Table of Contents

DISL Campus Contact Directory

Message to Students from the UP Chair

2021 Course Schedule

Course Descriptions

Faculty List

Registration Procedures/FAQs

MESC Institutions and Campus Liaison Officers

Advisor Course Approval Form

Facilities Map

Register online
www.disl.org/univ-prog/undergrad
University Programs faculty and staff are excited to present the course schedule for the 2021 UP Summer at the Dauphin Island Sea Lab.

We have faced many challenges in 2020 including the COVID-19 pandemic and Hurricane Sally.

I wanted to let you know that the facilities necessary for the summer program will be ready for in person learning to begin on the designated dates for each term.

However, we ask that you are patient with the possibility of continued construction on campus while you are taking classes. The construction will not impact your classes.

There is a chance that some courses will be offered completely online. These courses include, but are not limited to Biotic Response to Sea Level Rise, Environmental Applications of GIS, Hurricanes of the Gulf Coast.

We remain hopeful that the COVID-19 pandemic will subside, and normal operations can resume for the 2021 UP summer. Please take into consideration that changing conditions may alter class offerings.

These decisions will be finalized in early April 2021 and clearly communicated to you.

Dr. Lee Smee
University Programs Chair
**Additional fees apply (fees nonrefundable unless course is cancelled)**

May Session: May 10 - May 22

one course only may be taken in this session - Lecture/Lab: M-F (9A-4P)

**#Biology & Conservation of Marine Turtles** (2cr UG/G) Wibbels

**Dolphins and Whales** (2cr UG) Lewis

**Ecology of the Florida Everglades** (2cr UG/G) Stanton

**Shariff’s and Bay Biology** (2cr UG) Drymon

**Shellfish Aquaculture of the GOM** (2cr UG) Prante

**Coral Reef Biology and Ecology** (4cr UG/G) Headley

Special May Session: March 1 - May 22

**#Biology & Conservation of Marine Turtles** (2cr UG/G) Wibbels

**Ecology of the Florida Everglades** (2cr UG/G) Stanton

**Shark and Ray Biology** (2cr UG/G) Drymon

**Coral Reef Biology and Ecology** (4cr UG/G) Headley

**1st Session: May 24 - June 25 - 5 weeks**

**A Courses**

Schedule A1: 4-hour courses:

- Lecture: M/T/W (9A-12P); Lab: M/T (1P-4P)

Marine Behavioral Ecology (4cr UG/G) Gier

Marine Biology (4cr UG/G) Layton

Marine Botany (4cr UG/G) Henning

Marine Mammals (4cr UG/G) Lewis

Schedule A2: 2-hour courses:

- Lecture: TH/F (9A-11:30A); Lab: TH (1P-4P)

Coastal Birds (4cr UG/G) Woodrey

Environmental Applications of GIS (4cr UG/G) Fleming

Hurricanes of the Gulf Coast (4cr UG/G) Terwey

- Lecture: M/T/W (9A-12P); Lab: M/T (1P-4P)

Coastal Wetlands (4cr UG/G) Stanion

Intro to Oceanography (4cr UG/G) Kruse

Marine Geology (4cr UG/G) Elliott

Marine Vertebrate Zoology (4cr UG/G) Allens

Schedule A3: 2-hour courses:

- Lecture: M/T (9A-11:30A); Lab: M (1P-4P)

Marine Restoration Ecology (2cr UG/G) Stanion

Marine Technical Methods (2cr UG/G) Dorgan

**B Courses**

Schedule B1: 4-hour courses:

- Lecture: W (1P-4P), TH/F (9A-12P); Lab: TH/F (1P-4P)

Marine Biology (4cr UG/G) Gannon

Marine Ecology (4cr UG/G) Dorgan

Marine Geology (4cr UG/G) Elliot

Marine Vertebrate Zoology (4cr UG/G) Baker

Schedule B2: 2-hour courses:

- Lecture: M/T (9A-11:30A); Lab: M (1P-4P)

Marine Aquaculture (2cr UG/G) Stoelzel

Shark and Ray Biology (2cr UG/G) Drymon

**Special Session July 19-August 6**

EX Course

- Lecture: M-Sat. (9A-3P)

Intro. To Neurobiology (3cr Adv. UG/G) Strang et al.

