BIOLOGY

Department Information

Department of Biology website
https://www.southalabama.edu/biology (https://www.southalabama.edu/biology/)

Undergraduate Studies

The program of the Department of Biology is designed to contribute to a scientific background as part of a liberal education. The department offers a diversified, broadly based program, which can be designed to satisfy many areas of study. Our multitrack major can provide the traditional student with a well-rounded background in biology, or students may select courses to prepare them for a particular area of study. The multitrack curriculum can prepare students for graduate study, pre-health professional fields (such as medicine or dentistry), marine biology, or environmental science. The department has persons trained to advise in each of these areas. A list of advisors for a specific track or area of study can be obtained from the departmental office.

All first-time freshmen must successfully complete CAS 100 as a degree requirement. Students must enroll during their first term at USA, except for summer-entry students, who must enroll in the fall semester following entry.

Effective for fall, 2016, Major Milestones are used in all concentrations of the Biology Bachelor of Science major to help students stay on track for timely graduation. Each regular semester in the Biology major is a tracking term. To remain on track, students must complete the milestone requirements for each tracking term. These requirements are viewable on the Major Milestone tab above.

Major milestone requirements apply only to full-time, degree-seeking students who first entered Fall 2016 or later. Milestone requirements do not apply to transfer students in the Biology program.

The sample academic plan viewable on the Major Milestone tab above is designed to ensure graduation in the Biology major in four years. Several academic plans are available -- consult with your academic advisor for the plan that is the best fit for you. For specific course requirements, refer to the program requirements above and the General Education requirements of the College of Arts and Sciences.

Degrees, Programs, or Concentrations

- Biology (BS) (http://bulletin.southalabama.edu/programs-az/arts-sciences/biology/biology-bs/)
- Biology (BS) - Environmental Science Concentration (http://bulletin.southalabama.edu/programs-az/arts-sciences/biology/biology-bs-environmental-science-concentration/)
- Biology (BS) - Marine Biology Concentration (http://bulletin.southalabama.edu/programs-az/arts-sciences/biology/biology-bs-marine-concentration/)
- Biology (BS) - Senior Thesis Concentration (http://bulletin.southalabama.edu/programs-az/arts-sciences/biology/biology-bs-senior-thesis-concentration/)
- Biology (MS) (http://bulletin.southalabama.edu/programs-az/arts-sciences/biology/biology-ms/)
- Biology Minor (http://bulletin.southalabama.edu/programs-az/arts-sciences/biology/biology-minor/)

Courses

BLY 101 Life Science I 3 cr
The first of a two-semester sequence designed for the non-major. The basic principles of biological phenomena are emphasized by examples relating to the human. Cell structure and function, energy and organ systems are studied. Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L and BLY 102 BLY 102L) and the major/minor sequence (BLY 121, BLY 121L and BLY 122, BLY 122L).
Corequisite: BLY 101L

BLY 101L Life Science I Laboratory 1 cr
Laboratory exercises associated with BLY 101. Together, BLY 101 and BLY 101L count as one laboratory science course, partially fulfilling general education requirements. Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L and BLY 102 BLY 102L) and the major/minor sequence (BLY 121, BLY 121L and BLY 122, BLY 122L).
Prerequisite: BLY 101 (may be taken concurrently) Minimum Grade of D

BLY 102 Life Science II 3 cr
A continuation of BLY 101. Organ systems, cell reproduction, plant and animal development, heredity, evolution, and ecology area studied. Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L and BLY 102 BLY 102L) and the major/minor sequence (BLY 121, BLY 121L and BLY 122, BLY 122L).
Prerequisite: BLY 101 (may be taken concurrently) Minimum Grade of D

BLY 102L Life Science II Lab 1 cr
Laboratory exercises associated with BLY 102. Together, BLY 102 and 102L count as one laboratory science course, partially fulfilling general education requirements. Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L and BLY 102 BLY 102L) and the major/minor sequence (BLY 121, BLY 121L and BLY 122, BLY 122L).
Prerequisite: BLY 101 (may be taken concurrently) Minimum Grade of D and BLY 102 (may be taken concurrently) Minimum Grade of D

BLY 121 General Biology I 3 cr
A study of general biological principles, including the chemical basis of life; cellular biology, including cell structure and metabolism, genetics, microevolution; and a survey of simple organisms, including bacteria, protists and fungi.Core Course.Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L and BLY 102 BLY 102L) and the major/minor sequence (BLY 121, BLY 121L and BLY 122, BLY 122L).
Prerequisite: ACT Math 22 or SAT Mathematics 540 or MATH SECTION SCORE 565 or CH 100 Minimum Grade of D or CH 131 (may be taken concurrently) Minimum Grade of D or BLY 101 Minimum Grade of C or MA 112 (may be taken concurrently) Minimum Grade of D
Corequisite: BLY 121L

