HEALTH SCIENCES

Contact Information

Kinesiology
https://kinesiology.rice.edu
S203 Tudor Fieldhouse
713-348-8816

Heidi Y. Perkins
Department Chair
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Health Sciences is a major offered by the Kinesiology (KINE) Department. The goal of the health sciences major is to provide students with a fundamental background in health promotion and disease prevention. This background will enable them to understand the role that health promotion plays in society and the mechanisms that affect public and community health, while also considering the complexities of maintaining an optimal level of personal health. The health sciences major is viewed as an excellent option for undergraduate students who are preparing to enter graduate school in public health, health promotion, and health education, as well as other health-related graduate or professional programs, such as medicine or dentistry.

Bachelor's Program

• Bachelor of Arts (BA) Degree with a Major in Health Sciences (https://ga.rice.edu/programs-study/departments-programs/natural-sciences/health-sciences/health-sciences-ba/)

Health Sciences does not currently offer an academic program at the graduate level.

Chair
Heidi Y. Perkins

Professors Emeriti
Bruce Etnyre
Nicholas K. Iammarino
Eva J. Lee
Dale W. Spence

Teaching Professor
Heidi Y. Perkins

Associate Teaching Professor
Augusto X. Rodriguez

Assistant Teaching Professors
Cassandra S. Diep
Laura S. Kabiri
Amanda Perkins Ball

Clinical Professor
Brian Gibson

Lecturers
Lisa Basgall
Nicholas K. Iammarino

Part-Time Lecturers
Roberta Anding
Jaime Aparicio
Loren Bryant
Michael Furtado
Steven L. Jones
Wendy Schell
P. Burke Wilson

Adjunct Faculty
Karen Basen-Engquist
Daniel C. Hughes
Thomas Krouskop
Alexis Ortiz
Dawn Stuckey
Armin Weinberg

For Rice University degree-granting programs:
To view the list of official course offerings, please see Rice's Course Catalog (https://courses.rice.edu/admweb/!SWKSCAT.cat?action=cata)
To view the most recent semester's course schedule, please see Rice's Course Schedule (https://courses.rice.edu/admweb/!SWKSCAT.cat)

Emergency Med Studies/Practice (EMSP)

EMSP 238 - SPECIAL TOPICS
Short Title: SPECIAL TOPICS
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Internship/Practicum, Laboratory, Lecture, Seminar, Independent Study
Credit Hours: 1-4
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: Topics and credit hours vary each semester. Contact department for current semester’s topic(s). Repeatable for Credit.

EMSP 281 - EMT-B: INTRODUCTION TO EMERGENCY CARE
Short Title: EMT-B INTRO TO EMERGENCY CARE
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: This course is a state-sanctioned EMT-B Certification course which includes practical and didactic exploration into pre-hospital care. This class culminates with a national certification to practice pre-hospital care on the EMT-B level. This course will discuss anatomy, body systems, and the biochemical basis of emergency intervention in addition to practical application of EMT-B skills. Formerly HEAL 308 and BIOS 281 and NSCI 281. Instructor Permission Required.
EMSP 282 - ADVANCED EMT
Short Title: ADVANCED EMT
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: Continuation of EMSP 281, Emergency Care. Formerly BIOS 282, HEAL 310, and NSCI 282. Instructor Permission Required.

EMSP 375 - EMS INCHARGE LEADERSHIP COURSE
Short Title: EMS INCHARGE LEADERSHIP COURSE
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Independent Study
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Students preparing to hold leadership positions in EMS will expand their competency in emergency services, including emergency management and incident response, in addition to improving patient care and leadership skills. Participants will achieve certification in national emergency services courses, and will work as a team to manage a major event. Formerly UNIV 275. Instructor Permission Required.

EMSP 477 - SPECIAL TOPICS
Short Title: SPECIAL TOPICS
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Seminar, Lecture, Laboratory, Internship/Practicum
Credit Hours: 1-4
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Topics and credit hours vary each semester. Contact department for current semester's topic(s). Repeatable for Credit.

