A premier marine laboratory on the Gulf of Mexico, The University of Southern Mississippi’s Gulf Coast Research Laboratory is home to the School of Ocean Science and Engineering’s Division of Coastal Sciences, Marine Education Center, Center for Fisheries Research and Development and the Thad Cochran Marine Aquaculture Center.

All courses offered through The University of Southern Mississippi’s School of Ocean Science and Engineering are accredited by the Southern Association of Colleges and Schools Commission on Colleges. Upon completion, a transcript request must be submitted to transfer credit hours to the home institution. To order a transcript, contact the USM Registrar’s Office at 601.266.5006.

Undergraduate Students

1. Submit the $45 non-refundable application processing fee for undergraduate students (fees not applicable to current USM students). Make check payable to The University of Southern Mississippi. Electronic or credit card payments cannot be accepted.
2. Official transcript (electronic transcripts preferred, send to margaret.firth@usm.edu)
3. Copy of immunization records

Graduate Students

To apply, contact Margaret Firth for admission instructions at 228.818.8852 or margaret.firth@usm.edu.

ADMISSION DEADLINE

All application materials MUST be submitted by APRIL 29, 2022.

The Summer Field Program is held at GCRL and is designed to allow undergraduate and graduate students an unrivaled academic experience studying coastal environments in an intense field and laboratory-based setting. On-site amenities include research vessels, dormitory, dining hall, research labs, library and specimen museum. Submit your application today to attend the 2022 Summer Field Program and gain the experience of a lifetime!

For questions, contact margaret.firth@usm.edu or call 228.818.8852.

EOE/F/M/VETS/DISABILITY

Depending on the status of the COVID-19 pandemic, it is possible courses may be shifted to a hybrid, or partially web-supplemented, format. The safety of students and staff is of the highest importance and any decisions will be made in the best interest of health and safety. Once you have applied for the program, your contact information will be on file, and you will be notified if there are any changes to course format. Information will also be posted on the GCRL Summer Field Program Facebook page. The most up-to-date university-wide information can be found on USM’s COVID-19 response website: https://www.usm.edu/covid-19/index.php
Session I  July Term

BARRIER ISLAND ECeology

This course will familiarize students with concepts of coastal ecotone, with an emphasis on the diversity of plant and animal communities unique to the Gulf of Mexico. Students will visit field locations on barrier islands, coastal dune fields, mangrove ecosystems, and seagrass beds. Field exercises to barrier islands will be conducted during this course. Topics covered include marsh, barrier islands, vegetated and unvegetated sand sheets, animal behavior, vegetation structure and function, and species interactions. Lectures will cover such topics as evolution, community ecology, and behavioral ecology. Prerequisites: an introductory course in biology or permission of instructor. COA 409/509/409L/509L: 3 credit hours (1/1). 379/hour

CETaceAN BEhAVIOR

This course will familiarize students with cetaceans that inhabit the coastal waters of the southeastern United States, with an emphasis on bottlenose dolphins of the Mississippi Sound. Prerequisites: none. COA 403/503/403L/503L: 3 credit hours (0/0).

Coastal RESTORATION

This course will provide an overview of coastal restoration along the Gulf Coast. Through lectures and field exercises to restoration sites in Mississippi, Alabama, and Florida, students will gain first-hand experience with different restoration techniques at both large and small scales and across a variety of habitats (e.g., marsh, oyster, mangrove, seagrass, dunes, springs). Students will also get an overview of how stochastic events, global climate change, and human activities influence the methods and success of restoration efforts. Prerequisites: two courses in biology or permission of instructor. COA 410/510/410L/510L: 3 credit hours (1/1).

ELASMoBRANCH BiOLOGY

This course will familiarize students with the anatomy and taxonomy of elasmobranch (sharks, skates and rays) biology and ecology. Students will learn how to identify species. Special emphasis will be given to the species common to the Gulf of Mexico. Laboratory work will emphasize dissection and identification of different body parts and anatomy as well as dissections. Prerequisites: Marine Biology and Marine Ichthyology or permission of instructor. COA 424/524, 424L/524L, 424L-01. Barrier Island Ecology 6 credit hours (3/3)

ENVIRONMENTAL PaRamaETERS

This course will develop an awareness of our environment, and convey this understanding through the medium of photographic field trips. Students will gain a fuller understanding of how an ecosystem functions through the structure and function of ecosystems encompassing aquatic communities, prairie ecosystems, and marine ecosystems and environments. Prerequisites: basic awareness of environmental science. COA 415/515/415L/515L: 3 credit hours (3/3).

