing and interpreting data.
- communicate original scientific work to colleagues and mentors in the form of a scientific paper as the culmination of the capstone experience. Other communication skills may include presenting their results in a Research Symposium either orally or as a poster.
- exhibit strong teamwork and problem solving skills during the entire capstone experience.