EMSP 491 - EMERGENCY MEDICAL SERVICES RESEARCH COURSE
Short Title: EMS RESEARCH COURSE
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Research
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: EMSP 491 is an independent program of study for students interested in research in prehospital medicine. All students will complete a research project under the supervision of a physician faculty member from Baylor College of Medicine. Projects may vary based on each student's interest and faculty projects. Formerly NSCI 491. Instructor Permission Required. Repeatable for Credit.

EMSP 492 - EMERGENCY MEDICAL SERVICES RESEARCH COURSE
Short Title: EMS RESEARCH COURSE
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Research
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: EMSP 492 is an independent program of study for students interested in research in prehospital medicine. All students will complete a research project under the supervision of a physician faculty member from Baylor College of Medicine. Projects may vary based on each student's interest and faculty projects. Formerly NSCI 492. Instructor Permission Required. Repeatable for Credit.

EMSP 499 - EMT TEACHING PRACTICUM
Short Title: EMT TEACHING PRACTICUM
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Internship/Practicum
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course is open to an undergraduate student who serves as an instructor for the Emergency Medical Technician course. As an instructor, he/she would need to participate in course planning, course assignments, and student evaluation. They would also be expected to present course material through preparing and delivering lectures, presentations, and practical skills instructions. Grade would be assigned based on student self-evaluation, class evaluation, and primary instructor assessment. Formerly NSCI 289. Instructor Permission Required. Repeatable for Credit.

HEAL 103 - NUTRITION
Short Title: NUTRITION
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: Concepts underlying the science of nutrition: food composition, calories and needs for energy, special nutrients, and nutritional deficiencies.
HEAL 119 - INTRODUCTION TO HEALTH AND WELLNESS
Short Title: INTRO TO HEALTH & WELLNESS
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment limited to students with a class of Freshman. Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: Designed to help students develop a greater understanding and appreciation of health and well being, as it relates to themselves and others around them, and for students to apply health and wellness knowledge in their personal life to improve their health.

HEAL 132 - MEDICAL TERMINOLOGY
Short Title: MEDICAL TERMINOLOGY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: This course introduces the student interested in medical and health professions to a large vocabulary of medical language which develops skills in understanding and remembering new words. It describes word origins, basic terms in anatomy and terms pertaining to each body system as well as pharmacology and medical equipment, and many frequently used medical terms, abbreviations and symbols.

HEAL 208 - CHEMICAL ALTERATIONS OF BEHAVIOR
Short Title: CHEM ALTERATIONS OF BEHAVIOR
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: Examination of social, cultural psychological, physiological causes and effects of drug use and abuse. Individual, family, and community factors related to prevention and treatment will be addressed.

HEAL 222 - PRINCIPLES OF PUBLIC AND COMMUNITY HEALTH
Short Title: PRIN PUBLIC&COMMHEALTH
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment limited to students with a class of Freshman or Sophomore. Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: Principles of Public & Community Health examines aspects of the community that relate to health including health issues within community subgroups; identification and analysis of community health programs; organizational patterns and functions of voluntary and governmental health agencies and coordination of community health programs.

HEAL 238 - SPECIAL TOPICS
Short Title: SPECIAL TOPICS
Department: Kinesiology
Grade Mode: Satisfactory/Unsatisfactory
Course Type: Activity Course, Intensive Learning Experience, Independent Study, Internship/Practicum, Laboratory, Lecture, Lecture/Laboratory, Research, Seminar, Studio
Credit Hours: 1-4
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Lower-Level
Description: Topics and credit hours vary each semester. Contact department for current semester's topic(s). Repeatable for Credit.

HEAL 306 - HUMAN SEXUALITY
Short Title: HUMAN SEXUALITY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Designed to explore the physiological, psychological, and sociological parameters of human sexuality, while providing accurate information and helping students develop healthy attitudes toward sexuality. Cross-list: SWGS 306.