**Course Descriptions**

**Directed Studies**

Advanced (UG/G) 1-6 credit hours

Students may enroll by special arrangement. All students registering for Directed Research must be accepted by a DISL faculty research supervisor who will be in residence at DISL during the research. Please contact one of the listed faculty members for suggested topics in their area of expertise. Projects, duration, credit and acceptance by a supervisor must be arranged prior to registration at DISL. For sessions 1 & 2 you may enroll in (1) 4-hr & (1) 2-hr course; or (2) 2-hr courses. (2) 4hr  courses may be taken at the discretion of your advisor.

**May Term- May 10 - May 22**

**Biology and Conservation of Marine Turtles** (2cr UG/G) Dr. Wibbels

This introductory course will provide an overview of the biology and conservation of marine turtles. Topics to be covered include the identification, distribution, nesting behavior, migratory behavior, feeding ecology, population biology and genetics, developmental habitats, temperature-dependent sex determination, paleontology and conservation of marine turtles. Students will obtain a detailed knowledge of sea turtle biology; gain an understanding of why many sea turtle species have become endangered; and how proper management has allowed some populations to recover. The course will culminate with an overnight, multi-day field trip to sea turtle nesting beaches and foraging grounds in the southeastern U.S. The class will also visit sea turtle research and rehabilitation facilities. The overnight field trip will provide students with the opportunity to observe loggerhead, green, and leatherback turtles in their natural habitats.

*Special fees apply and will be determined based on enrollment (approximately $625.00). A trip deposit (1/2) will be due on March 6, 2021, with the remaining portion due on April 29, 2021. The fee is nonrefundable unless the class is canceled. Prerequisites - introductory course in biology.

**Dolphins and Whales** (2cr UG) Dr. Lewis

This class will be an introduction to the biology of cetaceans (toothed and baleen whales). Topics covered will include evolution, taxonomy, anatomy, physiology, genetics, behavior, and conservation related to species within this Order. Lab exercises will introduce current methods used in cetacean research.

Prerequisites - general biology.

**Students may need to arrive at 7:30am for field trips, and/or work evenings and weekends to meet course needs (working in the lab, on projects, or participating in field exercises and/or overnight field trips). Some courses may have snorkeling and other water activities.**
### May Term- May 10 - 21

**Ecology of the Everglades** *(2 cr UG/G)*

Dr. Stanton

This course examines the natural history and ecology of the world’s rarest and most endangered wilderness area. The course will consist of a week of lectures and discussions focusing on the history, geology, hydrology, and biota of this system, and then a week of field exploration to examine the Everglades and associated systems. The field component will consist of excursions and tent camping in several Florida 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 (approximately $75.00). A trip deposit (1/2) is due on March 08, 2021, with the remaining portion due on April 29, 2021. The fee is nonrefundable unless the class is canceled. Email questions to lstanton@uwa.edu.

**Prerequisites** - undergraduate biology, zoology or botany.

### Shark and Ray Biology** *(2 cr UG/G)*

Dr. Drymon

This course will provide an introduction to the biology of sharks and rays, with special emphasis on regional shark fauna and field techniques. Topics to be covered include chondrichthyan origin, systematics, sensory biology, locomotion, food consumption, osmoregulation, reproductive biology, life history, ecology, fisheries and conservation. Lectures will be supplemented with discussions of papers from the primary literature to familiarize students with current research. In addition, longline and gillnet sampling will provide students with firsthand knowledge of field techniques and local shark identification. **Prerequisites** - one course in general/organismal biology (or equivalent).

### Shellfish Aquaculture of the Gulf of Mexico** *(2 cr UG/G)*

Dr. Pruente

This course will provide students with an overview of the various types of shellfish aquaculture practiced in the Gulf of Mexico, both for public stock enhancement and private production. Students will gain a broader understanding of the scale and methods of oyster aquaculture, including cultching, on-bottom and off-bottom methods, as well as clam aquaculture, with field trips to operations in Louisiana, Mississippi, Alabama and Florida. Students will get an overview of shellfish hatchery production and techniques. This course is also designed to assist students with problem solving and communication skills.

*Special fees apply and will be determined based on student enrollment in the course (approximately $385.00). A trip deposit (1/2) is due on March 08, 2021 with the remaining portion due on April 29, 2021. Fee is nonrefundable unless the class is canceled. **Prerequisites** - One year of college-level biology or permission of instructor.