BLY 121L General Biology I Lab 1 cr
Laboratory exercises associated with BLY 121. Together, BLY 121 and BLY 121L count as one laboratory science course, partially fulfilling general education requirements. Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L and BLY 102 BLY 102L) and the major/minor sequence (BLY 121, BLY 121L and BLY 122, BLY 122L).Fee.
Prerequisite: (SAT Mathematics 540 or ACT Math 22 or CH 100 Minimum Grade of D or CH 131 (may be taken concurrently) Minimum Grade of D or BLY 101 Minimum Grade of C or MA 112 (may be taken concurrently) Minimum Grade of D)
Corequisite: BLY 121

BLY 122 General Biology II 3 cr
A study of plants, major invertebrate phyla, vertebrate morphology, plant and animal physiology, animal behavior, macroevolution and ecology. Core course. Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L and BLY 102 BLY 102L) and the major/minor sequence (BLY 121, BLY 121L and BLY 122, BLY 122L).
Prerequisite: BLY 121 Minimum Grade of D
Corequisite: BLY 122L

BLY 122L General Biology II Laboratory 1 cr
Laboratory exercises associated with BLY 122. Together, BLY 122 and 122L count as one laboratory science course, partially fulfilling general education requirements. Credit will not be allowed for both the non-major sequence (BLY 101, BLY 101L and BLY 102 BLY 102L) and the major/minor sequence (BLY 121, BLY 121L and BLY 122, BLY 122L).Fee.
Prerequisite: BLY 121 Minimum Grade of D
Corequisite: BLY 122

BLY 134 Ocean Science 3 cr
An introduction to physical, chemical, and biological oceanography.

BLY 134L Ocean Science Lab 1 cr
Lab experiences associated with BLY 134.
Prerequisite: BLY 134 (may be taken concurrently) Minimum Grade of D

BLY 205 Intro Environmental Sci 4 cr
Environmental science, including the fundamentals required to understand how ecosystems work, how environmental modifications affect ecosystems and living things, and how living things affect their environment. Topics to be emphasized include the effects of pollution, habitat modification and other environmental changes, on ecosystems, plants, wildlife, man, outdoor recreation and the future. Public health and medical effects will also be considered. Many topics covered are of special significance to this region: wetlands, the effects of dredging and filling, artificial lake construction, development, agricultural and forestry practices on ecosystems, plants and animals. Requires college biology, or permission of instructor. The course includes lecture and a lab component.

BLY 207 Biology of Aging 3 cr
A descriptive review of processes of aging. Emphasis is placed on studying structural and functional changes that could occur with increase in chronological age. Usually taught in the fall, spring and summer terms.
Prerequisite: BLY 101 Minimum Grade of D

BLY 213 Microbiology 3 cr
A survey of bacteria, fungi, protozoa and viruses with emphasis on host-microbe interactions, immune responses, and control mechanisms.
Prerequisite: BLY 101 Minimum Grade of D or BLY 121 Minimum Grade of D
Cross-Listed: BMD 210

BLY 214 Lab Studies Microbiology 1 cr
A series of laboratory experiments designed to provide practical experiments in basic microbial techniques.
Prerequisite: (BLY 213 (may be taken concurrently) Minimum Grade of D or BMD 210 Minimum Grade of D)

BLY 300 Ecology 3 cr
Introduction to general concepts of ecology. Major topics will include population growth dynamics, community structure and interactions, ecosystem structure and function, and principles of biodiversity and biogeography. Theoretical and practical issues will be addressed. Core course.
Prerequisite: (MA 112 Minimum Grade of D and CH 131 Minimum Grade of D and BLY 121 Minimum Grade of C and BLY 122 Minimum Grade of C)

BLY 301 Cell Biology 3 cr
A course designed to integrate cell structure and function: the study of the ultrastructure, organization, physiology, genetics, and other functions of the cell. Core course.
Prerequisite: (BLY 121 Minimum Grade of C and BLY 122 Minimum Grade of C and CH 131 Minimum Grade of D) and (EH 102 Minimum Grade of C or EH 105 Minimum Grade of C)

BLY 302 Genetics 3 cr
An introduction to both classical and modern genetic concepts and theory, with an emphasis on problem-solving. Topics covered include Mendelian genetics, molecular genetics, and evolutionary genetics. Core course.
Prerequisite: BLY 121 Minimum Grade of C and BLY 122 Minimum Grade of C and CH 131 Minimum Grade of D and BLY 121L Minimum Grade of C and BLY 122L Minimum Grade of C

BLY 304 Exp. Designs in Biology 3 cr
Experimental designs in Biology is intended to provide students with basic skills of experimental design and statistical methodology needed in modern biological research. Additionally, students will learn basic statistical software (e.g., Minitab, Ecosim, Resampling Procedures). The use of statistical software will be fully integrated with lecture material to provide a 'holistic' learning experience. Having completed this course, students will have gained a basic foundation in quantitative procedures for analyzing and interpreting biological data. This course requires each student to have a lap-top computer and a copy of Minitab Student v 14, which is provided with the required text.
Prerequisite: BLY 121 Minimum Grade of C and BLY 122 Minimum Grade of C and MA 112 Minimum Grade of C

