

**250. Scientific Research Reporting (2)**  
Prerequisite: permission of instructor. Techniques of scientific photography and writing, illustrating emphasized. (1 lecture, 3 lab hours)

**255T. Topics in Botany (1-3; max total 8)**

Prerequisite: permission of instructor. Investigation of new fields, areas not in current courses, or advanced studies in a given area. (Lecture and/or laboratory)

**260T. Topics in Biology (1-3; max total 8)**

Prerequisite: permission of instructor. Investigation of new fields, areas not in current courses, or advanced studies in a given area. (Lecture and/or laboratory)

**265T. Topics in Physiology (1-3; max total 8)**

Prerequisite: permission of instructor. Investigation of new fields, areas not in current courses, or advanced studies in a given area. (Lecture and/or laboratory)

**270T. Topics in Zoology (1-3; max total 8)**

Prerequisite: permission of instructor. Investigation of new fields, areas not in current courses, or advanced studies in a given area. (Lecture and/or laboratory)

**274. Biometry (3)**

Prerequisite: one statistics class, preferably MATH 101. Application of statistical techniques to biological problems with emphasis on sampling, analysis of variance, experimental design, and regression techniques. Emphasis on analysis of real biological data and interpretation of results.

**275. Biogeography (3)**

Prerequisite: permission of instructor. Seminar in descriptive and ecological geography of animal and plant groups.

**281T. Seminar in Biological Science (1-2; max total 8)**

Prerequisite: permission of instructor. Reviews and reports on current literature in the various phases of biology.

**290. Independent Study (1-3; max total 6)**

See *Academic Placement — Independent Study*. Approved for *SP* grading.

**295. Research (2-6; max total 6)**

Prerequisite: permission of instructor. Independent research by the advanced graduate student.

**299. Thesis (2-4; max total 4)**

Prerequisite: See *Criteria for Thesis and Project*. Preparation, completion, and submission of an acceptable thesis for the master's degree. Approved for *SP* grading.

## IN-SERVICE COURSE

(See *Course Numbering System*.)

## Biology (BIOL)

**302T. Topics in Biology (3; max total 6)**

Prerequisite: graduate standing or permission of instructor. Relation of man to his surroundings; review of concepts, cell, physics and chemistry of life, energetics, inheritance, evolution.

## Moss Landing Marine Laboratories

The California State University began operation of the Moss Landing Marine Laboratories, Moss Landing, California, in the fall semester 1966. This facility functions as a seaside extension of the campuses of six cooperating state universities (Fresno, Hayward, Sacramento, San Francisco, San Jose, and Stanislaus). It offers full-time coursework in marine biology, oceanography, and other marine sciences for majors in either the biological or physical sciences whose objectives include further graduate study, teaching the sciences, or research in the marine sciences. Properly qualified upper-division and graduate students may enroll at the Fresno State campus for a term of instruction at Moss Landing and earn resident credit for such coursework. See *Earth and Environmental Science Department* for on-campus coursework in general oceanography and geology courses related to marine science.

Space reservation is required for attending Moss Landing Marine Laboratories. Forms for this purpose are available from the Biology Department or Moss Landing Marine Laboratories, P.O. Box 223, Moss Landing, CA 95039. Priority is determined based upon the date the space reservation form is received at Moss Landing Marine Laboratories. Since enrollment is limited, interested students should make early application.

## COURSES

**Note:** The following courses are offered at the Moss Landing Marine Laboratories. M SCI 103 and 104 are usually recom-

mended for first semesters of full-time students.

The Biology Department will accept only the following Moss Landing Marine Laboratories courses for major credit as indicated. Botany: M SCI 131, 144. Zoology: M SCI 112, 113, 122, 124, 125. Biology elective: M SCI 103, 104.

## Marine Science (M SCI)

**103. Marine Ecology (4)**

Prerequisites: ecology and statistics (or concurrent registration in M SCI 104) or permission of instructor. A field-oriented introduction to the interrelationships between marine and estuarine organisms and their environment with emphasis on quantitative data collection and analysis. (2 lecture, 6 lab or field hours)

**104. Quantitative Marine Science (4)**

Prerequisite: college mathematics. The mathematical methods for analysis of biological, chemical, and physical data from the marine environment; experimental design, parametric and nonparametric statistics. (3 lecture, 3 lab or field hours)

**105. Marine Science Diving (3)**

Prerequisites: upper-division science major; thorough physical examination; ability to pass swimming test. Skin and SCUBA diving course; pool-training culminates in 10 ocean dives. Topics include diving physics, physiology, diving environments, night diving, and research diving. Successful completion gives NAUI and MLML certification. (1 lecture, 6 lab or field hours)

**110. Introduction to Marine Behavior (4)**

Prerequisite: M SCI 103 or permission of instructor. Basic theoretical concepts of animal behavior, stressing the causation, development, and evolution of behavior. Emphasis is on the marine environment. (3 lecture and 3 lab hours)

**112. Marine Birds and Mammals (4)**

Prerequisite: upper-division vertebrate zoology; M SCI 103 recommended. Systematics, morphology, ecology, and general biology of marine birds and mammals. (2 lecture, 6 lab or field hours)

**113. Marine Ichthyology (4)**

Prerequisite: college zoology or equivalent. Taxonomy, morphology, and ecology of marine fishes. Both field and laboratory work concentrate on the structure, function, and habits of marine fishes and the ecological interactions of these fishes with