HEAL 313 - FOUNDATIONS OF HEALTH PROMOTION AND EDUCATION
Short Title: FOUNDATIONS HEALTH PROMO&EDUC
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to students with a major in Health Sciences. Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): HEAL 222
Description: Foundations of Health Promotion/Health Education is designed to introduce students to the discipline of health education and the practice of health promotion. The course explores critical issues in the field of health promotion, accountability and professional preparation, professional ethics, credentialing and the changing technology in the field. Intended for Health Sciences majors only.
HEAL 300 - UNDERSTANDING CANCER
Short Title: UNDERSTANDING CANCER
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Examination of cancer from a biological, psychological and sociological perspective with emphasis on cancer epidemiology, prevention, and early detection.

HEAL 360 - VIOLENCE IN AMERICA: A PUBLIC HEALTH PERSPECTIVE
Short Title: VIOLENCE IN AMERICA
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This interdisciplinary course reviews topics involved in characterizing the built environment and workplace harassment. including family violence, intimate partner violence, community violence, and workplace harassment.

HEAL 375 - THE BUILT ENVIRONMENT AND PUBLIC HEALTH
Short Title: ENVIRONMENT AND PUBLIC HEALTH
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This interdisciplinary course reviews topics involved in characterizing the built environment and workplace harassment. including family violence, intimate partner violence, community violence, and workplace harassment.

HEAL 407 - EPIDEMIOLOGY
Short Title: EPIDEMIOLOGY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Study of communicable, noncommunicable, and behavioral diseases with emphasis on the disease process and basic epidemiologic methods. Graduate/Undergraduate Equivalency: HEAL 507. Mutually Exclusive: Cannot register for HEAL 407 if student has credit for HEAL 507.

HEAL 412 - HEALTH CARE DELIVERY & POLICY IN THE UNITED STATES
Short Title: HEALTH CARE DELIVERY & POLICY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: An in-depth look our current health delivery system intended to introduce student to the historic development, organization and characteristics of the health care delivery system; current payment and reimbursement systems; health insurance options; the functions of health care providers; and organizational patterns of health care facilities. Recommended Prerequisite(s): HEAL 222
HEAL 422 - THEORIES AND MODELS OF HEALTH BEHAVIOR  
**Short Title:** THEORY & MODELS HLTH BEHAVIOR  
**Department:** Kinesiology  
**Grade Mode:** Standard Letter  
**Course Type:** Seminar  
**Credit Hours:** 3  
**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.  
**Course Level:** Undergraduate Upper-Level  
**Prerequisite(s):** HEAL 222  
**Description:** Theories & Models of Health Behavior is designed for the student interested in public and community health or health psychology. This course examines the current theories and models of health behavior and their application to the field of health promotion/health education. Graduate/Undergraduate Equivalency: HEAL 522. Mutually Exclusive: Cannot register for HEAL 422 if student has credit for HEAL 522.

HEAL 460 - PLANNING AND EVALUATION OF HEALTH PROMOTION AND EDUCATION  
**Short Title:** PLAN/EVAL: HEALTH PROGRAMS  
**Department:** Kinesiology  
**Grade Mode:** Standard Letter  
**Course Type:** Lecture  
**Credit Hours:** 3  
**Restrictions:** Enrollment limited to students with a class of Junior or Senior. Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.  
**Course Level:** Undergraduate Upper-Level  
**Prerequisite(s):** HEAL 222  
**Description:** Planning & Evaluation of Health Promotion provides the student with the technical skills for planning and evaluation of health promotion, health education, and disease prevention programs including collection and analysis of both qualitative and quantitative data. Graduate/Undergraduate Equivalency: HEAL 560. Mutually Exclusive: Cannot register for HEAL 460 if student has credit for HEAL 560.

