

MESC-Marine Environmental Sci Courses

Courses

MESC 106. Introduction to Oceanography. 4 Hours.

General introduction to the physics, chemistry, geology, and biology of the ocean. Lecture, laboratory, and field trips. Course is taught at Dauphin Island Sea Lab.

MESC 201. Oceanology of the Gulf of Mexico. 2 Hours.

Descriptive study of the oceanology of the Gulf of Mexico and adjacent waters, including coastal zone, continental shelf, and deep ocean. Course is taught at Dauphin Island Sea Lab.

MESC 204. Coastal Geomorphology. 2 Hours.

Shape and land forms along coast; factors determining formation. Lecture and lab. Course is taught at Dauphin Island Sea Lab.

MESC 206. Marine Biology. 4 Hours.

Invertebrates, vertebrates, and marine plants. Lecture, laboratory, and field work. Permission of instructor required. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 124 [Min Grade: D]

MESC 207. Commercial Marine Fisheries of Alabama. 2 Hours.

Biology, harvest techniques, processing, and economic value of local commercial species. Course is taught at Dauphin Island Sea Lab.

MESC 208. Biology and Conservation of Marine Turtles. 2 Hours.

Overview of the biology and conservation of marine turtles. Lecture and laboratory. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 124 [Min Grade: D]

MESC 209. Hurricanes of the Gulf of Mexico. 2 Hours.

Survey of hurricane formation and impacts with emphasis on hurricanes in the Gulf of Mexico. Does not count towards the biology major or minor. General elective credit only. Course is taught at Dauphin Island Sea Lab.

MESC 213. Shark & Ray Biology. 2 Hours.

Introduction to the biology of sharks and rays, with emphasis on regional shark and ray fauna. Lecture and laboratory. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 124 [Min Grade: C]

MESC 230. The Ecology of Florida Everglades. 2 Hours.

This course will examine the natural history and ecology of one of the world's rarest and most endangered wilderness areas. The Everglades is the only area of our planet to be designated as a National Park, an International Biosphere Reserve, and a World Heritage Park. This two-week course will consist of a week of intensive lectures and discussions, focusing on the natural history, geology, hydrology, and biota of this system, and then a week of intense field time to examine the Everglades and associated systems. The field portion of the course will consist of day-long excursions and hikes, as well as tent camping in several of Florida's state parks. As such, participants should bring appropriate gear and be prepared to actively and cheerfully participate. Special fees apply and will be determined by the number of participants in the course.

Prerequisites: (BY 123 [Min Grade: C] and BY 124 [Min Grade: C]) or BY 260 [Min Grade: C] or BY 256 [Min Grade: C] or BY 255 [Min Grade: C]

MESC 302. Coastal Zone Management. 2 Hours.

Ecological features and set of physical management policies for coastal communities, with description of relevant federal and state programs. Course is taught at Dauphin Island Sea Lab.

MESC 303. Coastal Climatology. 2 Hours.

Physical factors resulting in climatic conditions of coastal regions, with emphasis on northern Gulf of Mexico. Does not count towards the biology major or minor. General elective credit only. Course is taught at Dauphin Island Sea Lab.

MESC 304. Marine Geology. 4 Hours.

Geology of ocean basins, with emphasis on continental shelves, sediments, and sedimentary processes. Course is taught at Dauphin Island Sea Lab.

Prerequisites: ES 101 [Min Grade: D] and ES 102 [Min Grade: D]

MESC 305. Dolphins and Whales. 2 Hours.

Classification, anatomy, and ecology of cetaceans. Lecture and laboratory. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 124 [Min Grade: D]

MESC 330. Marine Conservation Biology. 4 Hours.

This course will explore the major threats to marine biodiversity as well as the pros and cons of the potential solutions to these threats. In addition, students will participate in field trips that support topics covered in lecture, and will demonstrate the application of current principles in marine conservation.

MESC 402. Marine Vertebrate Zoology. 4 Hours.

Marine fishes, reptiles, and mammals (systematics, zoogeography, and ecology). Lecture, laboratory, and field work. 12 semester hours in biology required. Course is taught at Dauphin Island Sea Lab.

MESC 407. Marine Botany. 4 Hours.

Marine algae and vascular and non-vascular plants (distribution, identification, structure, ecology, and reproduction). Lecture, laboratory, and field work. 12 semester hours in biology required. Course is taught at Dauphin Island Sea Lab.

MESC 411. Coastal Wetlands Ecology. 4 Hours.

Habitat analysis, natural history studies, and population dynamics of selected organisms. Lecture, laboratory, and field work. Course is taught at Dauphin Island Sea Lab.

Prerequisites: MESC 412 [Min Grade: D] or BY 470 [Min Grade: D]

MESC 412. Marine Ecology. 4 Hours.

Bioenergetics, community structure, population dynamics, predation, competition, and speciation in marine ecosystems. Lecture, laboratory and field work. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 255 [Min Grade: D] or BY 256 [Min Grade: D]

MESC 413. Marine Invertebrate Zoology. 4 Hours.

Natural history, systematics, and morphology of marine invertebrates. Lecture, laboratory and field work. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 124 [Min Grade: D]

MESC 415. Coastal Ornithology. 2 Hours.

Coastal and pelagic birds, with emphasis on ecology, taxonomy, and distribution. Lecture, laboratory, and field work. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 124 [Min Grade: D]

MESC 417. Marine Technical Methods. 2 Hours.

Hardware of marine science, sampling procedures, processing station location, and field equipment maintenance and operation. Prerequisite: 12 semester hours in a science discipline. Course is taught at Dauphin Island Sea Lab.

MESC 428. Oceanography. 4 Hours.

Physics, chemistry, biology, and geology of oceans. Course is taught at Dauphin Island Sea Lab.

Prerequisites: CH 117 [Min Grade: D] and CH 118 [Min Grade: D] and PH 202 [Min Grade: D] and MA 106 [Min Grade: D]

MESC 472. Marine Aquaculture. 2 Hours.

Science, techniques, and economics of marine aquaculture. Lecture and laboratory. BY 255 is a recommended prerequisite. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 256 [Min Grade: D] or BY 435 [Min Grade: D]

MESC 473. Marine Fish Diseases. 4 Hours.

Introduction to aquatic animal diseases, specifically for fish and shellfish. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 271 [Min Grade: D] and (BY 255 [Min Grade: D] or BY 256 [Min Grade: D])

MESC 475. Marine Behavioral Ecology. 4 Hours.

Behavior of marine organisms as it relates to survival in their environment. Lecture, laboratory and field trips. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 255 [Min Grade: D] or BY 256 [Min Grade: D]

MESC 478. Advanced Anatomy and Evolution of Marine Fishes. 3 Hours.

Anatomical studies of marine fishes with emphasis on function and structure; evolutionary and taxonomic relationships. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 256 [Min Grade: D]

MESC 479. Marine Toxicology. 4 Hours.

Selected topics of toxicology as related to the coastal environment and marine organisms. Course is taught at Dauphin Island Sea Lab.

Prerequisites: BY 330 [Min Grade: D] and (CH 235 [Min Grade: D] or CH 237 [Min Grade: D])

MESC 491. Research on Special Topics. 1-6 Hour.

Enrollment by special arrangement in any subject listed. Permission of MESC representative, Department of Biology required. Course is taught at Dauphin Island Sea Lab.

MESC 492. Special Topics: Lecture. 2-4 Hours.

Lectures on selected marine-related topics. Course content varies. Course is taught at Dauphin Island Sea Lab.