BLY 305 Introduction to Evolution 3 cr
Introduction to general concepts of evolution. Major topics will include natural selection, genetic drift, quantitative genetics, phylogenetics, speciation, human evolution, and evolutionary medicine. Theoretical and practical issues will be addressed. Core course.
Prerequisite: (MA 112 Minimum Grade of D or CH 131 Minimum Grade of D) and (BLY 121 Minimum Grade of C and BLY 122 Minimum Grade of C)

BLY 310 Economic Botany 3 cr
This course includes the study of plants in their form and structure by connecting them to their use by humans. Topics include plant anatomy and nomenclature; history of plant use; origins of economically important plants; use of flowers, fruits, stems and leaves for food and other purposes.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 314 Molecular Microbiology - W 4 cr
Study of procaryotic and eucaryotic microorganisms and their relationship to their environment. Molecular, genetic and biochemical aspects of each will be emphasized.
Prerequisite: EH 102 Minimum Grade of C and CH 131 Minimum Grade of C and BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 321 Genetics of Development 3 cr
An in-depth laboratory experience to determine the genetic regulation involved in organ development using the C. elegans model system. The research experience gained in this laboratory class is designed to generate novel results to ultimately be shared with the larger scientific community. Emphasis will be place on mastering experimental design and data analysis. Students will work together in laboratory groups to carry out experiments, to discuss progress and conclusions, and review the primary literature relating to the project.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 332 Biology of Algae 4 cr
A survey of non-vascular plants: algae, fungi, liverworts, and mosses, with emphasis on morphology and taxonomy.
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 333 Biomedical Ethics - W 3 cr
Ethical analyses of problems and issues in the biomedical and health-related fields. Topics may include genetic research and technology, abortion, health care, experimentation, and death and dying.
Prerequisite: EH 102 Minimum Grade of C or EH 105 Minimum Grade of C
Cross-Listed: PHL 333

BLY 342 Experimental Cell Biology-W 2 cr
Laboratory experience with instrumentation and techniques utilized in modern cell biology research including organellar isolation, enzyme assay, protein analysis, and microscope techniques. Students develop and conduct group projects.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 350 Human Physiology 3 cr
The function and regulation of the organ systems of the body and physiological integration of the systems to maintain homeostasis. Course content will include neural and hormonal homeostatic control mechanisms, and study of the musculoskeletal, circulatory, respiratory, digestive, urinary, immune, reproductive, and endocrine systems.
Prerequisite: (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C) and CH 115 Minimum Grade of C or (CH 131 Minimum Grade of C and CH 131L Minimum Grade of C) and (BLY 121 Minimum Grade of C or BLY 141 Minimum Grade of C) and BLY 121L Minimum Grade of C and (BLY 122 Minimum Grade of C or BLY 142 Minimum Grade of C) and BLY 122L Minimum Grade of C

BLY 354 General Entomology 4 cr
Classification and habits of insects, including collection, preservation, and identification of those occurring in south Alabama.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 360 Invertebrate Zoology 4 cr
Detailed study of the invertebrate phyla, taxonomy, ecology and phylogenetic relationship. Terrestrial, fresh-water, and marine forms are studied.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 365 Comp Vertebrate Anatomy 5 cr
Anatomy and evolution of the organ systems of the major vertebrate groups. Laboratory includes dissections of dogfish, sharks, and cats. Category C (usually taught in the fall term).
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D)

BLY 367 Marine Biology 4 cr
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. Participation in overnight field trips is a part of this course. Snorkeling gear is required.
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C) and (CH 115 Minimum Grade of D or CH 131 Minimum Grade of D) and (CH 116 Minimum Grade of D or CH 132 Minimum Grade of D)

BLY 368 Dolphins and Whales 2 cr
Classification, anatomy, and ecology of cetaceans and manatees. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term.
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 369 Blgy/Conserv Marine Turtles 2 cr
Introductory course providing an overview of the biology and conservation of marine turtles. The course will culminate with a multi-day field trip to sea turtle nesting beaches and foraging grounds in the southeastern U.S. Class also will visit sea turtle research and rehabilitation facilities. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term. Special fees apply and will be posted on the website: www.disl.org
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of C or BLY 142 Minimum Grade of C) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 370 Marine Aquaculture 2 cr
Techniques and issues involved with the commercial culture of marine organisms including nutrition, reproductive biology, production, water quality, processing, marketing, and economics. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term.
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 371 Shark and Ray Biology 2 cr
This course will provide an introduction to the biology of sharks and rays, with special emphasis on regional shark fauna and field techniques. 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 first hand knowledge of field techniques and local shark identification. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term.
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) or (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 372 Coastal Birds of Alabama 2 cr
An introductory-level, field-based course covering identification, population dynamics and behavior of coastal avian fauna. Field trips will be taken to local coastal ecosystems and island rookeries. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term.
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 380 Study Abroad Biology 1-4 cr
This course is for educational opportunities in foreign countries in any biological science discipline. Offered in May, or Summer Semester. May be repeated when content varies.
Prerequisite: (BLY 300 Minimum Grade of C and BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 305 Minimum Grade of C)

