

# BIOMEDICAL SCIENCES

## Department Information

(251) 445-9265

Department of Biomedical Sciences website

<https://www.southalabama.edu/colleges/alliedhealth/biomedical>  
(<https://www.southalabama.edu/colleges/alliedhealth/biomedical/>)

## Biomedical Sciences Faculty

Title	Name
Chair	Nancy Rice
Professors	Rice
Professor Emeritus	Covey, Davis, Spector, Turrens
Associate Professor Emeritus	Stanfield
Associate Professors	Mockett, Ravine, Shokolenko, Thulasiraman
Assistant Professors	Gorelik, Swiger
Instructors	Henry

The Department of Biomedical Sciences educates students for successful health-related careers by providing instruction in core scientific content, encouraging critical thinking and providing active collaboration; it engages in hypothesis-driven research, embraces global diversity, and guides students to become life-long learners dedicated to enriching the scientific and healthcare community. The curriculum offers students a strong general education in the humanities, arts, and social sciences, followed by in-depth study in one of three concentrations: Pre-Health Professional, Biotechnology, and Public and Global Health. The program offers an optional Honors Research Thesis (BMD 499) to qualified students consisting of a laboratory apprenticeship in biomedical research under the mentorship of a faculty scientist. Students interested in the Honors Research Thesis option should contact Dr. Robin Mockett for information.

## Concentrations

### Pre-Health Professional Sciences (PHP)

The PHP concentration provides a strong foundation in basic human sciences, with corollary work in chemistry, math, and statistics. The PHP concentration prepares students to pursue post baccalaureate educational experiences in any biomedical discipline, including medicine, dentistry, pharmacy, optometry, as well as a Ph.D. degree in a variety of health and science related fields. In addition, this concentration offers prerequisite coursework for students wishing to pursue programs in the Pat Capps Covey College of Allied Health Professions.

### Biotechnology (BT)

The BT concentration provides a strong foundation in basic human sciences, with an emphasis on fundamental concepts of genetics, molecular biology, and recombinant DNA technology. The core requirements have a strong applied skill-based laboratory component that further reinforces theoretical concepts. The BT concentration prepares students for entry level biotechnology jobs or post-graduate (M.S. and Ph.D.) research programs.

### Public And Global Health (PGH)

The PGH concentration offers students interested in healthcare careers with a foundational knowledge of those challenges that limit the provision of health care globally. This concentration provides a strong foundation in basic human sciences, corollary work in chemistry, math,

and statistics, and adds a multi-disciplinary exploration into key factors important to health and disease in resource limited areas. Students in the PGH concentration will gain knowledge of public health, global diseases, international healthcare systems, and introduction to epidemiology, as well as a basic knowledge of those social and environmental factors that impact health and disease in vulnerable populations. A BMD degree with a concentration in PGH prepares students for a tremendous diversity of graduate programs and careers in scientific research, public health, global health education, and jobs in industry and government laboratories (CDC).

## Degrees, Programs, or Concentrations

- Biomedical Sciences (BS) (<http://bulletin.southalabama.edu/programs-az/allied-health/biomedical-sciences/biomedical-sciences-bs/>)
- Biomedical Sciences (MS) (<http://bulletin.southalabama.edu/programs-az/allied-health/biomedical-sciences/biomedical-sciences-ms/>)
- Biomedical Sciences Minor (<http://bulletin.southalabama.edu/programs-az/allied-health/biomedical-sciences/biomedical-sciences-minor/>)

## Courses

### Allied Health Profs (AHP)

#### AHP 101 Freshman Sem in Allied Health 2 cr

A course for first-time students that assists with maximizing the student's potential to achieve academic success and to adjust responsibly to the individual and interpersonal challenges presented by college life. Taught in small groups, the course provides an introduction to the nature of higher education with special emphasis on health-related disciplines. Appropriate reading and writing assignments will be required.

**Cross-Listed:** HSC 101

#### AHP 390 Special Topics 1-9 cr

The purpose of this course for the undergraduate student is to develop an improved understanding of culture, to recognize any cultural practices that affect health care, and to incorporate this understanding into the provision of care. Culture will be examined through writing, cultural experiences, and through collaboration.

#### AHP 401 Seminar in HP 3 cr

This course is designed to provide students with an overview of different health professions and their scope of practice and also to provide information about health administration.

