Health Sciences

Overview

A major in Health Science prepares students for careers and graduate studies in the health sciences, including: medicine, allied health, rehabilitative science, and health promotion/preventive medicine. The Department offers a bachelor of science degree in Health Science. The curriculum integrates the sciences of biology, chemistry, physiology, social behavior, nutrition, and physics and applies them to the study of individual health. Courses combine traditional classroom lecture with experiential learning and the practical application of concepts through a variety of laboratory, clinical, and field experiences. The Department provides students a fully equipped, modern learning environment. Students complete senior research projects that are often presented at the annual spring Stetson Showcase and/ or at professional regional and national conferences. Graduates pursue graduate and professional studies, as well as employment and research opportunities in the health sciences, including: medicine, physician assistant programs, physical therapy, occupational therapy, nursing, exercise physiology, chiropractic medicine, nutrition, cardiac rehabilitation, and other related fields. Graduates also work in corporate and hospital-affiliated wellness centers.

More information can be found online at https://www.stetson.edu/other/academics/undergraduate/health-sciences.php.

Learning Outcomes

Student learning outcomes describe what students know, understand and are able to do as a result of completing a degree program. The learning outcomes for this program are:

- Explain ways in which psychological, social, environmental, spiritual and physical factors influence and impact health
- Demonstrate the ability to integrate concepts of anatomy and physiology to explain the unity of form and function in the human body and to be able to apply this knowledge to disease prevention in humans
- 3. Be able to explain macronutrients and metabolic processes used by the human body for energy production
- Apply the scientific method to a research question and design and execute an appropriate scientific research study
- Demonstrate the ability to write an effective scientific research paper including compiling and integrating relevant literature, collection and analysis of data, and interpretation of the data
- 6. Effectively present an oral scientific research study

Minors

Minor in Health Sciences - 5 Units

Code	Title	Units		
Requirements				
HLSC 201	Anatomy & Physiology I	1		
HLSC 202	Anatomy and Physiology II	1		
HLSC 119V	Health and Wellness	1		
Select two units t	2			
HLSC 200V	Introduction to Nutrition Science			
PUBH 140V	Introduction to Public Health			

т	Total Units 5				
	PUBH 284	Foundations of Epidemiology			
	COMM 336V	Food and Nutrition in the Media			
	COMM 327V	Health Communication			
	HLSC 441	Medical Terminology and Pathology			
	HLSC 401	Advanced Human Anatomy			
	HLSC 397	Internship in Health Sciences			
	HLSC 390	Special Topics in Health Science			
	HLSC 370	Seminar in Integrative Medicine			
	HLSC 342V	Ethical Issues in Health Care			
	HLSC 330	Aging of Physiological Systems			
	HLSC 313	Biomechanics			
	PUBH 303	Global Health			

Total Units

Advising Course Plans Advising Course Plans

Health Sciences Major - 3 Year Plan (https://catalog.stetson.edu/undergraduate/arts-sciences/health-sciences/hlsc-3yr-plan/)

Health Sciences Major - 2 Year Plan (https://catalog.stetson.edu/undergraduate/arts-sciences/health-sciences/hlsc-2yr-plan/)

The following advising course plans are available for Health Sciences majors who wish to pursue graduate and professional studies:

- Chiropractic Medicine (https://catalog.stetson.edu/undergraduate/ arts-sciences/health-sciences/chiropractic/)
- Dental Medicine (https://catalog.stetson.edu/undergraduate/artssciences/health-sciences/dental/)
- Dietitian (https://catalog.stetson.edu/undergraduate/arts-sciences/ health-sciences/dietitian/)
- Kinesiology-Exercise Science (https://catalog.stetson.edu/ undergraduate/arts-sciences/health-sciences/kinesiology-exercisesci/)
- Medicine (MD/DO) (https://catalog.stetson.edu/undergraduate/artssciences/health-sciences/medicine/)
- Physician Assistant (https://catalog.stetson.edu/undergraduate/ arts-sciences/health-sciences/physician-assistant/)
- Physical Therapy (https://catalog.stetson.edu/undergraduate/artssciences/health-sciences/pt/)
- Optometry (https://catalog.stetson.edu/undergraduate/artssciences/health-sciences/optometry/)

Courses

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HLSC 180. Health Sci Elective. 1 Unit.

HLSC 181. Health Sci Elective. 1 Unit.

HLSC 190. Special Topics in Health Sciences. 1 Unit.

HLSC 200V. Introduction to Nutrition Science. 1 Unit.

This course focuses on Stetson's Health and Wellness Value.

Designed as an introductory course in nutrition for students pursuing careers in health related fields, this course provides a scientifically-based introduction to nutrition and howit relates to health and disease. Students will acquire a thorough understanding of basicnutrition for their own health and wellness.

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Designed to augment and develop students' knowledge and understanding of the human body through the systemic study of structures and functions of the integumentary, skeletal, articular, muscular, and nervous systems, this course prepares students for curricular and clinical experiences in medicine, allied health, and advanced study of the human body (biomechanics, exercise physiology, pathology, and preventive medicine). Prerequisite: BIOL 141P and BIOL 142P.

HLSC 202. Anatomy and Physiology II. 1 Unit.

This course prepares students for clinical experiences in allied health and subsequent study of the human body; studies the structures and functioning of the cardiovascular, respiratory, digestive, urinary, lymphatic, and endocrine systems in depth; and explores applications of human physiology during exercise, pharmacological intervention, and disease. Prerequisite: BIOL 141P and BIOL 142P.

HLSC 209V. Cross-Cultural Aspects of Health Behavior. 1 Unit.