HEAL 477 - SPECIAL TOPICS  
**Short Title:** SPECIAL TOPICS  
**Department:** Kinesiology  
**Grade Mode:** Standard Letter  
**Course Type:** Internship/Practicum, Seminar, Lecture, Laboratory  
**Credit Hours:** 1-4  
**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.  
**Course Level:** Undergraduate Upper-Level  
**Description:** Topics and credit hours vary each semester. Contact department for current semester's topic(s). Repeatable for Credit.

HEAL 495 - INDEPENDENT RESEARCH IN HEALTH SCIENCES  
**Short Title:** INDEPENDENT RESEARCH  
**Department:** Kinesiology  
**Grade Mode:** Standard Letter  
**Course Type:** Research  
**Credit Hours:** 1-3  
**Restrictions:** Enrollment limited to students with a class of Junior or Senior. Enrollment is limited to students with a major in Health Sciences. Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.  
**Course Level:** Undergraduate Upper-Level  
**Prerequisite(s):** KINE 319 and KINE 440  
**Description:** To provide the student with an opportunity to participate in a research project under the supervision of a Rice Kinesiology faculty member and/or an external researcher. Department Permission Required. Repeatable for Credit.  
**Course URL:** kinesiology.rice.edu (http://kinesiology.rice.edu)

HEAL 498 - SPECIAL TOPICS IN HEALTH SCIENCES  
**Short Title:** SPECIAL TOPICS  
**Department:** Kinesiology  
**Grade Mode:** Standard Letter  
**Course Type:** Lecture  
**Credit Hours:** 3  
**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.  
**Course Level:** Undergraduate Upper-Level  
**Prerequisite(s):** HEAL 103  
**Description:** This course explores the role of nutrition in promoting public and community health. The course incorporates a socioecological framework to understand multiple levels of influence on dietary intake, food choices, and nutrition-related public health problems. Topics include dietary assessment, nutritional epidemiology, food insecurity, nutrition disparities, and nutrition policy. Fall 2022 Topic: Public Health Nutrition. Repeatable for Credit.