#### AHP 510 IPE Autism Spectrum Disorders 1 cr

This foundational course is designed to prepare graduate students in OT, PT, SLP, MD and ED to provide high-quality services to individuals with autism spectrum disorder and other developmental disabilities. The emphasis will be on interprofessional education using team-based instruction to support effective interprofessional practice in both educational and health care settings. **ADDITIONAL RESTRICTION:** Students can only be enrolled following successful application and admission. Contact the course instructor for information on application.

**AHP 550 IPE for Inclusive Pract in AHP 1-3 cr**

This course will focus on advancing the ideals of diversity, equity, and inclusion in future allied health providers to develop inclusive practices, and will support the development of interprofessional collaborative practice skills. The course will provide students with opportunities to engage with members of various healthcare-focused graduate programs through both interprofessional education modules and interprofessional clinical laboratory experiences.

**Cross-Listed:** AHP 650

**AHP 590 Special Topics 1-9 cr**

Selected topics in Health Sciences. Requires special permission.

**AHP 650 IPE for Inclusive Pract in AHP 1-3 cr**

This course will focus on advancing the ideals of diversity, equity, and inclusion in future allied health providers to develop inclusive practices, and will support the development of interprofessional collaborative practice skills. The course will provide students with opportunities to engage with members of various healthcare-focused graduate programs through both interprofessional education modules and interprofessional clinical laboratory experiences.

**Cross-Listed:** AHP 550

**Biomedical Sciences (BMD)****BMD 101 Orientation to BMD 1 cr**

An introduction to Biomedical Sciences that will establish an early and continuing working relationship between students and faculty, increase awareness of sciences and scientists and familiarize students with functions, policies and services of the University, College and Department. Taught Fall Semester.

**BMD 102 Lab Skills Bootcamp 0 cr**

Lab Skills Bootcamp is an intense one-week training program to provide first-time experience and practice in basic biomedical laboratory techniques for students who have little to no research or laboratory background. Skills include basic biosafety, calculations, preparing solutions, data interpretation, micropipetting, DNA isolation, and PCR. A minimum cumulative GPA of 3.0 is required.

**BMD 110 Introduction to A & P I 4 cr**

An introduction to the structure and function of the human body with an emphasis on anatomy. This course surveys anatomical terminology, basic chemistry, cell structure/function, tissues, skin skeleton, joints, muscles, and central nervous system.

**BMD 111 Introduction to A & P II 4 cr**

Topics include, peripheral/autonomic nervous system, endocrinology, cardiovascular system, blood, respiration, digestion, metabolism/nutrition, urinary system, and reproduction.

**BMD 200 Career Planning 1 cr**

Clinical Observations (Medicine, Dentistry, Optometry and Veterinary Medicine). This course gives the student clinical exposure to various health-care services. It is designed to help students make informed decisions when selecting a career in the health professions. A written report on the clinical experience or scenario dealing with "medical ethics" is required. May be repeated for a maximum of six hours' credit. Permission of the Director of Health Pre-Professional Program is required.

**Prerequisite:** CH 131 Minimum Grade of D and BLY 121 Minimum Grade of D

**BMD 201 Seminars in Biomedical Science 1 cr**

This course introduces students to contemporary biomedical research and career possibilities in the biomedical sciences. Students will use the resources of the Biomedical Library to perform a literature search.

**BMD 210 Microbiology in Healthcare 3 cr**

This course introduces concepts of human host-infectious microbe interactions that result in disease. Microorganisms examined include viruses, parasites, fungi, mycobacteria, and bacteria. Included topics are genetics, taxonomy, microbial metabolism, virulence factors, host defense/microbe evasion mechanisms, epidemiology, antimicrobial chemotherapy/resistance, merging/reemerging infectious diseases, and diagnostic criteria. Emphasis will be placed on the microbial infections of different body systems.

**Prerequisite:** BLY 101 Minimum Grade of C or BLY 121 Minimum Grade of C or CH 101 Minimum Grade of C or CH 131 Minimum Grade of C

**BMD 210L Microbiology in Healthcare Lab 1 cr**

Laboratory experience includes introduction to fundamental microbial techniques, including differential staining, biochemical identification techniques, and antimicrobial susceptibility testing. Patient case studies will be used to supplement learning experience.

**Prerequisite:** (BLY 101 Minimum Grade of C or BLY 121 Minimum Grade of C or CH 101 Minimum Grade of C or CH 131 Minimum Grade of C)

**BMD 212 Introduction to Food Science 3 cr**

This course is an introduction to digestion, absorption, transportation, and utilization of nutrients. It will discuss the integration of basic chemical, physical, microbiological and nutritional properties and components of food and their relationship to a healthy lifestyle. Lab exercises are completed in which students prepare foods and observe the chemical and physical properties that affect the product.