BLY 411 Developmental Biology 3 cr
A study of the principles that regulate the development of a complex, multicellular from a single cell with a focus on the underlying molecular mechanism and genetic regulation. Topics to be covered will include fertilization, differentiation, cell fate determination, pattern formation, organogenesis and regeneration. Particular emphasis will be placed on the experimental approaches, both historical and contemporary, that led to our current understanding of the development of multicellular organisms.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 414 Expt Bacterial Genomics - W 4 cr
An integrated lab-lecture course utilizing real-world research experiences to explore the molecular genetics and genomics of bacteria. Students will be directly involved in the design, execution, analysis, and presentation of group research projects determining the function of genes from completed microbial genomes. A basic foundation in microbiology and genetics is required for this course.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C and BLY 314 Minimum Grade of C and EH 101 Minimum Grade of C and EH 102 Minimum Grade of C

BLY 425 Chemical Ecology - W 3 cr
This class focuses on chemically mediated interactions between, among, and within organisms in both the aquatic and terrestrial environments. The topics covered include: chemoreception, chemical defense, chemical attraction, and the impact of chemical ecology on humans. This course includes a writing component. Students will gain experience in critical analysis, research development, grant writing, and computer-based presentation.
Prerequisite: (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 426 Freshwater Ecology 3 cr
This course examines four aspects of freshwater ecology; physical and chemical properties of water, biotic communities, links among freshwater systems, and human influence on freshwater ecosystems. Students will be required to submit a collection of local freshwater invertebrates.
Prerequisite: (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)
Cross-Listed: BLY 526

BLY 430 Marine Botany 4 cr
A general survey of marine algae and vascular and non-vascular plants associated with the marine environment. Distribution, identification, structure, ecology, and reproduction will be considered. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term.
Prerequisite: (BLY 121 Minimum Grade of C or BLY 141 Minimum Grade of C) and (BLY 122 Minimum Grade of C or BLY 142 Minimum Grade of C) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 431 Plant Physiology - W 4 cr
An integrative study of higher plant functions. This course includes a study of water relations, plant biochemistry, plant development, and plant-environmental interactions.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C and CH 132 Minimum Grade of D

BLY 433 Evolution of Vascular Plants 4 cr
A survey of the systematics, taxonomy, and structure of the major groups of vascular plants. Fossil plants (paleobotany) will also be covered where relevant. Many labs are outdoors and focus on plant structure and identification utilizing the rich local flora.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 434 Plant Physiological Ecology 3 cr
Plant Physiological Ecology is an investigation into the relatively "new" scientific field of physiological ecology (i.e., the study of how plants function in their environment) and is designed to meet the needs of students majoring in biology, ecology and/or various disciplines in plant biology. This course explores plant biology, plant-animal interactions, as well as, principles of ecology and evolution. Category B.
Prerequisite: BLY 121 Minimum Grade of C and BLY 122 Minimum Grade of C and BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C and BLY 431 Minimum Grade of C
Cross-Listed: BLY 534

BLY 435 Biology of Fungi 4 cr
Identification and morphology of fungi with some emphasis on their relation to human affairs. Collection required.
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 436 Animal Physiology - W 4 cr
This class will take a comparative approach to animal physiology. Comparisons of structural and functional relationships in the body systems of invertebrates and vertebrates, including humans, will be made. A basic foundation in chemistry and cell biology is required for this course. This course incorporates writing and computer components. Students will gain experience in critical analysis, research development and analysis, word processing, computer based statistical and graphical analysis, and in computer based presentation programs.
Prerequisite: (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 440 Biochemistry I 3 cr
Study of the fundamental biochemical concepts; emphasis is placed on protein, carbohydrate, and lipid structure as related to their functional behavior; enzymes kinetics and mechanisms of action; thermodynamic relationships in biochemical systems. Offered only in Fall term. Cross-listed with CH 440.
Prerequisite: CH 202 Minimum Grade of D and BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C
Cross-Listed: CH 440

BLY 441 Biochemistry II 3 cr
Study of the reaction and regulations of intermediary metabolism; the biochemistry of genetics systems to include regulatory mechanisms and protein synthesis. Offered only in Spring term. Cross-listed with CH 441.
Prerequisite: BLY 440 Minimum Grade of D or CH 440 Minimum Grade of D
Cross-Listed: CH 441

BLY 443 Lab Studies Biochemistry 2 cr
Course familiarizes the student with basic laboratory techniques commonly employed in biochemical research. Offered only in Spring term. Cross-listed with CH 443.
Prerequisite: (BLY 440 Minimum Grade of D or CH 440 Minimum Grade of D) and (BLY 441 (may be taken concurrently) Minimum Grade of D or CH 441 (may be taken concurrently) Minimum Grade of D)
Cross-Listed: CH 443

