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. Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
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 238 - SPECIAL TOPICS
Short Title: SPECIAL TOPICS
Department: Kinesiology
Grade Mode: Standard Letter
Course Type: Internship/Practicum, Lecture, Laboratory, Seminar
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.

KINE 300 - HUMAN ANATOMY
Short Title: HUMAN ANATOMY
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: 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: 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
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
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: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
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.
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<th>Course</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>Prerequisite(s)</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>KINE 321 - EXERCISE PHYSIOLOGY</strong></td>
<td></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 Upper-Level</td>
<td>KINE 300 and KINE 301</td>
<td>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.</td>
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<td><strong>KINE 323 - EXERCISE PHYSIOLOGY LABORATORY</strong></td>
<td></td>
<td>Kinesiology</td>
<td>Standard Letter</td>
<td>Laboratory</td>
<td>1</td>
<td>Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.</td>
<td>Undergraduate Upper-Level</td>
<td>KINE 321</td>
<td>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.</td>
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<tr>
<td><strong>KINE 326 - EXERCISE EPIDEMIOLOGY</strong></td>
<td></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 Upper-Level</td>
<td>KINE 321</td>
<td>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.</td>
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<td><strong>KINE 351 - HUMAN ANATOMY LAB</strong></td>
<td></td>
<td>Kinesiology</td>
<td>Standard Letter</td>
<td>Laboratory</td>
<td>1</td>
<td>Enrollment is limited to students with a major in Kinesiology. Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.</td>
<td>Undergraduate Upper-Level</td>
<td>KINE 300</td>
<td>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.</td>
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<td><strong>KINE 375 - SPORTS MEDICINE INTERNSHIP</strong></td>
<td></td>
<td>Kinesiology</td>
<td>Standard Letter</td>
<td>Internship/Practicum</td>
<td>1-3</td>
<td>Enrollment limited to students with a class of Junior or Senior. Enrollment is limited to students with a major in Kinesiology. Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.</td>
<td>Undergraduate Upper-Level</td>
<td>KINE 300</td>
<td>Internship experience for upperclassmen in the sports medicine concentration. Department Permission Required. Repeatable for Credit.</td>
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<td><strong>KINE 403 - SPORT NUTRITION</strong></td>
<td></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 Upper-Level</td>
<td>HEAL 103</td>
<td>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.</td>
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<tr>
<td><strong>KINE 410 - CASE STUDIES IN HUMAN PERFORMANCE</strong></td>
<td></td>
<td>Kinesiology</td>
<td>Standard Letter</td>
<td>Research</td>
<td>3</td>
<td>Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.</td>
<td>Undergraduate Upper-Level</td>
<td>KINE 321</td>
<td>An advanced, interdisciplinary consideration of how humans perform. Class work will center around problem solving using a case study methodology.</td>
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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, Undergraduate Professional or Visiting Undergraduate level students.  
**Course Level:** Undergraduate Upper-Level  
**Prerequisite(s):** KINE 319 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:** 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 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 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:** 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:** 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 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:** Consider issues related to athletic injury including mechanisms, assessment, management, and rehabilitation.

KINE 495 - INDEPENDENT RESEARCH IN SPORTS MEDICINE  
**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 Kinesiology. 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:** Seminar  
**Credit Hours:** 3  
**Restrictions:** Enrollment limited to students with a class of Junior, Sophomore or Senior. 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 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. Spring 2019 Topic: Movement Disorders. 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: Enrollment is limited to Undergraduate, Undergraduate Professional or Visiting Undergraduate level students.
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.