**Corequisite:** BMD 212L

**BMD 212L Intro to Food Science Lab 1 cr**

Laboratory experience includes an introduction to digestion, absorption, transportation, and utilization of nutrients. Lab exercises are completed in which students prepare foods and observe the chemical and physical properties that affect the product.

**Corequisite:** BMD 212

**BMD 251 Human Anatomy & Physiology I 4 cr**

This is the first of a two-course sequence that covers basic human anatomy and physiology, including the study of the structure and function of various body systems. Included is a study of basic principles of organism homeostasis, biochemical makeup, a study of cells and tissue, cellular metabolism, joints, the integumentary, and skeletal systems, muscular and nervous systems, and the senses. Laboratory experiences are provided through demonstration and interactive (virtual) laboratories.

**Prerequisite:** BLY 101 Minimum Grade of C or BLY 121 Minimum Grade of C or CH 100 Minimum Grade of C or CH 131 Minimum Grade of C

**Cross-Listed:** BMD 114

**BMD 252 Human Anatomy & Physiology II 4 cr**

A continuation of BMD 251. Topics include nervous, cardiovascular, lymphatic, immune, respiratory, digestive, and urinary systems. Additional topics may include blood, metabolism, immunology and reproduction. Laboratory experience is provided through demonstration and interactive (virtual) laboratories.

**Prerequisite:** BMD 251 Minimum Grade of C

**Cross-Listed:** BMD 115

**BMD 290 Sp Top - H - 1-3 cr**

Topics of current health interest.

**BMD 311 Human Anatomy 3 cr**

A course in human gross and microscopic anatomy in a systematic approach, with an emphasis on structure-function relationships at the cell, tissue and organ level. The topics include anatomy of integumentary, musculoskeletal, nervous, cardio-vascular, lymphatic, respiratory, digestive, urinary and reproductive systems. This course is lecture-based with no lab component.

**Prerequisite:** BLY 121 Minimum Grade of D

**BMD 321 Biochemistry I-Molecular Biol 3 cr**

The course covers different aspects of molecular biology including protein structure and function, carbohydrate, lipids, DNA replication, transcription and translation and applications to medical problems (i.e., forensic medicine, diagnosis of genetic diseases, etc).

**Prerequisite:** CH 201 Minimum Grade of D

**BMD 322 Biochemistry II-Metabolism 3 cr**

The course discusses the chemical basis of metabolism including the conversion of nutrients from digestion to either molecules of biological relevance or to energy. Genetic diseases affecting these pathways are described and discussed.

**Prerequisite:** (BMD 321 Minimum Grade of C or BLY 440 Minimum Grade of C or CH 440 Minimum Grade of C) and CH 201 Minimum Grade of D

**BMD 323 Biochemistry Laboratory 2 cr**

This laboratory is designed to provide hands-on experience on several biochemical techniques including cell fractionation, chromatography, DNA isolation, electrophoresis, determination of enzyme activity, etc.

**Prerequisite:** BMD 321 Minimum Grade of C

**BMD 331 Biotechnology Skills I 4 cr**

This course is designed to train students in fundamental biotechnology laboratory skills and applying the scientific method to create, test, and interpret new hypotheses. Students will collaborate with peers and faculty to generate publishable data, and present their findings in both written and oral form.

**Prerequisite:** (BMD 323 Minimum Grade of C and BMD 350 Minimum Grade of C)

**BMD 334 Human Physiology I 3 cr**

The objectives of this course are to study human physiology with emphasis on cellular physiology ( cell structure, metabolism, and transport) and the endocrine and nervous systems and skeletal muscle. This course is the first of a 2 course sequence.

**Prerequisite:** BLY 121 Minimum Grade of C and CH 131 Minimum Grade of C and CH 132 Minimum Grade of C

**BMD 335 Human Physiology II 3 cr**

Study of human physiology with emphasis on the basic principles of organ system physiology. The course emphasizes muscle, cardiovascular, renal, respiratory, digestive, and reproductive physiology and an introduction to immunology. This is the second course in a 2 course sequence.

**Prerequisite:** BMD 334 Minimum Grade of C

**BMD 336 Physiology Lab - W 2 cr**

This laboratory is designed to provide students with hands-on laboratory experience in physiology, with emphasis on the musculoskeletal, cardiovascular, respiratory and nervous systems. Limited to BMD majors unless by special permission. Special fee.