### Special May Term - March 1-May 22

**Coral Reef Biology and Ecology** *(4 cr UG/G)*

Dr. Hoadley

This course will explore the ecology and evolution of coral reef communities, with a view to understanding what is happening on reefs today. This 4 credit course will begin with online course lectures beginning on March 1st, followed by a two-week trip to the Florida Keys. The online portion of the course will be self paced (with some online discussions) and cover energy flow across reefs, biogeochemical cycling important for continual reef development, microbial Interactions that govern the flow of carbon and nitrogen through coral reefs, and current threats from climate change. The online portion must be completed by May 1st. Students will then spend May 7th - 22nd in the Florida Keys, carrying out short experimental projects and exploring various coral reef and mangrove systems.

There is no assigned textbook and most readings will be research articles and posted prior to the lecture. **Prerequisites** - 2 semesters of general biology or equivalent required, general ecology course recommended.

*Special fees apply and will be determined by the number of participants in the course (approximately $1000.00). A trip deposit (1/2) is due on March 08, 2021, with the remaining portion due on April 29, 2021. The fee is nonrefundable unless the class is canceled. Email questions to khoadley@disl.edu.

**1st Session - 4 Courses**

**May 24- June 25**

**Marine Behavioral Ecology** *(4cr UG/G)*

Dr. Gier

The course examines how animal behavior is influenced by and interacts with its environment, and the ecological and evolutionary significance of these behaviors in a marine setting. Students will learn principles of behavioral ecology as they relate to marine animals, become familiar with techniques for observing animal behavior and conducting behavioral experiments, and be introduced to methods for collecting and analyzing behavioral data. Snorkeling gear will be needed. **Prerequisites** - introductory course that covers zoology (either vertebrate or invertebrate).

**Marine Biology** *(4cr UG/G)*

Dr. Layton

A general survey of marine plants, invertebrates and vertebrates, the communities they form and the physical and chemical factors that influence them. Field trips include marsh, seagrass, and dune habitats. Sampling from research vessels and laboratory exercises will serve to introduce students to the diversity of marine habitats and organisms. Organisms will be identified using dichotomous keys. There will be overnight field trips. Snorkeling gear will be needed. **Prerequisites** - general biology.

**Marine Botany** *(4cr UG/G)*

Dr. Henning

A general survey of marine algae (microscopic and macroscopic), as well as salt marsh vegetation, mangroves, seagrasses and maritime forest communities. Lectures will emphasize identification, distribution, structure, ecology and physiology. Overnight field and laboratory work is involved, and may include wading and snorkeling. Snorkeling gear will be needed. **Prerequisites** - general biology.
Course Descriptions

1st Session - A4 Courses
May 24 - June 25
Marine Mammals (4cr UG)  Dr. Lewis
This course will cover the evolutionary history, taxonomy/classification, anatomy, physiology, behavior and conservation/management issues of marine mammals (cetaceans, pinnipeds, mustelids, sirenians and the polar bear). In addition, research methods used to study marine mammals will be taught (including field and lab techniques). Prerequisites - general biology.

1st Session - A2 Courses
May 24 - June 25
Coastal Birds of Alabama (2cr UG)  Dr. Woodrey
This course highlights the diverse coastal birdlife of northern Gulf of Mexico. With a focus on the study of avian ecology in the field, this class will include a significant emphasis on the use of both sight and sound as means of field identification. A variety of habitats will be explored, including barrier island nesting grounds, the Mobile-Tensaw River basin, local marshes and other unique coastal habitats. Students will also be introduced to a variety of field ornithology techniques including bird-banding, survey techniques, and monitoring methodologies. Email questions to Mark.Woodrey@msstate.edu. Prerequisites - undergraduate biology or zoology.

Environmenal Applications of GIS  Dr. Fleming
This course consists of learning applied mapping and analysis with GIS and will leverage other geospatial techniques including remote sensing, geovisualization, and spatial analysis with particular emphasis on environmental applications. Students will use knowledge acquired from readings, guided activities, and instructor demonstrations to apply GIS data including vector and raster spatial data, imagery, maps, and surface models in examinations of contemporary coastal and marine science issues. Students will be exposed to working with spatial information regarding human and natural hazards and disasters, land use and land cover, coastal monitoring, and other relevant data types. Some lecture is required, but this course will emphasize a “hands-on” approach to learning GIS through practical assignments and projects in a computer lab and in the field. Industry leading ArcGIS software will be used along with exposure to online and open-source technology. Prerequisites - statistics or equivalent course in mathematics. Offered online.

