Rice's Kinesiology department was one of the first in the nation to institute an academic program structure that allows students to concentrate their efforts in a specific sub-discipline. Within the Kinesiology major, there are two distinct major concentrations: Health Sciences and Sports Medicine.

**Major in Kinesiology and a Major Concentration in Health Sciences**
The goal of the health sciences program 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 science program 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.

**Major in Kinesiology and a Major Concentration in Sports Medicine**
The sports medicine curriculum intends to provide a strong natural science foundation and interface this foundation with application to the human body. Prerequisite courses in chemistry and physics, elective courses in biology and biochemistry, as well as an array of required and elective courses offered within the department provide this foundation. The sports medicine program is the only academic specialization on campus that provides detailed exposure to human anatomy and human physiology. In addition, students receive coursework in foundations of Kinesiology, research methods, motor learning, statistics, exercise physiology, and sports medicine. Practical experience is afforded through several academic labs. Other elective courses include epidemiology, case studies in human performance, motor control, advanced exercise physiology and preventive medicine, sports nutrition, medical terminology, and muscle physiology and plasticity. During advising sessions, students are encouraged to select from these electives according to their respective career goals. Students in the sports medicine program are expected to develop a strong scientific knowledge.

Students who choose the sports medicine program typically continue their education at the graduate level or plan on attending medical school or other medically related professional schools, such as physical therapy. Graduates also may be directly employed in medical and corporate settings, which include both preventative and rehabilitative programs. Graduates who choose not to seek post-baccalaureate education generally are encouraged to obtain certification for exercise testing, physical fitness evaluation, or exercise prescription through the American College of Sports Medicine (http://acsm.org) website.

**Bachelor's Programs**

- Bachelor of Arts (BA) Degree with a Major in Kinesiology and a Major Concentration in Health Sciences
  (ga.rice.edu/programs-study/departments-programs/natural-sciences/kinesiology/kinesiology-ba-health-sciences-concentration)

- and a Major Concentration in Sports Medicine
  (ga.rice.edu/programs-study/departments-programs/natural-sciences/kinesiology/kinesiology-ba-sports-medicine-concentration)

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

**Chair**
Nicholas K. Iammarino

**Professors**
Nicholas K. Iammarino

**Professors Emeriti**
Bruce Etnyre
Eva J. Lee
Dale W. Spence

**Clinical Professor**
Brian Gibson

**Lecturers**
Amanda Perkins Ball
Lisa Basgall
Cassandra S. Diep
Zacharias Papadakis
Heidi Perkins
Augusto X. Rodriguez

**Part-Time Lecturers**
Roberta Anding
Jaime Aparicio
Daniel C. Hughes
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?p_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 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
Distribution Group: Distribution Group III
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
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
Distribution Group: Distribution Group III
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
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: Graduate level students may not enroll.
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 491 - EMERGENCY MEDICAL SERVICES RESEARCH COURSE
Short Title: EMS RESEARCH COURSE
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Research
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
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: Graduate level students may not enroll.
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: Graduate level students may not enroll.
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.

Health Sciences (HEAL)

HEAL 103 - NUTRITION
Short Title: NUTRITION
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
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. Graduate level students may not enroll.
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: Graduate level students may not enroll.
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: Graduate level students may not enroll.
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 212 - CONSUMER HEALTH AND THE MEDIA
Short Title: CONSUMER HEALTH AND THE MEDIA
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
Course Level: Undergraduate Lower-Level
Description: Study of factual information and guidelines that enable consumers to act intelligently in selecting health products and services, with emphasis on the economic aspects of health.

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: Graduate level students may not enroll.
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 306 - HUMAN SEXUALITY
Short Title: HUMAN SEXUALITY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
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 Kinesiology. Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
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 Science majors only.

HEAL 350 - UNDERSTANDING CANCER
Short Title: UNDERSTANDING CANCER
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
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: Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: This course presents an overview of issues concerning violence using a public health perspective. Information will be presented and discussed concerning several domains pertinent to violence, including family violence, intimate partner violence, community violence, and workplace harassment.
HEAL 379 - INTERNSHIP IN HEALTH SCIENCES
Short Title: INTERNSHIP IN HEALTH SCIENCES
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Internship/Practicum
Credit Hours: 1-3
Restrictions: Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: Internship experience for upper-level health sciences majors only. Department Permission Required. Repeatable for Credit.

HEAL 380 - DISPARITIES IN HEALTH IN AMERICA
Short Title: DISPARITIES IN HEALTH IN AMER
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: This course explores the aspects of race and ethnicity that influence health, public health policy, and the management and practice of healthcare, as well as, the trends which drive ethnic demographic transition including an aging white population, declining white birth rate, immigration of non-whites, and the higher birth rate of minority groups. Graduate/Undergraduate Equivalency: HEAL 580. Mutually Exclusive: Credit cannot be earned for HEAL 380 and HEAL 580.

HEAL 407 - EPIDEMIOLOGY
Short Title: EPIDEMIOLOGY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
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: Credit cannot be earned for HEAL 407 and HEAL 507.