Marine SCience I - OceANOgy

This course will provide a multidisciplinary foundation in oceanography, specifically the principles, processes, relationships, and phenomena pertaining to all of Earth’s traditional sub-disciplines: physical, geophysical and chemical oceanography. The importance of the interaction of biology and physical processes in the marine environment will be traced through exploration of familiar issues in ocean science. Prerequisites: College algebra, 6 hours of chemistry, and 3 hours of Biology or permission of instructor. COA 148, 248, Marine Science I-01. Marine Ecology 1 credit hour (0/0).

Marine SCience II - OceANOgy

This course will provide a multidisciplinary foundation in oceanography, specifically the principles, processes, relationships, and phenomena pertaining to all of Earth’s traditional sub-disciplines: physical, geophysical and chemical oceanography. The importance of the interaction of biology and physical processes in the marine environment will be traced through exploration of familiar issues in ocean science. Prerequisites: College algebra, 6 hours of chemistry, and 3 hours of Biology or permission of instructor. COA 148, 248, Marine Science I-01. Marine Ecology 1 credit hour (0/0).

Marine SCience III - OceANOgy

This course will provide a multidisciplinary foundation in oceanography, specifically the principles, processes, relationships, and phenomena pertaining to all of Earth’s traditional sub-disciplines: physical, geophysical and chemical oceanography. The importance of the interaction of biology and physical processes in the marine environment will be traced through exploration of familiar issues in ocean science. Prerequisites: College algebra, 6 hours of chemistry, and 3 hours of Biology or permission of instructor. COA 148, 248, Marine Science I-01. Marine Ecology 1 credit hour (0/0).

MARINE ANIMAL BEhAVIOR

This course will familiarize students with the species-level exploration of animal behavior in marine organisms, including the physiological and behavioral aspects of the physiology of behavior. Students will learn to recognize and describe animal behavior, analyze and interpret animal behavior data, and review published behavior literature. The course will consist of lab exercises and field exercises that will incorporate marine animal behavior. Prerequisites: 2 semester of biology or permission of instructor. COA 420, 520, 420L/520L: Marine Animal Behavior, 5 credit hours (3/2).

MARINE BiOLOGY

This course will familiarize students with the biology of marine mammals (cetaceans, porpoises, sea lions and the polar bear), including their classification, evolutionary history, anatomy, physiology, behavior, conservation and management. Prerequisites: 400 hours of Biology or permission of instructor. COA 455/555/455L/555L: Marine Mammals, 5 credit hours (3/2).

MARINE ICHthyology

This course is an introduction to fish taxonomy, including the taxonomy, classification, and systematics of fish. Students will learn how to identify fish, and will learn how to understand the relationships among fish groups. Prerequisites: 2 semester of biology or permission of instructor. COA 405/505/405L/505L: Marine Ichthyology, 6 credit hours (3/3).

MARINE IcTOLOGY

Marine ichthyology is an extensive marine biology field course whose objective is to provide students with an overview of ichthyological techniques, an understanding of the role of the biota in coastal ecosystems, and the means to conduct research. COA 476/576: 3 credit hours (3/3).

MARINE INVerteBrate Zoology

This course will provide a detailed study of coastal invertebrates. Topics include marine invertebrate morphology, life cycles, and survival strategies. Prerequisites 8 hours of biology or permission of instructor. COA 406/506, Marine Invertebrate Zoology 4 credit hours (3/3).

MARINE MEDICINE

This course will provide students with an overview of the medical aspects of marine life, focusing on the unique challenges that result from marine exposure and the diagnosis and treatment of marine-related conditions. Prerequisite: 9 credit hours of science. COA 417/517: Marine Medicine 1 credit hour (0/0).

