

180. Independent Study (1-4)

Prerequisite: permission of instructor. Open only to undergraduate students having adequate subject matter preparation for the selected problem. Faculty directed study of selected research problems in the marine sciences. (3 conference, lab, or field hours per unit)

GRADUATE COURSES

(See *Course Numbering System—Definitions and Eligibility*)

201. Advanced Studies in the Marine Sciences (3) (Former M Sci 283)

Prerequisite: M Sci 101 and 103, or permission of instructor. Study of major principles and concepts of marine sciences; analysis of outstanding research from recent scientific literature; development of laboratory exercises; for teachers-in-service or credential candidates; not open to science majors.

202. Marine Instrumental Analysis (4)

Prerequisite: M Sci 101 and 102 and quantitative analysis, or permission of instructor. Theory and use of advanced instrumentation; advanced field and laboratory techniques for the interpretation of data collected in marine science research. (2 lectures, 6 lab or field hours)

203. Advanced Marine Ecology (3) (Former M Sci 262)

Prerequisite: ecology and/or permission of instructor. Advanced considerations of marine populations, communities and ecosystems with emphasis on current literature. (2 lecture, 3 lab, field, or discussion hours)

211. Behavior of Marine Animals (3) (Former M Sci 285T section)

Prerequisite: M Sci 104 or statistics, or permission of instructor. The causation, development, and evolution of the behavior of marine animals. (2 lecture, 3 lab or field hours)

212T. Topics in Marine Vertebrates (4; max total 8)

Prerequisite: M Sci 111 and either 112 or 113, and also permission of instructor. Advanced considerations of the ecology, physiology, and/or phylogeny of fishes, birds and/or mammals; emphasizes current literature and research. (2 lecture, 6 lab or field hours)

221T. Topics in Marine Invertebrates (4; max total 8)

Prerequisite: M Sci 121 and permission of instructor. Advanced considerations of the ecology, physiology, and/or phylogeny of the various invertebrate phyla emphasizing current literature and research. (2 lecture, 6 lab or field hours)

222. Biology of the Mollusca (4)

Prerequisite: M Sci 121 and permission of instructor. Systematics, functional morphology, ecology, and physiology of mollusca with emphasis on marine forms. (2 lecture, 6 lab or field hours)

231. Advanced Marine Phycology (4)

Prerequisite: M Sci 131 and permission of instructor. Algal development, reproduction, and ecology; review of literature; ecologically oriented individual research including laboratory culture and field experimentation. (2 lecture, 6 lab or field hours)

232. Advanced Marine Plankton (4)

Prerequisite: M Sci 132. Ecology and population dynamics of marine plankton, including physical and chemical factors. (2 lecture, 6 lab or field hours)

241. Marine Microorganisms (3)

Prerequisite: college geology, M Sci 121 and permission of instructor. Study of fossil microorganisms and related extant forms with emphasis on environmental significance. (2 lecture, 3 lab or field hours)

242. Continental Drift (3) (Former M Sci 285T section)

Prerequisite: M Sci 141 and permission of instructor. Historical background and modern theory of continental drift; sea-floor spreading and general considerations on plate tectonics.