Academic Track in the Biological Science Major

**MARINE BIOLOGY**

Marine biology is the study of saltwater organisms, including algae, plants, and invertebrate and vertebrate animals, with respect to a specific aspect of their biology (e.g., ecology, physiology, behavior, reproduction). Students following this academic track are generally preparing for careers in teaching, government, or research. **Careers specific to marine biology typically require a graduate degree (i.e., M.S., Ph.D., or D.V.M.).** Qualified junior and senior undergraduates can apply to FSU’s Certificate Program in Living Marine Resource Ecology (see page 30) to help prepare for advanced careers in marine biology. The certificate program provides students with a background in marine biology through internships, research, and field and lecture courses.

**CURRICULUM:** Marine Biology (BSC 3312) should be taken as a background course as early as possible following completion of the major prerequisite courses. Conservation Biology (BSC 3052) and General Ecology (PCB 3043) are recommended for all students interested in marine biology. Students who plan to pursue graduate study in marine biology are strongly encouraged to take a Directed Individual Study (BSC 4900) or Research Methods (BSC 4933) course. The following represents a list of other recommended elective courses offered by the department that are applicable to marine biology. Students should determine which elective courses to take based on educational interests and career goals.

- **BSC 3402** Experimental Bio Lab (Marine only) (2)
- **BSC 4514** Aquatic Pollution Biology (3)
- **BSC 4900** D.I.S. (Marine only) (3)
- **BSC 4931** Sr. Tutorial (Marine only) (1)
- **BSC 4933** Selected Topics in Bio.: (Bio. of Fishes (4) or Marine Resource Mngmt. & Ocean Policy (3) only)
- **BSC 4937** Sem. in Living Marine Res Ecol (1)
- **BSC 4940** Research Intern Marine Bio (3-9)
- **BSC 4940** Prokaryotic Biology (3) and Lab (2)
- **PCB 4341** Adv. Field Bio. (Marine only) (3)
- **PCB 4723** Comp. Animal Physiology (3)
- **ZOO 3203/L** Adv. Invert. Zoology (2) & Lab (2)
- **ZOO 4204C** Biol. of Higher Marine Invert. (5)
- **ZOO 4343C** Biology of Lower Vertebrates (4)
- **ZOO 4513** Animal Behavior (4)

**Additional Recommended Electives Offered Outside of the Department of Biological Science:**

- **OCB 4930** Zooplankton Ecology (3)
- **OCE 4011** Principles of Oceanography (3)
- **OCE 4906** Directed Individual Study (1-3)
- **OCE 4906** Benthic Microbiology (3)

* Does not count towards the biological science major unless the student completes the FSU Certificate Program in Living Marine Resource Ecology.

**FACULTY:** Undergraduate teaching and guidance is a large part of the commitment of our regular faculty in Biological Science. Our faculty value interaction and discussion with undergraduates and encourage individual discussion and research projects by undergraduates. The following faculty have expertise in marine biology.

- **Lawrence Abele:** Molecular systematics and evolution in crustaceans
- **William Herrnkind:** Behavioral and ecological specializations of lobsters and other marine crustaceans
- **Don Levitan:** Population biology of marine organisms, reproductive strategies and mating success
- **Robert Livingston:** Large scale ecological mechanisms of aquatic systems
- **Michael Meredith:** Reception and processing of chemical stimuli in the nervous system of elasmobranchs
- **Timothy Moerland:** Physiology and biochemistry of fishes, temperature adaptation
- **Janie Wulff:** Roles of predators, physical disturbance and competition in shaping sponge faunas

**ADJUNCT FACULTY**

- **Felicia Coleman:** Life history strategies of reef fishes; fisheries management; marine fishery reserves
- **Chris Koenig:** Reef fish behavior and ecology; marine fishery reserves