**Prerequisite:** (BMD 334 Minimum Grade of C and (EH 102 Minimum Grade of C or EH 105 Minimum Grade of C))

**Corequisite:** BMD 335

**BMD 350 Human Genetics and Genomics 3 cr**

This course presents the principles and current information about classical, molecular, and population genetics. It gives an understanding of DNA, gene, gene function and regulation, genome, and the mechanisms of Mendelian and non-Mendelian inheritance. The focus is on human genetics by understanding the clinical applications of genetics and genomics in human health and disease, with special emphasis on chromosomal abnormalities, gene mutations, cancer genetics, and gene therapy.

**Prerequisite:** BMD 321 Minimum Grade of C or BLY 301 Minimum Grade of C or BLY 440 Minimum Grade of C

**BMD 351 Global Health-W 3 cr**

This course introduces students to the basic principles of global public health that are used to improve population health at all levels. Students will get an overview of the determinants of health and how health status is measured. Students will also review the burden of disease, who is most affected by different disease burdens, risk factors, and key measures to address the burden of disease in cost-effective, doable, sustainable, and fair ways. Special attention will be paid throughout the course to health systems issues. The course will cover key concepts and frameworks but be practical in orientation. The course will be global in coverage but with a focus on low- and middle-income countries, the health of the poor and health disparities. Particular attention will be paid throughout the course to the linkages between health and development.

**BMD 390 Sp Top - 1-6 cr**

Topics of current health interest.

**BMD 401 Immunology 3 cr**

This course presents the basic concepts of immunochemistry, immunobiology and host immune responses to disease. Antigens, antibodies, cells and structures of the immune system will be discussed as well as their roles in the processes of immunity, allergies, transplantation, and diseases.

**Prerequisite:** BMD 321 Minimum Grade of C

**BMD 402 Medical Microbiology 4 cr**

This course presents the concepts of pathogenicity and virulence as they relate to disease causing bacteria, mycobacteria, fungi, protozoans, and viruses. Mechanisms of pathogenicity, host interactions, epidemiology and diagnosis will be emphasized. General concepts of microbial physiology, taxonomy, genetics, host immune response, and antimicrobial therapy are also presented. The laboratory portion of the course will provide hands-on experience in the handling and identification of each microbe class. Special fee.

**Prerequisite:** (BMD 321 (may be taken concurrently) Minimum Grade of C or BLY 440 Minimum Grade of C or CH 440 Minimum Grade of C)

**BMD 403 Molecular Basis of Cancer 3 cr**

This course will focus on the biological and molecular features of oncogenesis and clinical cancer, with specific attention given to the molecular events underlying carcinogenesis, metastasis, and angiogenesis. Recent therapeutic advances and their implications for the field will be explored through reading of current scientific literature. Case study learning is integrated into the course to help students understand the societal implications of cancer. Credit cannot be received for BMD 403 and BMD 503.

**Prerequisite:** BMD 321 Minimum Grade of C or BLY 301 Minimum Grade of C or BLY 302 Minimum Grade of C

**Cross-Listed:** BMD 503

**BMD 410 Pathophysiology 3 cr**

A systematic study of disease processes involving relationships between pathophysiological changes and clinical manifestations.

**Prerequisite:** BMD 321 Minimum Grade of C

**BMD 415 Microscopic Anatomy 4 cr**

A course in (human) microscopic anatomy with laboratory emphasizing recognition and utilizing traditional histologic techniques to process tissue for microscopic examination. Taught Fall Semester.

**Prerequisite:** BMD 311 Minimum Grade of D

**BMD 420 Pharmacology 3 cr**

An introduction to pharmacological concepts and effects and uses of major drug classes. Drug design, pharmacodynamics (receptors, mechanisms, dose-response) and pharmacokinetics (time action) are discussed in general (principles), and in particular, for selected classes of drugs. Credit cannot be received for BMD 420 and BMD 520.

**Prerequisite:** (BMD 321 Minimum Grade of C or BLY 440 Minimum Grade of C or CH 440 Minimum Grade of C)

**Cross-Listed:** BMD 520

**BMD 430 Neurosciences 4 cr**

A study of neuroscience which integrates neurochemistry, neuroanatomy, and neurophysiology, emphasizing cellular neurobiology, neural systems, and the neurobiology of behavior. Course includes laboratory experience. Credit cannot be received for BMD 430 and BMD 530.

