

## Department of Biological Sciences

### MARINE/AQUATIC Track

The Marine/Aquatic Sciences track developed for Biological Sciences majors combines fundamental training in biology with exposure to the cross-disciplinary nature of both oceanography and limnology through introductory offerings in these topics as well as through required courses in chemistry and physics. A common misconception is that the fields of oceanography and limnology (the science of fresh waters) are disciplines of their own accord, whereas in fact, these are cross-disciplinary fields. Most scientists working in these fields obtained their primary degree in one of the traditional sciences and have chosen to apply their training to the study of oceans or lakes, respectively. A variety of upper-year offerings in specialized topics, an extensive inland aquarium facility, field courses offered through consortium agreements with the Gulf Coast Research Lab and Ohio State University's Stone Lab as well as opportunities for independent study with faculty mentors combine to provide students an enhanced educational experience while serving to prepare students for a satisfying career in the aquatic sciences.

#### **Required Courses**

*BIOL 200*: Biology Today (1)

*BIOL 204*: Concepts in Biology I (5)

*BIOL 205*: Concepts in Biology II (5)

*BIOL 350*: General Genetics (4)

*CHEM 125, 127 & 128 or 135, 137 & 138*: General Chemistry (10)

*CHEM 306 or 341, 344 & (345 or 346)*: Organic Chemistry (4-10)

*MATH 131 or 134 & 135*: Calculus (5-6)

*PHYS 201*: College Physics (5)

Biochemistry strongly recommended

In addition to completion of the required courses, a minimum of 17 hours of Biology electives must be completed. At least one course from each Group (I, II, III) must be completed as part of the 17 hours, and 10 of those hours must be 400 level.

#### **Recommended Courses**

##### *Group I. Biology of Organisms*

*BIOL 313*: Microbiology (4)

*BIOL 374*: Marine Biology (3)

*BIOL 427*: Invertebrate Zoology (4)

*BIOL 472*: Ichthyology (3)

##### *Group II. Ecology, Evolution & Behavior*

*BIOL 354*: Population and Community Ecology (3)

*BIOL 425*: Limnology (3)

*BIOL 451*: Evolution (3)

##### *Group III. Cellular, Molecular & Regulatory Biology*

*BIOL 408*: Molecular Biology (3)

*BIOL 411*: Animal Physiology (4)

*BIOL 443*: Microbial Physiology (3)

##### *Biology Electives*

*BIOL 370*: Intro to Inland Marine Research (3)

*BIOL 401*: Independent Research (1-4)

*BIOL 403*: Biological Experience at Stone Lab (Summer, 1-5)

*BIOL 488*: Topics in Marine Science (Summer, 1-6)

**The following courses are also good choices to fulfill Biology elective requirements.**

*Group I*: Algology (424)

*Group II*: Animal Behavior (420), Plant Ecology (422), Chemical Ecology (441), Microbial Ecology (445)

*Group III*: Cell Biology (407), Plant Physiology (417)

*Biology Electives*: Topics in Biology (400), Microbial Physiology Lab (444), Marine Biology Field Trip (475), Internship (489), Seminar (490)