KINESIOLOGY (KIN)

KIN 105 - Foundations of Exercise Science. 2 Credits.
Provides non-major students with a foundational understanding of exercise science as applied to fitness, health/wellness through lifestyle medicine applications, and sport performance implications. Scientific applications of exercise science are designed to complement applications of many human-based sciences (e.g., anatomy/physiology), but does necessitate prerequisite course completion. Investigation of the physiological changes and the significance of these changes as they occur during physical work, activity and exercise. Focus on basic energy, musculoskeletal, nervous, cardiovascular and respiratory systems as they relate to aerobic and anaerobic exercise. Emphasis will be placed on the response of these systems to both acute exercise, and the adaptations to chronic exercise. Credit not allowed toward exercise science degree options in Integrative Physiology and Athletic Training.

KIN 106 - Foundations of Exercise Science Lab. 1 Credit.
Laboratory sessions engage students in inquiry-based learning activities related to the core topics presented within the lecture section. In hands-on lab activities, students will formulate a hypothesis, design an experiment to test the hypothesis, and collect, interpret, and present the data to support their conclusions. Individual student phenotypes (e.g., propensities for success in high school athletics, or lack thereof) will be addressed according to established scientific understanding about prior sport participation may/may not be informed by current fitness outcomes. In addition, current and future health status will be examined relative to exercise and other lifestyle practices as a way of improving long-term health outcomes for preventing chronic diseases. Credit not allowed toward exercise science degree options in Integrative Physiology and Athletic Training.

KIN 191 - Special Topics. 1-6 Credits.
(R-6) Experimental offerings of visiting professors, experimental offerings of new courses, or one time offerings of current topics.

KIN 201 - Basic Exercise Prescription. 3 Credits.
Theory, principles, and practice of exercise prescription for aerobic and resistance exercise programs for health, fitness and performance.

KIN 205 - Foundations of HHP. 3 Credits.
An overview of the foundational principles comprising the field of Integrative Physiology, Health and Allied Health with special emphasis on the historical and philosophical foundations, and the evolution of the unity of mind/body concept. Includes an overview of program options, analysis of future directions, and career choices.

KIN 248 - Principles Optimal Performance for Athletes. 2 Credits.
Introduction to an optimal performance model, with focus upon specific physical, psychological, and environmental factors that contribute to human performance.

KIN 292 - Independent Study. 1-6 Credits.
(R-6) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student.

KIN 310 - Strength Training & Cond. 2 Credits.
This course is designed to introduce students to the fundamentals of aerobic exercise and resistance training related to health, fitness and performance. Subject matter will include, but is not limited to maximizing student involvement in the understanding of physical training and the designing of exercise programs for health (both physical and mental), fitness and performance. This course will lay a basic practical foundation for students to design training programs, understand and design programs for athletic performance and to develop the fundamental theories of training for future coaches.

KIN 320 - Exercise Physiology. 3 Credits.
Prereq., BIOH 370 or BIOH 211N, KIN 201; coreq., KIN 321. Investigation of the physiological changes and the significance of these changes as they occur during physical work, activity and exercise. Focus on basic energy, musculosketal, nervous, cardiovascular and respiratory systems as they relate to aerobic and anaerobic exercise. Emphasis will be placed on the response of these systems to both acute exercise, and the adaptations to chronic exercise. Credit not allowed toward graduate degree in the exercise science option in Health and Human Performance.

KIN 321 - Exercise Physiology Lab. 1 Credit.
Prereq., BIOH 370 or BIOH 211N; coreq., KIN 320. Laboratory session examining the physiological effect of the physical work, activity and exercise on the functions of the human body. Credit not allowed toward graduate degree in the exercise science option in Health and Human Performance.

KIN 322 - Kinesiology. 3 Credits.
Prereq., BIOH 211N or BIOH 370; coreq., KIN 323. Anatomy and kinesiology of the neuromusculoskeletal system and body cavities in relation to movement and function.

KIN 323 - Anatomical Kinesiology Lab. 1 Credit.
Prereq., BIOH 211N or BIOH 370; coreq., KIN 322. Anatomy and kinesiology of the neuromusculoskeletal system and body cavities in relation to movement and function.

KIN 330 - Motor Learning and Control. 3 Credits.
Prereq., BIOH 201N or BIOH 365. Focused on developing an understanding of the anatomy and physiology within the nervous system necessary for movement. Establishes an understanding of the basic science involved in the control of motor tasks, and uses this foundation to evaluate case studies that will focus on sport performance, clinical deficits, age-related alterations, learning of motor tasks following injury, and other motor-related tasks.

KIN 391 - Special Topics. 1-9 Credits.
(R-9) Offered intermittently. Experimental offerings of visiting professors, experimental offerings of new courses, or one-time offerings of current topics.

KIN 395 - Experiential Learning in Integrative Physiology and Athletic Training. 1-3 Credits.
Offered every term. Students will be connected with preceptors in health-related occupations. They will be positioned to observe the demands and duties of specific jobs for which they think they may be interested as future professionals.

KIN 410 - Advanced Strength Training & Conditioning. 3 Credits.
Prereq., KIN 320, senior or graduate student status. Advanced resistance and aerobic exercise testing and prescription for both healthy and clinical populations.