1st Session - A2 Courses
May 24 - June 25
Hurricanes of the Gulf Coast (2cr UG/G)  Dr. Terwey
This is an introductory survey course on hurricanes with emphasis on hurricanes in the Gulf of Mexico. Topics include: 1) the hurricane problem along the Gulf Coast and a review of some of the infamous Gulf Coast hurricanes of the last 150 years; 2) Atlantic/Caribbean/Gulf hurricane climatology; 3) the effects of El Niño and multi-decadal changes in the Atlantic circulation on hurricane frequency; 4) favorable/unfavorable environments for hurricane development and intensification; 5) hurricane features and structure; 6) hurricane movement and steering mechanisms; 7) coastal and inland effects from landfalling Gulf Coast hurricanes; and 8) Gulf hurricane forecasting (where will the storm go and how strong will it be at landfall). A half-day boat trip along much of the length of Dauphin Island is planned (weather permitting) during the last week of class to inspect the impact of recent hurricanes on this barrier island. Prerequisites - none. Offered online.

1st Session - B4 Courses
May 24 - June 25
Coastal Wetlands Ecology (4cr UG/G)  Dr. Stanton
This course will focus on coastal and nearshore wetland areas, with an emphasis on the biogeochemical processes that occur within, and issues that threaten and protect these important resources. Wetlands not only provide critical habitat for many aquatic and semi-aquatic species, they are also important for primary productivity, transformation of nutrients, pollutant removal, as well as providing protection from storm surges and floodwaters. Insight into wetland ecology requires understanding of the unique interactions between biology, chemistry and hydrology. Prerequisites - General biology and botany or ecology.

Intro to Oceanography (4cr UG/G)  Dr. DeBose
This hands-on course provides students an opportunity to learn about the physics, chemistry, geology, and biology of the ocean. Students will apply this knowledge first hand by implementing sample collection strategies on board a research vessel during cruises on Mobile Bay and the Gulf of Mexico. Through class discussion of recent oceanographic discoveries and core concepts, and learning user-friendly ocean data visualization software, this course will enable students to then interpret oceanographic data collected during their cruises and to create clear and concise presentations. Typical data collected on board the research vessel will include hydrographic (temperature, pH, salinity, inorganic nutrients, light intensity) and biological (phytoplankton, zooplankton) variables that are collectively processed and visualized. Students should have a laptop equipped with word processing and spreadsheet software. Prerequisites - General biology and botany or ecology.

Marine Geology (4cr UG/G)  Dr. Elliot
A study of the geology of the ocean basins, with special emphasis on the continental shelves, their sediments and the sedimentary processes at work there with emphasis on the northeast Gulf of Mexico. Field trips will be taken to study beach processes and sediments in Mobile Bay and offshore. Students will be introduced to the following: technical writing; conducting a research project; working as a team member; data management; concepts of marine geology; critical thinking; principles of science (hypothesis testing). Participation in overnight field trips is a part of this course. Prerequisites - introductory geology recommended.
A survey of marine fishes, reptiles and mammals, with an in-depth comprehensive treatment of their systematics, zoogeography and ecology. Field and laboratory work will stress the vertebrate fauna of the northern Gulf of Mexico and most of the course will be devoted to fishes. Students completing this course will:

1) have a basic understanding of the biology, ecology, physiology and systematics of the various marine vertebrate taxa;
2) gain experience in field and lab identification of members of the various vertebrate taxa; and
3) gain experience in collecting various marine and island vertebrate taxa. **Prerequisites:** two semesters of general biology (or equivalent) and accompanying labs.

**Marine Vertebrate Zoology** (4cr UG/G)  
Dr. Albins

This course provides an overview of the scientific and technical principles of marine habitat restoration. We will discuss the role of key ecological concepts in restoration, and the role of restoration in science and society. Students will identify structural and functional components of marine habitats and learn how to design restoration projects and monitoring plans that capture these key components of structure and function. Students will learn to recognize when adaptive management may be needed, and how to formulate strategies to correct or maintain the desired trajectory of restored habitats. Students will also be introduced to the interdisciplinary nature of restoration science, including social, ethical, political and economic aspects. Lectures will be supplemented with primary literature reading assignments. Field trips will allow students to see local restoration sites and learn monitoring techniques used in various habitats (e.g., salt marsh, oyster reef, seagrass bed). This course is designed for undergraduate and graduate students. **Prerequisites:** One year of undergraduate introductory science (preferably including an ecology course) or consent of the instructor.