**Prerequisite:** BMD 311 Minimum Grade of C and BMD 334 Minimum Grade of C

**Cross-Listed:** BMD 530

**BMD 434 Human Physiology 6 cr**

A study of human physiology from cells to systems. A strong foundation in biology and general chemistry is required. Special permission from instructor required. Prerequisites: BLY 121 and 122, CH 131 and 132.

**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)

**Cross-Listed:** BMD 534

**BMD 441 Epidemiology 3 cr**

This course will cover a wide variety of topics along with providing students in-field examples of the use of epidemiology and statistics for public and global health. The goal is to become familiar with basic statistical concepts, epidemiologic terminology, outcome measures, and study designs; to appreciate application of epidemiology to subfields (e.g., infectious diseases, reproductive health, genetics); and to apply epidemiologic methods to current public health issues.

**Prerequisite:** (ST 210 Minimum Grade of D or ST 305 Minimum Grade of D)

**BMD 450 Introduction to Research 2 cr**

The purpose of this course is to relay the relevance of biomedical research to all medical practices. First, students will learn how to systematically read, analyze, and present primary biomedical science literature. Second, students will learn how to design a new research project. Written abstracts and oral classroom presentations are required.

**Prerequisite:** BMD 321 Minimum Grade of C

**BMD 451 Biotechnology Skills II 4 cr**

Students will learn the biological principles of genome editing and its applications in biotechnology. Emphasis will be on CRISPR/Cas technology in prokaryotic and eukaryotic biological systems. Students will perform CRISPR/Cas9 gene editing and collaborate with peers and faculty to generate a knock-out cell line.

**Prerequisite:** (BMD 331 Minimum Grade of C)

**BMD 490 Special Topics 1-6 cr**

Topics of current health interest.

**BMD 493 Ethical Issues in Health - W 3 cr**

This course will provide an open forum for discussion of current controversial issues in biomedical sciences. The topics will include research integrity, discussions on the impact of medical advances in society as well as issues of historical relevance.

**Prerequisite:** (BLY 121 Minimum Grade of C) and (EH 102 Minimum Grade of C or EH 105 Minimum Grade of C)

**BMD 494 Directed Research Studies 1-3 cr**

The student will perform a biomedical research project under the direction of a faculty mentor. This will include literature searches and presenting the project in a written format. Instructor Permission Required. Credit cannot be received for BMD 494 and BMD 594.

**Prerequisite:** BMD 321 Minimum Grade of C

**Cross-Listed:** BMD 594

**BMD 499 Honors Research Thesis - W - H 1-6 cr**

Literature survey and laboratory research experience under the direction of the faculty. Instructor permission required.

**Prerequisite:** BMD 311 Minimum Grade of C and BMD 322 Minimum Grade of C and BMD 323 Minimum Grade of C and BMD 335 Minimum Grade of C and BMD 336 Minimum Grade of C

**BMD 500 Graduate Seminar 2 cr**

Professional growth through in-depth experiences in the presentation of problems and formal papers, with emphasis on guided discussions and research criticism. A different topic of current health interest will be selected every semester for in-depth coverage and discussion. Various aspects of the selected topic will be presented by both faculty and students. Each presentation will focus on a single paper from the current biomedical literature.

**BMD 501 Immunology 3 cr**

This course presents the basic concepts of immunochemistry, immunobiology, and host immune responses to disease, antigens, antibodies, cells and structures of the immune system will be discussed as well as their roles in the process of immunity, allergies, transplantation and diseases. A term paper is required.

**BMD 502 Medical Microbiology 4 cr**

This course presents the concepts of pathogenicity and virulence as they relate to disease causing bacteria, mycobacteria, fungi, protozoans, and viruses. Mechanisms of pathogenicity, host interactions, epidemiology and diagnosis will be emphasized. General concepts of microbial physiology, taxonomy, genetics, host immune response, and antimicrobial therapy are also presented. The laboratory portion of the course will provide hands-on experience in the handling and identification of each microbe class. A term paper is required. Credit cannot be received for both BMD402 and BMD502

**Cross-Listed:** BMD 402

**BMD 503 Molecular Basis of Cancer 3 cr**

This course will be a discussion of the biological and molecular features of oncogenesis and clinical cancer focusing on the specific molecular events underlying carcinogenesis, metastasis, and angiogenesis. Case study learning will be integrated into the course to engage students in understanding the societal implications of cancer. A term paper is required. Credit cannot be received for both BMD 403 and BMD 503.