BLY 445 Computational Genetics-W 3 cr
An ever growing body of online genetic datasets and publically available software makes basic informatic analysis of genetic systems no longer restricted to programmers. Utilizing the principle online resources employed by researchers today, this course will provide advanced undergraduates with a solid foundation in computational biology as well as the competency to independently evaluate emerging resources in the future. Students enrolled in this course will gain real world experience in the application of informatic techniques through participating in an actual collaborative research analysis and through directly contributing to a peer-reviewed manuscript reporting their results. Requires permission of instructor.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 450 Animal Behavior 4 cr
Course examines animal behavior from a biological and empirical viewpoint, with an emphasis on behavioral adaptations of animals to their environment. Orientation, migration, rhythms, communication, territoriality, social and courtship behaviors will be considered within the context of ecology and evolution.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 451 Marine Vertebrate Zoology 4 cr
A study of marine vertebrates, with emphasis on fishes; their systematics, zoogeography, and ecology. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term.
Prerequisite: (BLY 121 Minimum Grade of C or BLY 141 Minimum Grade of C) and (BLY 122 Minimum Grade of C or BLY 142 Minimum Grade of C) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 452 Marine Mammals 4 cr
This is a marine field course designed to engage students in the collection, identification, and preservation of parasites of marine vertebrates and invertebrates. Each student will be required to submit a collection of parasites taken from beach, barrier island, estuarine, and pelagic (10-200km) offshore localities.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 455 Ornithology 4 cr
Principles of classification, structure, distribution, migration, natural history and adaptations of birds within an ecological context. Field & laboratory identification of birds by habitat, size, form, color, and sound. Some field activities may occur at times other than regularly scheduled laboratory hours.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C and BLY 121 Minimum Grade of C and BLY 121L Minimum Grade of C and BLY 122 Minimum Grade of C and BLY 122L Minimum Grade of C

BLY 459 General Parasitology 4 cr
Ecology and evolution of parasites and a survey of all major parasitic groups.
Prerequisite: (BLY 121 Minimum Grade of C or BLY 141 Minimum Grade of C) and (BLY 122 Minimum Grade of C or BLY 142 Minimum Grade of C) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 463 Vertebrate Histology 4 cr
Microscopic anatomy of organ systems, with emphasis on human tissues. Category C (usually taught in the Spring term)
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D)

BLY 466 Introduction to Neurobiology 3 cr
Neuroanatomy and neurophysiology of marine invertebrates and vertebrates. Topics include resting and action potentials, synaptic transmission, neurotransmitters, sensory transduction, muscle innervation, sensorimotor transformations, and the neurophysiological basis of behavior. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term.
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 468 Coral Reef Ecology 4 cr
Ecology and evolution of coral reef, seagrass, and mangrove communities. An additional assessment will cover transportation, meals, and lodging for a one-week field trip to Andros Island, Bahamas. Updated information at www.disl.org. Prerequisites: BLY 121 and 122 and BLY 325 or BLY 325 or BLY 425 or BLY 475. Category D (usually taught in summer session).
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (BLY 325 Minimum Grade of C or BLY 425 Minimum Grade of C or BLY 475 Minimum Grade of C)

BLY 470 Herpetology 4 cr
A field course that emphasizes the ecology, evolution, natural history, characteristics, structure, function, geographic distribution, behavior, and systematics of amphibians and reptiles. Course includes structured writing assignments and focuses on good writing skills and forms. Laboratory and field work emphasize identification of specimens by name, habitat, and characteristics. Some field activities will occur at times other than the scheduled laboratory hours.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 471 Mar Invertebrate Zoology 4 cr
A study of the natural history, systematics, and morphology of marine invertebrates. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term.
Prerequisite: (BLY 121 Minimum Grade of C or BLY 141 Minimum Grade of C) and (BLY 122 Minimum Grade of C or BLY 142 Minimum Grade of C) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 472 Marine Behavioral Ecology 4 cr
The ecological and evolutionary significance of animal behaviors in the marine environment. Exercises will include analysis of data collected from laboratory and field experiments. Statistics recommended. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term.
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 474 Intro to Oceanography 4 cr
A general introduction to the oceans, with emphasis on chemical, physical, and geological processes and their relation to biological systems. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term.
Prerequisite: (BLY 121 Minimum Grade of C or BLY 141 Minimum Grade of C) and (BLY 122 Minimum Grade of C or BLY 142 Minimum Grade of C) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 475 Marine Ecology 4 cr
The relationship of marine organisms to their environment. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term.
Prerequisite: (BLY 121 Minimum Grade of C or BLY 141 Minimum Grade of C) and (BLY 122 Minimum Grade of C or BLY 142 Minimum Grade of C) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 478 Coastal Wetlands Ecology 4 cr
This course will focus on near shore wetland areas and emphasize biogeochemical processes, productivity, biodiversity and ecosystem function, as well as address the issues that threaten and protect these valuable resources.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 483 Field Marine Science 1-4 cr
Course consists of a 10-day field exercise in the tropical southeastern Gulf of Mexico (Florida Keys) and the temperate north Atlantic. Sites alternate annually. Faculty members with diverse interest accompany the students, participate in pre-trip readings and discussion sessions and evaluate the product developed by each student. Course offered only through Marine Environmental Science Consortium (DISL). Offered during the summer term. Requires Senior or Graduate standing in a major related to Marine Sciences and permission of instructor.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 484 Conservation Biology 3 cr
The study of preserving biodiversity and sustaining ecosystems using a multidisciplinary approach. Primary emphasis will focus on the development of strategies for preservation and management using scientific principles and theory.
Prerequisite: (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 485 Evolutionary Biology 3 cr
The study of mechanisms and historical patterns of evolutionary change in biological systems ranging from genes to phylogeny.
Prerequisite: (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C)