**Marine Restoration Ecology** (2cr UG/G)  
Dr. Baggett

This advanced course is open to juniors, seniors and graduate students. This course will explore the major threats to marine biodiversity as well as the pros and cons of the potential solutions to these threats. Students will participate in class discussions on current topics in marine conservation biology and will critically evaluate marine conservation primary literature as well as the viewpoints of the various entities involved in marine conservation issues. In addition, students will participate in field trips that support topics covered in lectures and will demonstrate the application of current principles in marine conservation. **Prerequisites:** an introductory class in either marine or general ecology.

**Marine Invertebrate Zoology** (4cr UG/G)  
Dr. Carmichael

This course surveys the morphology, natural history and evolutionary relationships of the marine invertebrates. The course includes lectures, laboratory exercises and extended field trips. Participation in overnight field trips is a part of this course. Snorkeling gear will be needed. **Prerequisites:** introductory biology or zoology.

**Intro to Oceanography** (4cr UG/G)  
Dr. Krause

This hands-on course provides students an opportunity to learn about the physics, chemistry, geology, and biology of the ocean. Students will apply this knowledge first hand by implementing sample collection strategies on board a research vessel during cruises on Mobile Bay and the Gulf of Mexico. Through class discussion of recent oceanographic discoveries and core concepts, and learning user-friendly ocean data visualization software, this course will enable students to then interpret oceanographic data collected during their cruises and to create clear and concise presentations.

Typical data collected on board the research vessel will include hydrographic (temperature, pH, salinity, inorganic nutrients, light intensity) and biological (phytoplankton, zooplankton) variables that are collectively processed and visualized. Students should have a laptop equipped with word processing and spreadsheet software. **Prerequisites:** basic science major.
Biotic Response to Sea Level Change (2cr UG/G) Dr. Wofford

This course is an overview of sea level change over geologic time with emphasis on mechanisms of change, evidence of past sea level changes, and the impact of expected sea level changes on the marine biosphere. Topics include: global climate change and eustasy, tectonically-forced sea level change, epeiric seas, transgression and regression sedimentology, coastal geomorphology, and marine and coastal habitat change. Field studies emphasize local evidence for sea level change, habitat shift and reorganization, and human response to changing sea level, such as community displacement, shoreline stabilization, and beach-fill nourishment. This course is designed for undergraduate and graduate students in the physical and biological marine sciences. Offered online.

Marine Mammal Health (4cr UG/G) Dr. Bloodgood

This course will provide an overview of marine mammal stranding response, health assessments, forensic pathology, and common diseases of marine mammals, with a focus on species found in the Gulf of Mexico. This course requires participation in marine mammal necropsy, which includes hands-on (or virtual, depending on COVID-19 requirements) dissection of carcasses and internal organs, blood, and can have foul smells. Due to potential risk of zoonotic disease, you may not want to participate in necropsies if you are pregnant or immunocompromised. Personal protective equipment will be available and is required. An optional fieldtrip to an aquarum will provide the opportunity to see marine mammal medical examinations, and participation in live and dead marine mammal stranding response will be available on a volunteer basis as opportunities present throughout the course. Prerequisites - 3rd or 4th year undergraduate completion of Dolphins and Whales or Marine Mammals course; graduate student; or consent of the instructor.

Marine Biology (4cr UG) Dr. Sprinkle

A general survey of marine plants, invertebrates and vertebrates, the communities they form and the physical and chemical factors that influence them. Field trips include marsh, seagrass, and dune habitats. Sampling from research vessels and laboratory exercises will serve to introduce students to the diversity of marine habitats and organisms. Organisms will be identified using dichotomous keys. There will be overnight field trips. Snorkeling gear will be needed. Prerequisites - general biology.

Marine Ecology (4cr UG) Dr. Dorgan

This advanced course is open to juniors, seniors and graduate students. The class will study marine organisms as they interact with each other and their environment, and examine ecological theories and the experimental basis of our current knowledge. The laboratory will consist of field trips to a wide variety of marine habitats and field problems which will be examined by student teams in small groups. Habitats selected for emphasis include coral reefs, kelp forests, seagrass meadows, the rocky intertidal and deep-sea hydrothermal vents. Snorkeling gear will be needed. Prerequisites - general biology.

** Students may need to arrive at 7:30am for field trips, and/or work evenings and weekends to meet course needs (working in the lab, on projects, or participating in field exercises and/or overnight field trips). Some courses may have snorkeling and other water activities.