KIN 425 - Biomechanics. 3 Credits.
Coreq., KIN 426. Prereq., KIN 320 & M 115 or higher and major in Integrative Physiology or Athletic Training. Description and analysis of the fundamental principles of human movement. Includes quantitative study of the Newtonian mechanics governing biological motion and the roles of the musculo-skeletal, nervous and cardio-vascular systems during human activity.

KIN 426 - Biomechanics and Human Movement Analysis Laboratory. 1 Credit.
Offered spring. Coreq., KIN 425. Prereq., KIN 320 & M 115 or higher. This course develops the laboratory and analysis skills needed to measure movement of the human body, both as translation in space and movements occurring within the human body. Laboratory experiments focus on; forces applied during human physical activity, muscle contractions, material properties, human gait, motion capture and analysis, hemo- & fluid-dynamics, motor control and muscle fatigue, projectile and rotational motion.

KIN 440 - Sport Psychology. 3 Credits.
Prereq., upper-division or graduate status. Course content is focused on the historical development of sport psychology, with emphasis upon the major principles and tactics of the discipline, including motivation, confidence, imagery, leadership, and team building.

KIN 441 - Seminar in Sport Psychology. 3 Credits.
Offered spring. Prereq., KIN 440 or consent of instructor. This course is designed as a capstone course for the minor in sport psychology. Through multiple case studies, writing assignments, lectures, and applied laboratory experiences, students will gain a greater understanding of sport psychology and its application in sport and performance settings. Level: Undergraduate

KIN 447 - Analytical & Communicative Techniques. 3 Credits.
Prereq., WRIT 101 or equivalent. Analysis and communicative critique of literature, cinema, and other forms of popular media that contain allegorical life themes. Substantial reading, speaking and writing component. Emphasis on improving and maintaining communication skills.
Gen Ed Attributes: Advanced Writing

KIN 460 - ECG Assessment. 2 Credits.
Prereq., junior, senior, or graduate status. Laboratory sessions combined with class sessions to understand electrocardiography and the assessment of electrocardiograms, both at rest and during exercise.

KIN 480 - Teaching Anatomy, Physiology. 4 Credits.
(R-4) Prereq., student must have received at least a “B” in Human Anatomy and Physiology and consent of instructor. Students assist in preparation and grading of demonstrations and laboratory assignments, and provide laboratory instruction of undergraduate students enrolled in BIOH 201N/202N-211N/212N. Students are given advanced instruction in principles of human anatomy and physiology.

KIN 483 - Exercise Disease & Aging. 3 Credits.
Prereq., KIN 320,321, 460; coreq. KIN 484. Focus on guidelines for exercise testing and prescription for individuals with chronic disease including heart disease, diabetes, hypertension, arthritis, osteoporosis, elderly and pulmonary disease. Class requires 25 assigned hours of service learning. Covers material necessary for ACSM clinical certification exam when combined with KIN 201, 320, 321, 460, and 484.

KIN 484 - Exercise Disease & Aging Lab. 1 Credit.
Prereq., KIN 320, 321; coreq., KIN 483. Laboratory sessions focus on practical exercise testing and prescription for individuals with chronic disease including coronary heart disease, diabetes, hypertension, arthritis, osteoporosis, elderly and pulmonary disease; basic ECG testing and analysis. Covers material necessary for ACSM clinical certification exam when combined with KIN 201, 320, 321, 460, and 483.

KIN 490 - Undergraduate Research. 1-3 Credits.
(R-6) Prereq., consent of instr. Directed individual research and study appropriate to the back ground and objectives of the student. Level: Undergraduate

KIN 492 - Independent Study. 1-3 Credits.
(R-6) Prereq., consent of instr. Course material appropriate to the needs and objectives of the individual student. Level: Undergraduate

KIN 494 - Seminar. 1-3 Credits.
(R-9) Seminar course in topic specific to individual course section. Level: Undergraduate

KIN 495 - Practicum in Integrative Physiology. 1-3 Credits.
Offered every term. The purpose of this course is to help students gain professional experience working with a professional in a field related to Integrative Physiology and Athletic Training. Practicum activities can include research, laboratory work, community engagement within fitness, wellness, coaching, health, and allied health professions. Level: Undergraduate

KIN 498 - Internship. 2-6 Credits.
(R-6) Prereq. all INPH concentrations minimum junior standing and ECP 120/121 (or equivalent). Prereqs per concentration. Exercise Science Applied: KIN 320/321. If internship is coaching or strength & conditioning must take KIN 410 and COA 405 as corequisites. Exercise Science Pre-Professional: KIN 320/321. If internship is cardiac rehab must take KIN 460/483/484 as corequisites. Community Health: CHTH 355. Supervised field experiences with private businesses, public agencies, or institutions. 45 hours of internship site work = 1 credit. A maximum of 6 credits of Internship x98 may count toward graduation. Students should not be registered for more than 16 credits their internship semester. Level: Undergraduate

KIN 499 - Capstone. 1-3 Credits.
(R 6) Prereq., consent of instr. Independent work under the University omnibus option. Level: Undergraduate