BLY 490 Special Topics 1-4 cr
Small interested groups of students will study specialized topics not generally listed in the course offerings. Faculty and visiting professors will offer courses in their areas of specialization. This course may be taken more than once if the topic changes for a total of eight hours. Requires permission of the department.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 494 Directed Studies 1-4 cr
Course is designed to enable the capable student to pursue independent research under the direction of a member of the faculty. Six hours of credit can be used to satisfy the 37 credit hours for the Biology major. Requires permission of the department chair.
Prerequisite: BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C

BLY 499 Honors Research in Biology-H-W 1-6 cr
Experience in planning, conducting, and reporting a research project under the direction of the faculty. Requires overall GPA 3.0, Biology GPA 3.5, and permission of the faculty.
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (CH 115 Minimum Grade of D or CH 131 Minimum Grade of D) and (CH 116 Minimum Grade of D or CH 132 Minimum Grade of D)

BLY 510 Prof in Science 3 cr
The overall goal for this course to convey expectations and important "survival skills" required to succeed in the competitive world of science. Emphasis is placed on grant writing, publications, tenure and promotion, collegiality, productivity creativity, building a CV, alternative paths, and achieving balance between the professional and private life.

BLY 511 Developmental Biology 3 cr
A study of the principles that regulate the development of a complex, multicellular organism from a single cell with a focus on the underlying molecular mechanism and genetic regulation. Topics to be covered will include fertilization, differentiation, cell fate determination, pattern formation, organogenesis, and regeneration. Particular emphasis will be placed on the experimental approaches, both historical and contemporary, that led to our current understanding of the development of multicellular organisms.
Prerequisite: (BLY 302 Minimum Grade of D or BLY 311 Minimum Grade of D) and (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and BLY 363 Minimum Grade of D

BLY 514 Expt Bact Genomics 4 cr
An integrated lab-lecture course utilizing real-world research experience to explore the molecular genetics and genomics of bacteria. Students will be directly involved in the design, execution, analysis, and presentation of group research projects determining the function of genes from completed microbial genomes. A basic foundation in microbiology and genetics is required for this course.

BLY 515 Ecotoxicology 4 cr
The impact of chemicals as toxic agents on ecosystems. Students will understand types, sources, and effects of environmental toxicants, methods of testing and interpretation, and regulation of environmental toxicants. This material will be presented in the context of ecosystem health rather than human health. This is a core course for MS degree students in the Environmental Toxicology program.
Prerequisite: (BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C) and (CH 201 Minimum Grade of C and CH 202 Minimum Grade of C) and (CH 540 Minimum Grade of B and CH 541 Minimum Grade of B)

BLY 520 Biometry 4 cr
The application of statistical methodology, both univariate and multivariate techniques, to the solution of biological problems. This course is not designed as a substitute for instruction in statistics, but rather to complement previous course work. The laboratory will involve the use of PC computers to perform procedures on biological data and subsequent interpretation of the results. Prerequisites can be waived at the discretion of the instructor.
Prerequisite: (BLY 121 Minimum Grade of D or BLY 141 Minimum Grade of D) and (BLY 122 Minimum Grade of D or BLY 142 Minimum Grade of D) and (ST 175 Minimum Grade of D or ST 210 Minimum Grade of D or ST 540 Minimum Grade of C)

BLY 525 Chemical Ecology 3 cr
Chemical Ecology focuses on chemically mediated interactions within organisms in both aquatic and terrestrial environments. The topics covered include: chemoreception, chemical defense, chemical attraction, and the impact of chemical ecology on humans. Students will gain experience in critical analysis, research development, grant writing, and computer-based presentation. Requires permission of instructor.
Prerequisite: (BLY 301 Minimum Grade of C or BLY 341 Minimum Grade of C) and (BLY 302 Minimum Grade of C or BLY 311 Minimum Grade of C) and (BLY 303 Minimum Grade of C or BLY 325 Minimum Grade of C) and (CH 201 Minimum Grade of C or CH 222 Minimum Grade of C)

BLY 526 Freshwater Ecology 3 cr
Course examines four aspects of freshwater ecology: physical and chemical properties of water, biotic communities, links among freshwater systems, and human influences on freshwater ecosystems. Students will be required to submit a collection of local freshwater invertebrates. Prerequisite: Ecology (equivalent to BLY 303). This prerequisite may be waived at the discretion of the instructor. Dual listed with BLY 426.
Prerequisite: BLY 303 Minimum Grade of C
Cross-Listed: BLY 426

BLY 530 Marine Microbial Ecology 3 cr
A general survey of the types of microorganisms found in the marine environment. Emphasis will be on the interaction of microorganisms with each other and with their environment. In particular, the role of microorganisms in the carbon cycling and biogeochemical processes will be stressed. Readings from current literature will expose students to the latest techniques and research.
Cross-Listed: MAS 530