Marine Geology (4cr UG/G) Dr. Minzoni

A study of the geology of the ocean basins, with special emphasis on the continental shelves, their sediments and the sedimentary processes at work there with emphasis on the northeast Gulf of Mexico. Field trips will be taken to study beach processes and sediments in Mobile Bay and offshore. Students will be introduced to the following: technical writing; conducting a research project; working as a team member; data management; concepts of marine geology; critical thinking; principles of science (hypothesis testing). Participation in overnight field trips is a part of this course. Prerequisites - introductory geology recommended.

Marine Vertebrate Zoology (4cr UG/G) Dr. Baker

A survey of marine fishes, reptiles, and mammals, with an in-depth comprehensive treatment of their systematics, zoogeography and ecology. Field and laboratory work will stress the vertebrate fauna of the northern Gulf of Mexico and most of the course will be devoted to fishes. Students completing this course will: 1) have a basic understanding of the biology, ecology, physiology and systematics of the various marine vertebrate taxa; 2) gain experience in field and lab identification of members of the various vertebrate taxa; and 3) gain experience in collecting various marine and island vertebrate taxa. Prerequisites - two semesters of general biology (or equivalent) and accompanying labs.

Marine Aquaculture (2cr UG/G) Dr. Stoeckel

This course will introduce students to techniques in live animal culture with an emphasis on basic principles that can be applied to the culture of any organism for research, display or commercial profit. Topics discussed will include: water chemistry, filtration, production techniques, reproduction and nutrition. This course is also designed to assist students with problem solving and communication skills. Prerequisites - general biology required; ichthyology, limnology, and invertebrate zoology suggested, but not required.

Shark and Ray Biology (2cr UG/G) Dr. Drymon

This course will provide an introduction to the biology of sharks and rays, with special emphasis on regional shark fauna and field techniques. Topics to be covered include chondrichthyan origin, systematics, sensory biology, locomotion, food consumption, osmoregulation, reproduction and nutrition. Lectures will be supplemented with discussions of papers from the primary literature to familiarize students with current research. In addition, longline and gillnet sampling will provide students with firsthand knowledge of field techniques and local shark identification. Prerequisites - one course in general/organismal biology (or equivalent).

** Students may need to arrive at 7:30am for field trips, and/or work evenings and weekends to meet course needs (working in the lab, on projects, or participating in field exercises and/or overnight field trips). Some courses may have snorkeling and other water activities.

Register online

www.disl.edu/univ-prog/undergrad
2nd Session - EX Special Courses
July 19 - August 6

Intro. to Neurobiology (3cr Adv.UG/G) Drs. Strang et al

Students will be introduced to the neuroanatomy and neurophysiology of marine invertebrates and vertebrates. The following aspects of neurobiology will be covered in lectures and laboratory exercises: neurons and glia; passive properties of neurons; resting potentials; action potentials; synaptic transmission; neurotransmitters and receptors; sensory transduction; muscle innervation and contraction; sensorimotor integration; and neurophysiological bases of behavior. In addition, students will use computer simulations that allow a more in-depth exploration of cellular neurobiology than is possible in standard laboratory classes. Students will be introduced to aspects of molecular biology and its applications to neuroscience. This class will include evening and Saturday sessions. The following are recommended but not required: general chemistry and general physics; or permission of the instructor. **Prerequisites** Introductory biology.

**Students may need to arrive at 7:30am for field trips, and/or work evenings and weekends to meet course needs (working in the lab, on projects, or participating in field exercises and/or overnight field trips). Some courses may have snorkeling and other water activities.**
**DISL Summer Program Faculty/Research Interest**

**Fleming, Jonathan P., Ph.D.** (Mississippi State University, 2012) Assistant Professor, Department of Geography and Sociology, Howard College of Arts and Sciences, Samford University. Current research topics include identifying mechanisms and patterns of species invasions, aquatic and wetland plants, and spatial ecology projects using applied GIS to understand contemporary environmental change. jfleming@samford.edu

**Gannon, Andy, Ph.D.** (Univ. of Fla., 1996). Professor of Biology, Birmingham-Southern College, Birmingham, AL. Physiology and ecology of crabs and their symbiotic relationships, marine ecology, agannon@bsc.edu


**Henning, Jeremiah A. Ph.D.** (University of Tennessee, 2017). Assistant Professor, University of South Alabama. Coastal plant community ecology, biodiversity-ecosystem function linkages, mycorrhizal fungi, plant-microbe interactions, global change ecology. henning@southalabama.edu.