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: Graduate level students may not enroll.
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: Credit cannot be earned for HEAL 422 and 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. Graduate level students may not enroll.
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: Credit cannot be earned for HEAL 460 and HEAL 560.

HEAL 495 - INDEPENDENT STUDIES IN HEALTH SCIENCES
Short Title: INDEPENDENT STUDIES
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Independent Study
Credit Hours: 1-3
Restrictions: Enrollment limited to students with a class of Junior or Senior. Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: Independent study or directed reading on an approved project under faculty supervision. Department Permission Required. Repeatable for Credit.

HEAL 496 - INDEPENDENT STUDIES IN HEALTH SCIENCES
Short Title: INDEPENDENT STUDY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Independent Study
Credit Hours: 1-3
Restrictions: Enrollment limited to students with a class of Junior or Senior. Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: Independent study or directed reading on an approved project under faculty supervision. Instructor Permission Required. Repeatable for Credit.

HEAL 498 - SPECIAL TOPICS IN HEALTH SCIENCES
Short Title: SPECIAL TOPICS
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 1-3
Restrictions: Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: Topics vary from semester to semester. 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: Graduate level students may not enroll.  
Course Level: Undergraduate Upper-Level  
Description: Advanced teaching experience for upper level students who have demonstrated particular aptitude and interest in one area of kinesiology. 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.

HEAL 507 - EPIDEMIOLOGY  
Short Title: EPIDEMIOLOGY  
Department: Kinesiology  
Grade Mode: Standard Letter  
Course Type: Lecture  
Credit Hours: 3  
Restrictions: Enrollment is limited to Graduate level students.  
Course Level: Graduate  
Description: Study of communicable, noncommunicable, and behavioral diseases with emphasis on the disease process and basic epidemiologic methods. Graduate level students only. Instructor Permission Required. Graduate/Undergraduate Equivalency: HEAL 407. Mutually Exclusive: Credit cannot be earned for HEAL 507 and HEAL 407.

HEAL 522 - 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 Graduate level students.  
Course Level: Graduate  
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 level students only. Instructor Permission Required. Graduate/Undergraduate Equivalency: HEAL 422. Mutually Exclusive: Credit cannot be earned for HEAL 522 and HEAL 422.

HEAL 560 - 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 is limited to Graduate level students.  
Course Level: Graduate  
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 level students only. Instructor Permission Required. Graduate/Undergraduate Equivalency: HEAL 460. Mutually Exclusive: Credit cannot be earned for HEAL 560 and HEAL 460.

HEAL 580 - DISPARITIES IN HEALTH IN AMERICA  
Short Title: DISPARITIES IN HEALTH IN AMER  
Department: Kinesiology  
Grade Mode: Standard Letter  
Course Type: Lecture  
Credit Hours: 3  
Restrictions: Enrollment is limited to Graduate level students.  
Course Level: Graduate  
Description: This course explores the aspects of race and ethnicity that influence health, public health policy, and the management and practice of healthcare, as well as, the trends which drive ethnic demographic transition including an aging white population, declining white birth rate, immigration of non-whites, and the higher birth rate of minority groups. Graduate level students only. Instructor Permission Required. Graduate/Undergraduate Equivalency: HEAL 380. Mutually Exclusive: Credit cannot be earned for HEAL 580 and HEAL 380.

Kinesiology (KINE)  
KINE 120 - SCIENTIFIC FOUNDATIONS OF KINESIOLOGY  
Short Title: FOUNDATIONS OF KINESIOLOGY  
Department: Kinesiology  
Grade Mode: Standard Letter  
Course Type: Lecture  
Credit Hours: 3  
Restrictions: Enrollment limited to students with a class of Freshman. Graduate level students may not enroll.  
Course Level: Undergraduate Lower-Level  
Description: 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.

KINE 300 - HUMAN ANATOMY  
Short Title: HUMAN ANATOMY  
Department: Kinesiology  
Grade Mode: Standard Letter  
Course Type: Lecture  
Credit Hours: 3  
Restrictions: Graduate level students may not enroll.  
Course Level: Undergraduate Upper-Level  
Description: Introduction to human anatomy including concepts of function.

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: Graduate level students may not enroll.  
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: Graduate level students may not enroll.
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: Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
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: Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: Designed to provide a basic understanding of the theories related to skill acquisition, development, and movement. Learners develop an understanding of the cognitive, behavioral, and neurological concepts needed to become skilled at movements. The course will also incorporate laboratory experiences in the physiological, neurological, and psychological factors of human movement.

KINE 319 - STATISTICS FOR THE HEALTH PROFESSIONAL
Short Title: STATS FOR HEALTH PROFESSIONAL
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: Topics include displaying and describing data, the normal curve, regression, statistical inference including parametric and non-parametric analyses, and hypothesis testing. Students also have the opportunity to analyze data using SPSS and Excel software.

KINE 321 - EXERCISE PHYSIOLOGY
Short Title: EXERCISE PHYSIOLOGY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
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. Must register for co-req course KINE 323 also.