BLY 534 Plant Physiological Ecology 3 cr
This course is an investigation into how plants function in their environment and is designed to meet the needs of students majoring in biology, ecology and/or various disciplines in plant biology. This course explores plant biology, plant-animal interactions, as well as, principles of ecology and evolution.
Prerequisite: BLY 121 Minimum Grade of C and BLY 122 Minimum Grade of C and BLY 301 Minimum Grade of C and BLY 302 Minimum Grade of C and BLY 303 Minimum Grade of C and BLY 431 Minimum Grade of C
Cross-Listed: BLY 434

BLY 535 Biology of Fungi 4 cr
Identification and morphology of fungi with some emphasis on their relation to human affairs. Collection required. Credit for both BLY 535 and 435 is not allowed.
Cross-Listed: BLY 435

BLY 536 Advanced Animal Physiology 3 cr
This class explores animal physiology, aiming to understand how animals work, from individual cells to whole organisms. We will take a comparative approach to understand the fundamental ways in which animals deal with the common challenges. A basic foundation in chemistry, molecular biology, cell biology, and evolutionary biology is required for this course. Students will complete a capstone independent literature review on a topic of their choice in the field of animal physiology.
Cross-Listed: BLY 436

BLY 540 Biochemistry I 3 cr
Study of the fundamental biochemical concepts; emphasis is placed on protein, carbohydrate, and lipid structure as related to their functional behavior; enzymes kinetics and mechanisms of action; thermodynamic relationships in biochemical systems. Offered only in Fall term. Cross-listed with CH 540.
Prerequisite: (CH 201 Minimum Grade of D or CH 222 Minimum Grade of D) and (CH 202 Minimum Grade of D or CH 223 Minimum Grade of D)
Cross-Listed: BLY 440

BLY 541 Biochemistry II 3 cr
Study of the reaction and regulations of intermediary metabolism; the biochemistry of genetics systems to include regulatory mechanisms and protein synthesis. Offered only in Spring term. Cross-listed with CH 541.
Prerequisite: BLY 540 (may be taken concurrently) Minimum Grade of B

BLY 543 Lab Studies Biochemistry 2 cr
Course familiarizes the student with basic laboratory techniques commonly employed in biochemical research. Offered only in Spring term. Cross-listed with CH 543.
Prerequisite: BLY 440 Minimum Grade of D or BLY 441 Minimum Grade of D or BLY 540 Minimum Grade of B or BLY 541 Minimum Grade of B
Cross-Listed: CH 543

BLY 544 Molecular Biology 3 cr
BLY 544 is a graduate course that covers the basic mechanisms by which organisms utilize, maintain and duplicate their genetic information. Topics to be covered include: organization of genes, the mechanisms and regulation of transcription, RNA processing and translation, the packaging of DNA as chromatin and its impact on gene expression, DNA replication, recombination and repair, and genomics and proteomics.

BLY 551 Marine Vertebrate Zoology 4 cr
A study of marine vertebrates with emphasis on fishes; their systematics, zoogeography, and ecology. Students will have an opportunity to assemble a collection of vertebrate species. Course offered only through Marine Environmental Sciences Consortium. Credit for both BLY 551 and BLY 451 is not allowed.

BLY 566 Introduction to Neurobiology 4 cr
Neuroanatomy and neurophysiology of marine invertebrates and vertebrates. Topics include resting and action potentials, synaptic transmission, neurotransmitters, sensory transduction, muscle innervation, sensorimotor transformations, and the neurophysiological basis of behavior. Credit for BLY 566 and 466 is not allowed.
Prerequisite: ((BLY 121 Minimum Grade of C and BLY 121L Minimum Grade of C) or BLY 141 Minimum Grade of C) and ((BLY 122 Minimum Grade of C and (BLY 122L Minimum Grade of C) or BLY 142 Minimum Grade of C)

BLY 568 Coral Reef Ecology 4 cr
Ecology and evolution of coral reef, seagrass, and mangrove communities. An additional assessment will cover transportation, meals, and lodging for a one-week field trip Andros Island, Bahamas. Updated information at www.disl.org. Prerequisite: BLY 325, Ecology. Credit for BLY 568 and BLY 468 is not allowed.
Prerequisite: BLY 325 Minimum Grade of C

BLY 570 Herpetology 4 cr
A field course that emphasizes the ecology, evolution, natural history, characteristics, structure, function, geographic distribution, behavior, and systematics of amphibians and reptiles. Course includes structured writing assignments and focuses on good writing skills and forms. Laboratory and field work emphasize identification of specimens by name, habitat, and characteristics. Some field activities will occur at times other than the scheduled laboratory hours. Oral classroom presentations required. Credit for BLY 470 and BLY 570 is not allowed.

BLY 571 Marine Invertebrate Zoology 4 cr
A study of the natural history, systematics and morphology of marine invertebrates. Credit for both BLY 571 and BLY 471 is not allowed.