**Hoadley, Kenneth, Ph.D.** (University of Delaware, 2016) Senior Marine Scientist I DISL, Assist. Professor, Dept. of Biological Sciences, University of Alabama. Current research topics include coral reef biology and marine algal photobiology and primary production. khoodley@disl.edu

**Keyser, Kent, Ph.D.** (SUNY Stony Brook, 1980). Professor, Dept. of Vision Sciences, Assistant Vice President for Research, Univ. of AL B’ham. Communication between neurons: neurotransmitters, neurotransmitter receptors in the retina and brain. kkeyser@uab.edu.

**Krause, Jeffrey, Ph.D.** (Oregon St. Univ., 2008). Senior Marine Scientist I DISL, Assistant Professor, Dept. of Marine Sciences, Univ. of South AL. Marine diatom and cyanobacteria ecology and understanding the coupling between the marine biogeochemical cycle of silicon with those for carbon and nitrogen. jkrause@disl.edu.

**Layton, Jenny E., Ph.D.** (Univ of Alabama at Birmingham, 2011). Assistant Professor, Samford University. Biological sciences, marine biology, ecology, and conservation of terrestrial and aquatic vertebrates. Including emphasis on temperature-dependent sex determination in reptiles and its evolutionary, ecological, and conservation implications for marine turtles. jlayton@samford.edu

**Lewis, Jennifer, Ph.D.** (Fla. Int. Univ., 2010). Director, Tropical Dolphin Research Foundation. Animal movement and the benefits of group formation; foraging ecology; behavioral ecology of tropical dolphin species; marine ecological conservation with focus on non-lethal effects of vessel traffic on marine species. jlewino06@fiu.edu.

**Moss, Anthony G., Ph.D.** (Boston Univ., 1986). Associate Professor of Biological Sciences, Marine Biology Program Coordinator, Auburn Univ. Sternochorees and jellyfish, salps, marine microbial biology, cilia & flagella. mossant@auburn.edu

**Pruente, Victoria, Ph.D.** (Auburn University, 2020). Postdoctoral Research Scientist, Auburn Univ., School of Fisheries, Aquaculture and Aquatic Sciences. Seafood safety and oyster aquaculture. vlp0006@auburn.edu.

*Smee, Lee, Ph.D. (Georgia Tech, 2006) Chair DISL University Programs, Senior Marine Scientist II DISL, Assoc. Professor, Dept. of Marine Sciences, Univ. of South AL. Current research topics include oyster reef ecology, mangrove encroachment, pesticide effects on blue crabs, and biogeography of seagrass communities in the Gulf of Mexico. lsmee@disl.edu

**Stanton, Lee, Ph.D.** (LA State Univ., 2005). Associate Professor, Univ. of West AL., Director of Black Belt Conservation and Research Institute. lstanton@uwa.edu.

**Stoeckel, Jim, Ph.D.** (Miami University, 2007). Associate Professor, Auburn Univ., School of Fisheries, Aquaculture, and Aquatic Sciences. Crustacean and molluscan ecology and aquaculture; physiological ecology; ecotoxicology; special focus on burrowing crayfish and mussels. jas0018@auburn.edu.

**Strang, Christopher, Ph.D.** (Univ. of Ala. at B’ham., 2004). Assistant Professor, Dept. of Psychology, Univ. of AL B’ham. Visual processing in health and disease. estrang@uab.edu.

**Terwey, Wesley, Ph.D.** (Colo. St. Univ., 2007). Assistant Professor of Meteorology, Dept. of Earth Sciences, Univ. of South Ala. Hurricane intensity change and structure; severe weather; winter weather; technology and science. terwey@southalabama.edu.

*Valentine, John, Ph.D.** (Univ. of Ala., 1989). Executive Director and Senior Marine Scientist III DISL, Professor, Dept. of Marine Sciences, Univ. of South AL. jvalentine@disl.edu.

**Wibbels, Thane, Ph.D.** (Texas A&M Univ., 1988). Associate Professor of Biology, Univ. of AL B’ham. The biology of temperature-dependent sex determination in reptiles, including emphasis on its implications for the ecology, evolution and conservation of sea turtles. twibbels@uab.edu.