HEAL 499 - TEACHING PRACTICUM IN HEALTH SCIENCES  
**Short Title:** TEACH PRACTICUM HEALTH SCIENCE  
**Department:** Kinesiology  
**Grade Mode:** Standard Letter  
**Course Type:** Internship/Practicum  
**Credit Hours:** 1-3  
**Restrictions:** Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.  
**Course Level:** Undergraduate Upper-Level  
**Description:** Students will assist in conducting a course in which they have previously excelled. The student will learn techniques in course management, instruction, and evaluation. Department Permission Required. Recommended prerequisite(s): Junior or Senior standing, declared major in Health Sciences, and at least an "A-" in the course serving as the practicum. Repeatable for Credit.
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Short Title</th>
<th>Department</th>
<th>Grade Mode</th>
<th>Course Type</th>
<th>Credit Hours</th>
<th>Restrictions</th>
<th>Course Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEAL 507</td>
<td>EPIDEMIOLOGY</td>
<td>EPIDEMIOLOGY</td>
<td>Kinesiology</td>
<td>Standard Letter</td>
<td>Lecture</td>
<td>3</td>
<td>Enrollment is limited to Graduate level students.</td>
<td>Graduate</td>
<td>Study of communicable, noncommunicable, and behavioral diseases with emphasis on the disease process and basic epidemiologic methods. Graduate level students only. Instructor Permission Required.</td>
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<tr>
<td>HEAL 522</td>
<td>THEORIES AND MODELS OF HEALTH BEHAVIOR</td>
<td>THEORY&amp;MODELS HLTH BEHAVIOR</td>
<td>Kinesiology</td>
<td>Standard Letter</td>
<td>Seminar</td>
<td>3</td>
<td>Enrollment is limited to Graduate level students.</td>
<td>Graduate</td>
<td>Theories &amp; Models of Health Behavior is designed for the student interested in public and community health or health psychology. This course examines the current theories and models of health behavior and their application to the field of health promotion/health education. Graduate level students only. Instructor Permission Required.</td>
</tr>
<tr>
<td>HEAL 560</td>
<td>PLANNING AND EVALUATION OF HEALTH PROMOTION AND EDUCATION</td>
<td>PLAN/EVAL: HEALTH PROGRAMS</td>
<td>Kinesiology</td>
<td>Standard Letter</td>
<td>Lecture</td>
<td>3</td>
<td>Enrollment is limited to Graduate level students.</td>
<td>Graduate</td>
<td>Planning &amp; Evaluation of Health Promotion provides the student with the technical skills for planning and evaluation of health promotion, health education, and disease prevention programs including collection and analysis of both qualitative and quantitative data. Graduate level students only. Instructor Permission Required.</td>
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<tr>
<td>HEAL 580</td>
<td>DISPARITIES IN HEALTH IN AMERICA</td>
<td>DISPARITIES IN HEALTH AMER</td>
<td>Kinesiology</td>
<td>Standard Letter</td>
<td>Lecture</td>
<td>3</td>
<td>Enrollment is limited to Graduate level students.</td>
<td>Graduate</td>
<td>This course explores social, behavioral, and medical determinants (e.g., race and ethnicity, socioeconomic status, and sexual orientation) that influence health and health disparities within populations, as well as strategies to reduce and eliminate those disparities. The course incorporates perspectives from various disciplines, including public health, psychology, and medicine. Graduate level students only. Instructor Permission Required.</td>
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<tr>
<td>KINE 120</td>
<td>SCIENTIFIC FOUNDATIONS OF KINESIOLOGY</td>
<td>FOUNDATIONS OF KINESIOLOGY</td>
<td>Kinesiology</td>
<td>Standard Letter</td>
<td>Lecture</td>
<td>3</td>
<td>Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.</td>
<td>Undergraduate</td>
<td>An introduction to studies in the areas of human movement: anatomy and physiology, exercise physiology, biomechanics, motor learning and control, and psychological aspects of sport and exercise.</td>
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<tr>
<td>KINE 238</td>
<td>SPECIAL TOPICS</td>
<td>SPECIAL TOPICS</td>
<td>Kinesiology</td>
<td>Satisfactory/Unsatisfactory</td>
<td>Independent Study, Internship/Practicum, Laboratory, Lecture, Seminar, Activity Course, Lecture/Laboratory, Intensive Learning Experience, Research, Studio</td>
<td>1-4</td>
<td>Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.</td>
<td>Undergraduate</td>
<td>Topics and credit hours vary each semester. Contact department for current semester’s topic(s). Repeatable for Credit.</td>
</tr>
</tbody>
</table>
KINE 300 - HUMAN ANATOMY WITH LAB
Short Title: HUMAN ANATOMY WITH LAB
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture/Laboratory
Credit Hours: 4
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: An introduction to normal human anatomy structure and function. All major body systems will be examined in both lecture and laboratory format using a variety of physical and virtual models.

KINE 301 - HUMAN PHYSIOLOGY
Short Title: HUMAN PHYSIOLOGY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Distribution Group: Distribution Group III
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course will address the fundamental principles of human physiology at the cell, tissue, organ, organ system, and organism levels. Emphasis will be placed on mechanisms of function and homeostasis as achieved through the coordinated function of homeostatic control systems.

KINE 302 - BIOMECHANICS
Short Title: BIOMECHANICS
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 300
Description: An introduction to the discipline of mechanics as it applies to biological systems. Primary emphasis is placed on humans and other vertebrate species. Topics covered include the kinematics and kinetics of movement, material and functional properties of musculoskeletal tissues and the integration of musculoskeletal function from molecules and cells to whole animals. Recommended prerequisite(s): KINE 321.

KINE 310 - PSYCHOLOGICAL ASPECTS OF SPORT AND EXERCISE
Short Title: PSYC OF SPORT & EXERCISE
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): PSYC 101
Description: Examine the psychological foundations that underlie sport and exercise participation. Recommended Prerequisite(s): PSYC 101.