MARINE PaRamaETERS

An ecological approach is taken to understanding the biology of marine systems and their management, including animal behavior, fishery population dynamics, marine tourism, and marine policies. The course will consist of lectures and laboratory exercises that will incorporate marine animal behavior. Prerequisites: two courses in biology or permission of instructor. COA 410/510/410L/510L: 3 credit hours (1/1).

MARINE PHySiology

This course will provide an overview of the physiology of marine species, including field exercises in which students will observe, collect, and measure physiological responses to environmental stimuli. Prerequisites: two courses in biology or permission of instructor. COA 409/509/409L/509L: Marine Physiology, 3 credit hours (0/0).

MARINE PHySiology

This course will provide an overview of the physiology of marine species, including field exercises in which students will observe, collect, and measure physiological responses to environmental stimuli. Prerequisites: two courses in biology or permission of instructor. COA 409/509/409L/509L: Marine Physiology, 3 credit hours (0/0).

MARINE TOxICology

This course will provide an overview of marine toxicology, including the biology and ecology of marine toxicology. Emphasis will be placed on understanding the mechanisms of action and impacts on the environment of chemical substances and their potential for bioaccumulation and biomagnification. Prerequisites: COA 405/505/405L/505L: Marine Ichthyology or permission of instructor. COA 422/522, 422L/522L, 422L-01. Barrier Island Ecology 6 credit hours (3/3).

Session II  July Term

ELASMoBRANCH BiOLOGY

This course will familiarize students with the anatomy and taxonomy of elasmobranch (sharks, skates and rays) biology and ecology. Students will learn how to identify species. Special emphasis will be given to the species common to the Gulf of Mexico. Laboratory work will emphasize dissection and identification of different body parts and anatomy as well as dissections. Prerequisites: Marine Biology and Marine Ichthyology or permission of instructor. COA 424/524, 424L/524L, 424L-01. Barrier Island Ecology 6 credit hours (3/3)

ENVIRONMENTAL PaRamaETERS

This course will develop an awareness of our environment, and convey this understanding through the medium of photographic field trips. Students will gain a fuller understanding of how an ecosystem functions through the structure and function of ecosystems encompassing aquatic communities, prairie ecosystems, and marine ecosystems and environments. Prerequisites: basic awareness of environmental science. COA 415/515/415L/515L: 3 credit hours (3/3).

MARINE ANIMAL BEhAVIOR

This course will familiarize students with the species-level exploration of animal behavior in marine organisms, including the physiological and behavioral aspects of the physiology of behavior. Students will learn to recognize and describe animal behavior, analyze and interpret animal behavior data, and review published behavior literature. The course will consist of lab exercises and field exercises that will incorporate marine animal behavior. Prerequisites: 2 semester of biology or permission of instructor. COA 420, 520, 420L/520L: Marine Animal Behavior, 5 credit hours (3/2).

MARINE BiOLOGY

This course will familiarize students with the biology of marine mammals (cetaceans, porpoises, sea lions and the polar bear), including their classification, evolutionary history, anatomy, physiology, behavior, conservation and management. Prerequisites: 400 hours of Biology or permission of instructor. COA 455/555/455L/555L: Marine Mammals, 5 credit hours (3/2).

MARINE MammALS

This course will familiarize students with the behavior of marine mammals (cetaceans, porpoises, sea lions and the polar bear), including their classification, evolutionary history, anatomy, physiology, behavior, conservation and management. Prerequisites: 400 hours of Biology or permission of instructor. COA 455/555/455L/555L: Marine Mammals, 5 credit hours (3/2).

MARINE TOxICology

This course will provide an overview of marine toxicology, including the biology and ecology of marine toxicology. Emphasis will be placed on understanding the mechanisms of action and impacts on the environment of chemical substances and their potential for bioaccumulation and biomagnification. Prerequisites: COA 405/505/405L/505L: Marine Ichthyology or permission of instructor. COA 422/522, 422L/522L, 422L-01. Barrier Island Ecology 6 credit hours (3/3).

RADING

Students must have a valid Student of the University Mississippi parking permit. Parking permits can be purchased online through the University of Mississippi Mississippi Parking and Transit Services website (https://www.usm.edu/parking-transit-services/index.php). USM students with a valid annual permit do not need to purchase a summer permit for GCRL.