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Biology/Marine Sciences (BIMS)

Montclair State University

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Biology / Marine Sciences

students in the final phases of their professional preparation. The course

uses hybrid teaching methods.

BIMS220 Title Introduction to Marine Biology.

Prerequisites BIOL 213 or departmental approval.

Number and type of credits 3 hours lecture, 3 hours lab.

Course Description 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 Marine Invertebrate Zoology.

Prerequisites BIOL 213.

Number and type of credits 3 hours lecture, 3 hours lab.

Course Description 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 Seashore Ornithology.

Prerequisites BIOL 213.

Number and type of credits 1 hour lecture, 3 hours lab.

Course Description 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 Field Methods in the Marine Sciences.

Prerequisites BIOL 213.

Number and type of credits 2 hours lecture, 4 hours lab.

Course Description 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 Benthic Ecology.

Number and type of credits 1 hour lecture, 6 hours lab.

Course Description Community structure, trophic dynamics, species diversity and distribution of

laboratory work and field investigations of the marine benthos. Also offered at NJ Marine Sciences Consortium.	
at NJ Marine Sciences Consortium.	
BIMS592 Title Bacteriological Techniques in Marine Sampling.	
Number and type of credits 6 hours lab.	
Course Description Standard methods of bacteriological water analysis, including MPN and mem	orane
filtration. Special problems related to sampling and analysis of marine	or arre
sediments, surface and sub-surface marine waters. NJ Marine Sciences	
Consortium. Cross listed with Biology, BIOL 504.	
BIOL100 Title Biological Sciences.	
Special Fee Special fee.	
Number and type of credits 3 hours lecture, 2 hours lab.	
Course Description 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 Basic Biology I.	
Number and type of credits 3 hours lecture, 3 hours lab.	
Course Description A study of the structure and function of cells, a survey of the plant kingdom	
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describing the anatomy, physiology and ecology of plants with emphasis on t	ne
higher plants.	
BIOL104 Title Basic Biology II.	
Number and type of credits 3 hours lecture, 3 hours lab.	
Course Description Adaptation of structure to function of cells, tissues and organs of plants and	

BIOL105 Title

Medical Miracles. Number and type of credits

Course Description

animals. Physical, chemical and ecological forces affecting these. (3 hours

lecture; 3 hours lab.)

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