KINE 311 - MOTOR LEARNING
Short Title: MOTOR LEARNING
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 300 and KINE 301
Description: This course examines the acute and chronic effects of exercise on physiological functions. Topics include nutrition, energy transfer, fatigue, metabolism, disease, aging, preventative medicine, genetics, elite performance, ergogenic aids, exercise testing, and specificity of training.
KINE 326 - PHYSICAL ACTIVITY EPIDEMIOLOGY
Short Title: PHYSICAL ACTIVITY EPIDEMIOLOGY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course provides an epidemiological foundation to exercise and physical activity research related to public health. The course is designed to present evidence of the positive effects of physical activity and exercise in preventing disease, disability, and increasing quality of life.

KINE 351 - ADVANCED HUMAN ANATOMY LAB
Short Title: ADVANCED HUMAN ANATOMY LAB
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Laboratory
Credit Hour: 1
Restrictions: Enrollment is limited to students with a major in Sports Medicine & Exercise Phy. Enrollment is limited to Undergraduate, Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 300
Description: Study of the pro-sections and cadavers are used for learning and understanding human anatomy in a gross anatomy examination laboratory at BCM in the Texas Medical Center. Hands-on examination of human anatomy in this course provides supplemental practical experience for lectures in KINE 300, Human Anatomy courses.

KINE 375 - SPORTS MEDICINE & EXERCISE PHYSIOLOGY INTERNSHIP
Short Title: SPORTS MEDICINE INTERNSHIP
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Internship/Practicum
Credit Hours: 1-3
Restrictions: Enrollment limited to students with a class of Junior or Senior. Enrollment is limited to students with a major in Sports Medicine & Exercise Phy. Enrollment is limited to Undergraduate, Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Internship experience for upperclassmen in the Sports Medicine and Exercise Physiology major. Department Permission Required. Repeatable for Credit.

KINE 403 - SPORT NUTRITION
Short Title: SPORTS NUTRITION
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): HEAL 103
Description: This course will address current scientific knowledge about common macronutrients, micronutrients, and supplements, and how they may enhance athletic performance. The course will also focus on the role of nutritional timing, volume, and periodization to achieve practical results in endurance, strength, power and speed. Recommended Prerequisite(s): KINE 321.

KINE 410 - CASE STUDIES IN HUMAN PERFORMANCE
Short Title: CASE STUDIES HUMAN PERFORMANCE
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Research
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: An advanced, multidisciplinary consideration of how humans perform. Class work will center around problem solving using a case study methodology.

KINE 412 - MOTOR CONTROL
Short Title: MOTOR CONTROL
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 311
Description: Exploration of the neurophysiological, behavioral, and biomechanical aspects of human movement and development.

KINE 415 - PSYCHOLOGICAL ASPECTS OF SPORTS INJURY & REHABILITATION
Short Title: PSYCHOLOGY OF SPORT INJURY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: This course examines the psychological factors involved in sport-related injuries and the rehabilitation process. Topics include personal and situational factors influencing injury and recover, adherence to rehabilitation programs, social support, returning to play after injury, and the application of psychological interventions to optimize the recovery process. Recommended Prerequisite(s): KINE 310

KINE 419 - MOVEMENT DISORDERS
Short Title: MOVEMENT DISORDERS
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 300 and KINE 301 and KINE 311
Description: This course offers an in-depth look into selected developmental, degenerative, and hyperkinetic movement disorders resulting in abnormal muscle tone and/or motor control. Multiple aspects of each disorder (presentation, treatment, and progression) will be considered through a variety of sources.
KINE 421 - ADVANCED TOPICS IN EXERCISE PHYSIOLOGY AND PREVENTIVE MEDICINE
Short Title: ADV TOPICS IN EX PHYS & MED
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 321 and KINE 323
Description: This course is a seminar style course that examines acute and chronic effects of exercise stimuli on physiological adaptation as relevant to health, disease and human performance. Topics will vary depending on current issues in exercise physiology. Examples include metabolism, fatigue, diabetes, genetics, muscular dystrophy, orthopedics, cancer and cardiovascular disease. The course is intended for those with a background in biology and/or physiology and interest in exercise and health.