This course focuses on Stetson's Human Diversity Value. This course helps students develop international perspectives as they research, analyze, and compare similarities and differences in health behavior and wellness issues and applications around the world. By focusing on differences in cultural beliefs and models for cross-cultural health and communication, students learn effective ways to implement health promotion programs and program evaluation across cultures.

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HLSC 285. Independent Study. 0.5 or 1 Units.

HLSC 290. Special Topics in Health Sciences. 1 Unit.

HLSC 301. Theories and Methods of Health Behavior Change. 1 Unit.

This course investigates the relationship between health and behavior. It explores the psychosocial determinants of behaviors risk factors that affect the health of individuals, groups, and the larger society. Students will develop a solid understanding in social/behavioral theories, not just as explanatory models of health behavior, but also how they impact the design of health intervention programs.

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Designed to develop a fundamental understanding of the anatomical, neuromuscular and biomechanical principles of human movement, this course applies these principles to evaluate human performance. Prerequisite: HLSC 201.

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The current trend in demography termed the "Graying of America" is now well under way, as Baby Boomers are entering their older years in great numbers. This course explores these shifting demographic trends in our society, as well as various biological/physiological theories of aging, the physiological components of the aging process, and the impact of exercise and other lifestyle choices on these components. Prerequisites: BIOL 141P and BIOL 142P.

HLSC 339. Mechanisms of Neuromuscular Diseases. 1 Unit.

This course introduces the mechanisms of disorders affecting the nervous and muscular systems. It is designed to help students understand the cellular and molecular mechanisms associated with neuromuscular disorders and identify health outcomes and behaviors related to movement dysfunction. This course prepares students for clinical experiences in medicine and allied health through an indepth study of neurological movement disorders and assessment and rehabilitation strategies. Prerequisite: HLSC 201.

HLSC 341. Advanced Topics in Nutrition Science. 1 Unit.

This course explores advanced topics in nutrition and focus on new research and developments in the field of nutrition. This course will introduce students to various special areas of interest and focus on current issues in nutrition. The course will satisfy Health Sciences major elective requirements in the Natural Science or Wellness category. After successfully completing this course, students will be able to understand the important role that nutrient intake and modifications play in the prevention, management and treatment of identified conditions and how modifications can affect human health and performance. Students will be able to explain the role and functioning of nutrients in relevant metabolic processes in the human body and be able to apply this knowledge in the promotion of optimal health and performance. Prerequisite: HLSC 200V.

HLSC 342V. Ethical Issues in Health Care. 1 Unit.

This course focuses on Stetson's Ethical or Spiritual Inquiry Value. This junior seminar addresses the moral issues facing health-care practitioners from a philosophical point of view by presenting an array of ethical theories that can be used to analyze both general issues and particular cases. It introduces students to current ethical dilemmas in the health-care field and develops their ability to think critically about these matters, such as patients' rights, maternal-fetal conflicts (including abortion), euthanasia, stem cell research, genetic engineering, human and animal experimentation, and the right to health care. Junior Seminar.

HLSC 343. Virology of Spillover. 1 Unit.

This course examines the complex dynamics of how viruses spillover from animals to humans. This includes discussing the bottlenecks that must be overcome for successful spillover on the side of the reservoir host, virus, environment, and the new human host. Also, the pathophysiology of the virus, the pandemic potential of such spillover events, and the human activities that both increase and mitigate spillover and disease will be discussed in detail. In order to explore the many facets of spillover, various modern zoonotic spillover pathogens will be discussed in terms of how the spillover occurred, how this pathogen causes disease, the global health burden of the pathogen, and our activities and scientific developments designed to mitigate their burden. These pathogens include the coronaviruses, HIV, Ebola, Influenza, Hendravirus, Malaria, and others. Junior standing required. Prerequisites: BIOL 141P and HLSC 201.

HLSC 344V. Science of Yoga. 1 Unit.

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HLSC 370. Seminar in Integrative Medicine. 1 Unit.

This course presents the methodologies of both conventional and alternative medicine and emphasizes the history and integration of these systems: allopathic medicine, naturopathy, energy therapies, chiropractic medicine, homeopathy, osteopathy, herbal medicine, and Chinese medicine. Students learn to describe the historical background, theory on health and disease, and the treatments promoted by each system.

HLSC 375. Community Health Care Seminar. 0.5 Units.

Offered in collaboration with practitioners from Florida Hospital, this course provides an academic foundation for expected subsequent one-year Health Coach Practicum I and II experiences with Florida Hospital. Topics include: challenges of delivering adequate healthcare in communities; population health; specific problems posed by diabetes, obesity and cardiovascular disease; ethical dimensions of "underinsurance"; community medicine and the law; and methods of improving compliance and measuring outcomes. Prerequisite: Permission of instructor.

HLSC 385. Independent Study. 0.5 or 1 Units.

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A lecture/discussion course designed to enhance the curriculum by allowing students an opportunity to gain knowledge and understanding in a specialized topic within their field of study, such as sport nutrition, strength and conditioning, eating disorders and body image, and advanced exercise physiology. Prerequisites may apply.

HLSC 395. Teaching Apprenticeship. 0.5 Units. Pass/Fail only.

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Designed to enhance students' knowledge and understanding of the human body, this experiential course allows them to study and examine human tissue/histology, organ systems, and pathophysiology on a human cadaver. It provides an opportunity for the advanced study of anatomical and physiological concepts needed to prepare students for clinical experiences and advanced/graduate study of the human body in fields such as medicine/allied health, biophysics/biomechanics, exercise physiology, and preventive/integrative medicine. Prerequisites: HLSC 201 and HLSC 202 (C or higher in these courses), junior or senior standing, or permission of instructor. Note: This course meets mid-fall semester to mid-spring semester at the University of Central Florida College of Medicine.

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