

2009

## Biology/Marine Sciences (BIMS)

Montclair State University

## **Biology / Marine Sciences**

BIMS220	Title Prerequisites Number and type of credits Course Description	students in the final phases of their professional preparation. The course uses hybrid teaching methods. Introduction to Marine Biology. BIOL 213 or departmental approval. 3 hours lecture, 3 hours lab. A field and laboratory oriented course covering the characteristics of marine plants and animals. The course is designed to provide the student with experience in collecting and identifying local marine flora and fauna.
BIMS431	Title Prerequisites Number and type of credits Course Description	Marine Invertebrate Zoology. BIOL 213. 3 hours lecture, 3 hours lab. A study of the invertebrates living in the marine realm with emphasis on the interrelations of these animals to their particular environment. Field work will include studies of the pelagic and benthonic forms associated with estuaries and the continental shelf. Also offered at the site of the New Jersey Marine Sciences Consortium.
BIMS433	Title Prerequisites Number and type of credits Course Description	Seashore Ornithology. BIOL 213. 1 hour lecture, 3 hours lab. Field identification of birds of the ocean, salt marsh, sand dunes, and adjacent land areas. Includes discussion of habits and ecology. Offered at NJ Marine Sciences Consortium.
BIMS490	Title Prerequisites Number and type of credits Course Description	Field Methods in the Marine Sciences. BIOL 213. 2 hours lecture, 4 hours lab. The application and techniques of marine sampling, including those of biology, chemistry, geology, meteorology and physics. The nature and role of various pieces of sampling equipment. Field experience at the NJ Marine Sciences Consortium.
BIMS564	Title Number and type of credits Course Description	Benthic Ecology. 1 hour lecture, 6 hours lab. Community structure, trophic dynamics, species diversity and distribution of

		bottom dwelling organisms in relationship to their environment; lectures, laboratory work and field investigations of the marine benthos. Also offered at NJ Marine Sciences Consortium.
BIMS592	Title Number and type of credits Course Description	Bacteriological Techniques in Marine Sampling. 6 hours lab. Standard methods of bacteriological water analysis, including MPN and membrane filtration. Special problems related to sampling and analysis of marine sediments, surface and sub-surface marine waters. NJ Marine Sciences Consortium. Cross listed with Biology, BIOL 504.
BIOL100	Title Special Fee Number and type of credits Course Description	Biological Sciences. Special fee. 3 hours lecture, 2 hours lab. The study of life from molecule to organism with focus on structure and function of cells, mechanisms of heredity and change, survey of animals and plants and their interrelationships in the living world. Open to non-majors as well as majors. BIOL 100 is not included in the GPA as a biology major course. Meets Gen Ed 2002 - Natural/Physical Science Laboratory.
BIOL103	Title Number and type of credits Course Description	Basic Biology I. 3 hours lecture, 3 hours lab. A study of the structure and function of cells, a survey of the plant kingdom describing the anatomy, physiology and ecology of plants with emphasis on the higher plants.
BIOL104	Title Number and type of credits Course Description	Basic Biology II. 3 hours lecture, 3 hours lab. Adaptation of structure to function of cells, tissues and organs of plants and animals. Physical, chemical and ecological forces affecting these. (3 hours lecture; 3 hours lab.)
BIOL105	Title Number and type of credits Course Description	Medical Miracles. 3 hours lecture. This course for non-biology majors will introduce the student to the recent advances in biotechnology and medical and surgical techniques. The
BIOL105	Course Description	applications of biotechnology in the production of important molecules, in the