

# Health Sciences (HLSC)

## Courses

### HLSC 119V. Health and Wellness. 1 Unit.

This course focuses on Stetson's Health and Wellness Value. This course examines health information and issues confronting each person and our society from the psychological, physical, intellectual, social, occupational, environmental, and spiritual dimensions.

### 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 how it relates to health and disease. Students will acquire a thorough understanding of basic nutrition for their own health and wellness.

### HLSC 201. Anatomy & Physiology I. 1 Unit.

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.

### HLSC 220. Facts and Fiction in Nutrition and Exercise. 1 Unit.

Students will develop the ability to critically interpret nutrition and exercise information within the health and fitness industry. Learn to identify the red flags and logical fallacies utilized to market nutritional supplements and exercise-related programs and products routinely sold to enhance health and wellness. Sophomore standing or higher.

### 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.

### HLSC 303. Multicultural Health Behavior: The Challenges and Opportunities. 1 Unit.

This course explores the health-related societal and cultural issues of Serbia. Being culturally competent is essential in the role of health professionals who often times work in a diverse society that presents both opportunities and challenges.

### HLSC 313. Biomechanics. 1 Unit.

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.

### HLSC 330. Aging of Physiological Systems. 1 Unit.

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 in-depth 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.**

This course focuses on Stetson's Health and Wellness Value. The topic is relevant and I expect will be interesting to students. The real life applications that learning the science of yoga are vast, but particularly the focus on pulling evidence from scientific literature is important vs. the generic and unfounded claims that are usually associated with yoga practice, ie. release toxins. This class will focus on the science behind yoga as evidenced by scientific literature and how it alters physiology of the human body. Students would be given an option to practice yoga on their own in parallel to their learning in the class by utilizing a free program on You Tube (Yoga with Adrienne), but this would not be a requirement of the class. Junior Seminar.

**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.****HLSC 390. Special Topics in Health Science. 0.5 or 1 Units.**

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.

**HLSC 397. Internship in Health Sciences. 0.5 or 1 Units.**

This course provides students an opportunity to enrich their classroom knowledge, develop skills, and gain practical experience in a field of health science (such as medicine, physical therapy, occupational therapy, physician assistant, nursing, chiropractic medicine, cardiac rehabilitation, health promotion/preventive medicine, public health, wellness/fitness). Students will be required to maintain a record of hours, complete journal assignments, participate in workshops/seminars/discussion forums, complete a topical paper, and obtain a letter of evaluation from the student's intern site supervisor. Specific requirements will be presented by way of a contract signed by the students. Full unit internships require approximately 60-80 patient/client contact hours for the semester and a total of 140 hours. Prerequisites: HLSC 201 and instructor permission for non-majors. Enrollment in an internship course requires students to attend an orientation prior to beginning work at their internship site. For more information regarding internship orientations, please contact Career & Professional Development at [career@stetson.edu](mailto:career@stetson.edu) or 386-822-7315.

**HLSC 401. Advanced Human Anatomy. 1 Unit.**

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.

**HLSC 411. Exercise Physiology. 1 Unit.**

This class analyzes the physiological responses of the human body to the demands of exercise and the effects of exercise training on the human body; supporting topics include principles of exercise testing, assessment, and prescription, preventive medicine, nutrition, and ergogenic aids. Prerequisites: HLSC 201 and HLSC 202.

**HLSC 413. Sport Nutrition. 1 Unit.**

Introduces basic concepts of Sport Nutrition in order to integrate knowledge of exercise science and nutrition into practical applications for active individuals. Prerequisite: HLSC 200V.

**HLSC 421. Immunology and Vaccinology. 1 Unit.**

This course focuses on teaching students how the human immune system functions and protects us from infection and disease. Building off of this foundation, students will further learn how vaccines work to stimulate the immune response to protect us from foreign invaders and disease. At the completion of this course, students will be able to understand and apply the essential aspects of the immune response, and also critically evaluate immunologic data and formulate new hypotheses. Prerequisites: HLSC 202 or BIOL 401, and BIOL 301 or BIOL 302, or permission of instructor. Junior standing or higher.

**HLSC 422. Mechanisms of Disease. 1 Unit.**

Defects in molecular and cellular processes within human cells often result in disease states. This course will focus on the triggers that cause pathophysiological processes and the basic mechanisms that result in disease. We will examine various clinical conditions and illustrate similar mechanisms underlying diverse diseases, while incorporating the latest developments from molecular and cellular biology. This knowledge will be applied to further understand the scientific basis of medical management of diseases as well as their treatment strategies. Prerequisite: HLSC 202 or permission of instructor.

**HLSC 441. Medical Terminology and Pathology. 1 Unit.**

This introductory course prepares students who are pursuing careers that require an understanding of medical terms, such as physical therapy, athletic training, emergency medical technician, rehabilitative services, medicine, medical technology, and pharmacy. Prerequisite: BIOL 142P, HLSC 201, or HLSC 202.

**HLSC 485. Independent Study. 0.5 or 1 Units.****HLSC 490. Special Topics in Health Sciences. 1 Unit.****HLSC 498. Senior Research Proposal. 1 Unit.**

Students will become familiar with both general and specific research methods training that is relevant to their mentor's research area (e.g., human subjects/safety/confidentiality training; Institutional Animal Use and Care Committee (IACUC) training). Students will also identify a topic in a selected field of study, prepare a review of pertinent literature, formulate a research question, and propose a research design for the studies they will execute in HLSC 499. Writing-intensive course.

**HLSC 499. Senior Research Project. 1 Unit.**

Students will demonstrate competency in the research process by conducting the research study proposed in HLSC 498 in their field of expertise. The project includes data collection, statistical analysis and interpretation, a scholarly research paper, and an oral or poster presentation. Prerequisite: HLSC 498.