BLY 572 Marine Behavioral Ecology 4 cr
The ecological and evolutionary significance of animal behaviors in the marine environment. Exercises will include analysis of data collected from laboratory and field experiments. Statistics recommended. Credit for BLY 572 and BLY 472 is not allowed.
Prerequisite: (BLY 122 Minimum Grade of C and BLY 122L Minimum Grade of C) or BLY 142 Minimum Grade of C

BLY 573 Oceanol Gulf of Mexico 3 cr
A descriptive study of the oceanology of the Gulf of Mexico, and adjacent waters, including coastal zone, continental shelf, and deep ocean.

BLY 575 Marine Ecology 4 cr
Their relationship of marine organisms to their environment. Credit for both BLY 575 and BLY 475 is not allowed.

BLY 583 Field Marine Science I 1-4 cr
The Field Marine Science course will consist of an 8 - 12 day field exercise in representative coastal sites. The field exercise is conducted in the term break prior to the term of registration for the course. Faculty members with diverse interests will accompany the students, participate in pre-trip discussions and evaluate the product developed by each student. The course is designed to familiarize students with habitats and research conditions different from those they experience on the Northern Gulf Coast. Field trip locations are selected on the basis of faculty and student interest, economics, and availability of logistical support. Students pay their room and board costs for the field exercise. The course is primarily for graduate students, but advanced undergraduates may enroll with consent of instructor. Both BLY 483/583 and 488/588 may be taken for credit when each is taught in a different environment.

BLY 585 Evolutionary Biology 3 cr
The study of mechanisms and historical patterns of evolutionary change in biological systems ranging from genes to phylogeny.

BLY 589 Marine Plankton 3 cr
The course familiarizes the student with the taxonomic breadth of phytoplankton, bacterioplankton and zooplankton in estuaries, coastal seas and open oceans. Though the focus is on taxonomic familiarization, basic biology of all major taxa, represented in the plankton will be covered. Students will learn fundamental, as well as "cutting-edge", field, lab, and statistical techniques.

BLY 590 Special Topics - 1-4 cr
Small, interested groups of students will study specialized topics not generally listed in the course offerings. Faculty and visiting professors will offer courses in their areas of specialization. This course may be taken more than once if the topic changes for a total of eight hours. Requires permission of the department.

BLY 592 Seminar 1 cr
Recent research in areas of special academic interest to students and faculty.

BLY 594 Directed Studies - 1-4 cr
Independent research under the direction of a member of the graduate faculty. A maximum of six credits may be used to meet degree requirements. Permission of instructor required.

BLY 599 Thesis 1-4 cr
Requires approval of research prospectus by student's graduate committee.

Faculty

Faculty Name	Faculty Department	Faculty Position	Degrees Held
DELANEY TUCKER, CYNTHIA LEIGH (leighdelaney@southalabama.edu)	Biological Sciences	Senior Instructor	BS, University of West Florida MS, University of South Alabama
FROST, LAURA ANN (lafrost@southalabama.edu)	Biological Sciences	Assistant Professor	BS, University of Alabama PHD, University of Washington
HAMIL, TRAY WEATHINGTON (thamil@southalabama.edu)	Biological Sciences	Senior Instructor	BS, Univ of Alabama-Birmingham MS, University of South Alabama
HENNING, JEREMIAH A (henning@southalabama.edu)	Biological Sciences	Assistant Professor	BS, University of Wisconsin-Oshko MS, University of Wisconsin-Oshko PHD, University of Tennessee-Knox
HOWELL, JACQUELYN SUZANNE (jackiehowell@southalabama.edu)	Biological Sciences	Instructor	BS, University of South Alabama MS, University of South Alabama
ITZA, ERIN MARIE (eitza@southalabama.edu)	Biological Sciences	Instructor	BS, Southeast Missouri State U MS, Miami University
LITTLEFIELD, RYAN SCOTT (ryanlittlefield@southalabama.edu)	Biological Sciences	Assistant Professor	BA, Johns Hopkins University PHD, Scripps Research Institute
MAJOR, KELLY M. (kmajor@southalabama.edu)	Biological Sciences	Professor	BA, Elmira College PHD, University of Maine
MATA, JUAN LUIS (jmata@southalabama.edu)	Biological Sciences	Associate Professor	BS, Univ of Costa Rica MS, Univ of Costa Rica PHD, University of Tennessee-Knox
MCCREADIE, JOHN WILLIAM (jmccread@southalabama.edu)	Biological Sciences	Professor	BS, University of Guelph MS, Memorial Univ of Newfoundland PHD, Memorial Univ of Newfoundland
NI CHADHAIN, SINEAD M. (snichadhain@southalabama.edu)	Biological Sciences	Associate Professor	BS, University of Scranton PHD, University of Delaware
PEREZ, JONATHAN HEBBEL (jhperez@southalabama.edu)	Biological Sciences	Assistant Professor	BA, Amherst College PHD, University of California-Davis
STRICKLAND, JASON LAYNE (jasonstrickland@southalabama.edu)	Biological Sciences	Assistant Professor	BS, Angelo State University MS, Angelo State University PHD, University of Central Florida
TRAN, TUAN MINH (tmtran@southalabama.edu)	Biological Sciences	Assistant Professor	BS, Vietnam National University PHD, University of Wisconsin-Madis