**Wofford, Sarah, Ph.D.** (Bowling Green State University, 2017) Assist. Professor, Dept. of Biology, Jacksonville State Univ. Current research topics include the aggressive behaviors of aquatic invertebrates, the chemical ecology of social interactions, and the effects of environmental change on resource acquisition and agonistic behaviors. swofford@jsu.edu.

**Woodrey, Mark, Ph.D.** (Univ. of Southern Miss., 1995). Avian Ecologist/Coastal Ecologist at MS State Univ., Research Coordinator at Grand Bay National Estuarine Research Reserve. Marsh bird ecology and conservation; monitoring programs for biological resources; tidal marsh ecology; ecological effects of sea level rise on coastal ecosystems. mowinr@ra.msstate.edu.

*These faculty are not instructing undergraduate courses this year.
Course Registration

Submission deadline for priority registration: February 12, 2021

DISL will accept registrations until the first day of class; however, courses will fill early and students should try to submit their registrations online before the priority registration date.

**Step #1 Complete the DISL Summer Online Registration Form:**

**ONLINE:**
- Visit [https://www.disl.edu/univ-prog/undergrad](https://www.disl.edu/univ-prog/undergrad) for instructions for logging into our student portal. www.disl.populiweb.com
- Once your student account is created on disl.populiweb.com, upload/submit a digital image, photo or scan of your signed advisor's sheet (last page of this bulletin).
- Complete online registration with course choices.
- You will be billed the $75.00 pre-registration fee via your online student account disl.populiweb.com.

**Step #2 Confirmation of DISL Enrollment**
- DISL will email a confirmation of your course enrollment at DISL after the priority registration deadline of February 12, 2021. This email will include instructions to login to your DISL Student account via disl.populiweb.com, and a link to additional documents.
- Once you login to your student account on DISL.Populiweb.com, you will be able to view a listing of your courses and the status of your enrollment (registered or wait)
- Your DISL bill is payable online (amount due upon arrival at DISL for fees, room and board). DISL fees may be paid on a session-by-session basis if arranged beforehand with the DISL Bursar, Ms. Daphne Wood (dwood@disl.edu).

**Step #3 Enrollment at Your Home Campus**
- **You MUST also register at your home campus and pay your home campus tuition** (not applicable for Birmingham Southern Students).
- **You must submit proof of home campus tuition paid and a schedule of courses registered for at your home campus to the UP Registrar.** This can be done via email to the registrar or online via disl.populiweb.com.

**NOTE:** In cases where your home institution does not permit you to register for classes before DISL classes begin and you fail to register when campus registration begins, you will be obligated to pay DISL directly for the cost of registration and tuition.

**Frequently Asked Questions**

**Do I have to enroll at both my home school and at the DISL for my summer course?**
Yes, in order to receive academic credit for your courses you MUST register for your class at your home institution and at the DISL. Be sure to get your academic advisor’s approval for your course selections.

**Will I receive two billing statements for my summer courses at DISL?**
Yes, your home institution will invoice your tuition. The DISL will invoice academic and facility fees as well as your room and board if you decide to live on the DISL campus.

**Can out-of-state students enroll in DISL Summer UP courses?**
Yes, however, your home school will need to enter an agreement with the DISL for academic credits to transfer. Please contact the UP Registrar Regina Kollegger for more info.

**Do I have to be enrolled in a college to take DISL Summer UP courses?**
No, you do not need to be enrolled in college to take our courses. You may audit our courses for a fee, but will not receive academic credit for your enrollment.

**Do you offer financial aid?**
DISL does not offer a financial aid program. You will need to coordinate your financial aid through your home institution. The DISL does offer student work-study and scholarship opportunities, please see page 27 for more information.

**Are there housing options on Dauphin Island other than DISL campus living?**
Sometimes there are houses available for rent on Dauphin Island, however, you will need to search and coordinate these options on your own.
Dauphin Island Sea Lab  Marine Science Summer 2021

**MESC Institutions and DISL Campus Liaison Officers**

*Alabama A & M University*
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lstanton@uwa.edu

*Schools with Graduate Programs*

Register online
www.disl.edu/univ-prog/undergrad

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**Schedule EX Special Courses**

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**Facilities Map**

- Open to the Public
- Severe Weather Shelter
- Automated External Defibrillators

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Dauphin Island Sea Lab
Alabama
From Delta to the Ocean Deep
Dauphin Island, AL
www.disl.edu

Fieldwork
Small Class Size
One-on-one instructor interaction