KINE 323 - EXERCISE PHYSIOLOGY LABORATORY
Short Title: EXERCISE PHYSIOLOGY LABORATORY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Laboratory
Credit Hour: 1
Restrictions: Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 300 and KINE 301
Corequisite: KINE 321
Description: This course introduces the concepts and assessment techniques used to quantify physiological function. Laboratory experiences will require students to acquire and apply knowledge of systems physiology to make direct functional assessments using themselves as subjects. A major emphasis will be placed on metabolism and energy transfer in the body. Cardiovascular, musculoskeletal, and central nervous system function will also be covered. Individual body composition, musculoskeletal levers, metabolic power and fitness, and neuromuscular control and coordination. Must register for co-req course KINE 321 also.

KINE 326 - EXERCISE EPIDEMIOLOGY
Short Title: EXERCISE EPIDEMIOLOGY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Lecture
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
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. Recommended Prerequisite(s): KINE 321 or KINE 323.
KINE 351 - HUMAN ANATOMY LAB  
Short Title: HUMAN ANATOMY LAB  
Department: Kinesiology  
Grade Mode: Standard Letter  
Course Type: Laboratory  
Credit Hours: 1  
Restrictions: Enrollment is limited to students with a major in Kinesiology. Graduate level students may not enroll.  
Course Level: Undergraduate Upper-Level  
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 INTERNSHIP  
Short Title: SPORTS MEDICINE INTERNSHIP  
Department: Kinesiology  
Grade Mode: Standard Letter  
Course Type: Internship/Practicum  
Credit Hours: 1-3  
Restrictions: Students with a class of Junior or Senior may not enroll. Enrollment is limited to students with a major in Kinesiology. Graduate level students may not enroll.  
Course Level: Undergraduate Upper-Level  
Description: Internship experience for upperclassmen in the sports medicine concentration. 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: Graduate level students may not enroll.  
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: Graduate level students may not enroll.  
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: Graduate level students may not enroll.  
Course Level: Undergraduate Upper-Level  
Prerequisite(s): KINE 311 and KINE 325  
Description: Exploration of the neurophysiological, behavioral, and biomechanical aspects of human movement and development.

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: Graduate level students may not enroll.  
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: Graduate level students may not enroll.  
Course Level: Undergraduate Upper-Level  
Prerequisite(s): KINE 300 and KINE 302 and KINE 321  
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: Graduate level students may not enroll.  
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 490 - SEMINAR IN SPORTS MEDICINE
Short Title: SEMINAR IN SPORTS MEDICINE
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Seminar
Credit Hours: 3
Restrictions: Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: Considers issues related to athletic injury including mechanisms, assessment, management, and rehabilitation.

KINE 495 - INDEPENDENT STUDY IN SPORTS MEDICINE
Short Title: INDEPENDENT STUDY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Independent Study
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 Kinesiology. Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: To provide the student with research opportunity to gain or enhance knowledge in the sports medicine area or to explore an area of interest related to research in sports medicine. Department Permission Required. Recommended Prerequisite(s): KINE 319 and KINE 440. Repeatable for Credit.

KINE 496 - INDEPENDENT STUDY IN SPORTS MEDICINE
Short Title: INDEPENDENT STUDY
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Independent Study
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 Kinesiology. Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: To provide the student with research opportunity to gain or enhance knowledge in the sports medicine area or to explore an area of interest related to research in sports medicine. 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: Seminar
Credit Hours: 1-3
Restrictions: Enrollment limited to students with a class of Junior or Senior. Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Prerequisite(s): KINE 300
Description: Course will address management of common sports injury to return to play. Students will learn how to identify common athletic injuries including mechanism of injury, signs and symptoms, treatment, evaluation of involved body region, and return to play decision making criteria. Fall 2015 topic: Management, Evaluation and Treatment of Sports Injuries. Recommended Prerequisite(s): KINE 321 or KINE 323. Repeatable for Credit.

KINE 499 - TEACHING PRACTICUM IN SPORTS MEDICINE
Short Title: TEACHING PRACTICUM
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Internship/Practicum
Credit Hours: 1-3
Restrictions: Graduate level students may not enroll.
Course Level: Undergraduate Upper-Level
Description: Advanced teaching experience for upper level students who have demonstrated particular aptitude and interest in one area of kinesiology. 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 Kinesiology, and at least an "A-" in the course serving as the practicum. Repeatable for Credit.

Descriptions and Codes 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 Kinesiology: KINE
- Course offerings/subject code for Emergency Medical Services/Practice: EMSP
- Course offerings/subject code for Health Sciences: HEAL

Department Description and Code
- Kinesiology: KINE

Undergraduate Degree Description Code
- Bachelor of Arts degree: BA

Undergraduate Major Description and Code
- Major in Kinesiology: KINE

Undergraduate Major Concentration Descriptions and Codes
- Major Concentration in Health Sciences: KHSC
- Major Concentration in Sports Medicine: KSPM