KINE 430 - SPORTS INJURY: EVALUATION, MANAGEMENT, AND TREATMENT
Short Title: SPORTS INJURY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 300
Description: Upper level course designed to provide students with practical application of basic science knowledge obtained in lower level courses within the department of Kinesiology. The course will address the management of common sports injuries from time of injury to return to play. At the end of the course, students will have a comprehensive understanding of athletic injuries and their management.

KINE 440 - RESEARCH METHODS
Short Title: RESEARCH METHODS
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 319
Description: Designed to introduce students to research methods, statistical techniques, and topics appropriate for experimental research.

KINE 477 - SPECIAL TOPICS
Short Title: SPECIAL TOPICS
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Laboratory, Internship/Practicum, Lecture, Seminar, Lecture/Laboratory
Credit Hours: 1-4
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Topics and credit hours may vary each semester. Contact department for current semester's topic(s). Repeatable for Credit.

KINE 490 - SEMINAR IN SPORTS MEDICINE
Short Title: SEMINAR IN SPORTS MEDICINE
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Considers issues related to athletic injury including mechanisms, assessment, management, and rehabilitation.

KINE 495 - INDEPENDENT RESEARCH IN SPORTS MEDICINE & EXERCISE PHYSIOLOGY
Short Title: INDEPENDENT RESEARCH
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Research
Credit Hours: 1-3
Restrictions: Enrollment limited to students with a class of Junior or Senior. Enrollment is limited to students with a major in Sports Medicine & Exercise Phy. Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 319 and KINE 440
Description: To provide the student with an opportunity to participate in a research project under the supervision of a Rice Kinesiology faculty member and/or an external researcher. Department Permission Required. Recommended Prerequisite(s): KINE 319 and KINE 440. Repeatable for Credit.

KINE 498 - SPECIAL TOPICS IN SPORTS MEDICINE
Short Title: SPECIAL TOPICS IN SPORTS MED
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Laboratory
Credit Hour: 1
Restrictions: Enrollment is limited to students with a major in Kinesiology or Sports Medicine & Exercise Phy. Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 301
Description: This course provides a laboratory experience designed to demonstrate and apply concepts from human physiology. Students will collect, analyze, and report data on various physiological variables. Key concepts and application include, homeostasis, isolated and integrated functions of body systems, and response to exercise. Spring 2021 Topic: Human Physiology Lab. Instructor Permission Required. Repeatable for Credit.
KINE 499 - TEACHING PRACTICUM IN SPORTS MEDICINE & EXERCISE
PHYSIOLOGY
Short Title: TEACHING PRACTICUM
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Internship/Practicum
Credit Hours: 1-3
Restrictions: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
Course Level: Undergraduate Upper-Level
Description: Students will assist in conducting a course in which they have previously excelled. The student will learn techniques in course management, instruction, and evaluation. Department Permission Required. Recommended prerequisite(s): Junior or Senior standing, declared major in Sports Medicine & Exercise Physiology, and at least an "A-" in the course serving as the practicum. Repeatable for Credit.

Description and Code Legend
Note: Internally, the university uses the following descriptions, codes, and abbreviations for this academic program. The following is a quick reference:

Course Catalog/Schedule
- Course offerings/subject code for Emergency Medical Services/Practice: EMSP
- Course offerings/subject code for Health Sciences: HEAL
- Course offerings/subject code for Kinesiology: KINE

Department Description and Code
- Kinesiology: KINE

Undergraduate Degree Description and Code
- Bachelor of Arts degree: BA

Undergraduate Major Description and Code
- Major in Health Sciences: HESC

CIP Code and Description

1 Classification of Instructional Programs (CIP) 2020 Codes and Descriptions from the National Center for Education Statistics: https://nces.ed.gov/ipeds/cipcode/