**Cross-Listed:** BMD 403

**BMD 507 Advanced Physiology 4 cr**

The foundation of the biomedical sciences in physiology - the study of the function of the human body. This course will cover advanced concepts in body function from the molecular, cellular, and organ levels. In addition, there will be a weekly focus on current literature reports that coordinate with recent lecture topics.

**BMD 508 Human Gross Anatomy 4 cr**

This is a course in gross anatomy of human body systems utilizing human cadavers and prosected specimens. Emphasis is placed on the relationships between structure and function. The lecture component of the course will be presented through live in person lectures and recorded video lectures on selected topics. The laboratory component will consist of dissection of human cadaver. Prosected material, skeleton models and diagnostic imaging will be introduced for each area of dissection.

**BMD 520 Pharmacology 3 cr**

This course will help students master the practical competencies of basic pharmacology. It will focus on the pharmacology of drugs including their classification and origin, pharmacokinetics, mechanism of action, indications, contraindications, adverse and side effects, drug interactions, and use in special patient populations. You will learn how drugs affect different biological systems, how the body responds to those drugs, and why one drug does not fit all. It is the responsibility of the student to go over the biochemistry and physiology concepts learned in previous courses to better understand this course.

**Cross-Listed:** BMD 420

**BMD 530 Neurosciences 4 cr**

A study of neuroscience which integrates neurochemistry, neuroanatomy, and neurophysiology, emphasizing cellular neurobiology, neural systems, and the neurobiology of behavior. Course includes laboratory experience. A term paper is required. Credit cannot be received for BMD 430 and BMD 530.

**Cross-Listed:** BMD 430

**BMD 534 Human Physiology 6 cr**

A study of human physiology from cells to systems. A strong foundation in cell biology and general chemistry is required. This course is restricted to pharmacy students or special permission from the instructor.

Prerequisites: BLY 121, BLY 122, CH 131, CH 132.

**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)

**Corequisite:** BMD 536

**BMD 536 Physiology Lab 1 cr**

This laboratory is designed to provide hands-on laboratory experiments to accompany the lecture material in BMD 534. This course is restricted to pharmacy students or special permission from the instructor.

Corequisite: BMD 534.

**Corequisite:** BMD 534

**BMD 594 Directed Studies 1-3 cr**

With the guidance of a faculty mentor, students will complete an independent research project (quantitative or qualitative) that will include a complete literature search, hypothesis development and testing through either laboratory experiments or meta-analysis, and final written report and analysis. Approval by the mentor and/or Graduate Director is required.

**Cross-Listed:** BMD 494

## Faculty

Faculty Name	Faculty Department	Faculty Position	Degrees Held
GORELIK, GABRIELA (ggorelik@southalabama.edu)	Biomedical Sciences	Assistant Professor	BS, Univ of Buenos Aires PHD, Univ of Buenos Aires
HENRY, ALISON K'ANN (ahenry@southalabama.edu)	Biomedical Sciences	Instructor	BS, Texas A & M University MS, Virginia Polytechnic Inst and EDD, University of South Alabama
MOCKETT, ROBIN JON (mockett@southalabama.edu)	Biomedical Sciences	Associate Professor	BS, Queens University PHD, Southern Methodist University
RAVINE, TERRENCE J. (travine@southalabama.edu)	Biomedical Sciences	Associate Professor	BSMT, University of Akron MS, University of Akron PHD, Virginia Commonwealth U
RENEMA, PHOIBE (prenema@southalabama.edu)	Biomedical Sciences	Assistant Professor	BS, Pensacola Christian College PHD, University of South Alabama
RICE, NANCY ANN (nrice@southalabama.edu)	Biomedical Sciences	Professor	BS, Western Kentucky University PHD, Univ of Tenn Hlth Sci Center
SHOKOLENKO, INNA NIKOLAEVNA (ishokolenko@southalabama.edu)	Biomedical Sciences	Associate Professor	MS, Kiev State Linguistic Univ PHD, Univ of South Alabama - COM
SWIGER, BRAD M. (bswiger@southalabama.edu)	Biomedical Sciences	Assistant Professor	BS, University of South Alabama PHD, University of South Alabama
THULASIRAMAN, PADMAMALINI (pthulasiraman@southalabama.edu)	Biomedical Sciences	Associate Professor	BS, McGill University Quebec MS, University of Oklahoma-Norman  PHD, University of Illinois-Urbana

URANKAR, SARAH ELIZABETH      Biomedical Sciences  
(sarahurankar@southalabama.edu)

Instructor

BS, East Carolina University  
MS, East Carolina University