

# KINESIOLOGY (KINE)

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## **KINE 5097. Special Topics in Kine. 3 Hours.**

### **KINE 5334. SHP Internship I. 3 Hours.**

Students engage in an internship experience in a personal working environment or organizational setting. Supervisory assistance by project staff occurs at frequent intervals.

### **KINE 5335. Sport and Human Performance Internship II. 3 Hours.**

Students complete an additional 200 hours of an internship experience and serves as the second half of the 400 hour internship for graduate students. This course allows students to either gain experience in a new setting, or delve deeper into the experiences gained in KINE 5334. Students who desire to gain practical experience in the Sport and Human Performance degree track should select this course.

**Prerequisite:** Department Approval and Graduate Standing.

### **KINE 5367. Adv Physiology of Exercise. 3 Hours.**

Students explore advanced content reflecting the scientific principles underlying the physiology of exercise. Students are required to conduct an applied research project on a topic of their choice.

**Prerequisite:** Graduate Standing.

### **KINE 5368. Research in Sport & Human Perf. 3 Hours.**

Students focus on current research trends in Sport and Human Performance (SHP). Research on a variety of current topics in the field are analyzed and discussed. In the course, students discuss media presentation and their application to the profession. Additionally, students develop and present a proposal for a research project.

**Prerequisite:** Graduate Standing.

### **KINE 5372. Youth Fitness. 3 Hours.**

Students are provided with specific background and knowledge in how to appropriately plan programs geared to improving the fitness of youth. Central to this course is the development of an attitude that perceives youth fitness as a significant part of the school curriculum. Students are prepared to promote youth fitness in an effective and scientific manner.

### **KINE 5374. Applied Research Methods in Kinesiology. 3 Hours.**

Students study research techniques, identification of problems, research designs and data gathering procedures. In addition, students develop a proposal for a research project.

### **KINE 5375. Statistical Design in KINE. 3 Hours.**

Students explore principles of advanced statistical techniques and measurement theory, with emphasis upon their application to Health, Kinesiology, and related areas.

### **KINE 5377. Independent Studies. 3 Hours.**

This course is adaptable to the needs and interests of the individual student. Students with specific interests are provided the opportunity to investigate and make application in theoretical, laboratory, or field experience approaches to their area of concentration. A proposal is submitted to the faculty sponsor and the Chair of the Health and Kinesiology Graduate Committee the semester before the student plans to register for this course. A proposal is submitted to the faculty sponsor and the Chair of the Health and Kinesiology Graduate Committee the semester before the student plans to register for this course.

**Prerequisite:** KINE 5374.

### **KINE 5378. Applied Motor Dev in PE. 3 Hours.**

Students focus on the principles that will enable graduate students to effectively apply motor development concepts to teaching, rehabilitation, and training. In addition, students apply current research and literature to the study of the changes of human motor behavior over the lifespan, the processes that underlie these changes, and the factors that affect them. This course emphasizes the administration, collection, and analysis of data in the motor domain.

### **KINE 5379. Mgt Adult Fitness Programs. 3 Hours.**

Students analyze factors associated with the management of commercial, corporate and hospital-based wellness programs. Special attention is given to the purpose, development, and maintenance of such programs.

### **KINE 5381. Clinical Exercise Physiology. 3 Hours.**

Students are introduced to a detailed study of the human physiological responses to activity and exercise in the presence of chronic disease. Students are provided with fundamental knowledge of disease-specific pathology and treatment guidelines. Students are guided through the physiology associated with exercise testing and physical training of patients with chronic disease.

**Prerequisite:** Graduate standing.

### **KINE 5385. Biomechanics of Injury. 3 Hours.**

Students examine the biomechanics of musculoskeletal injury. Specific topics to be addressed are the biomechanics of tissue and how biomechanical factors impact injuries to the lower-extremity, upper-extremity, and head, neck, and trunk.

**Prerequisite:** Graduate Standing .

**KINE 5386. EKG/Cardiac Conditions. 3 Hours.**

Students in this course develop an advanced understanding of cardiac anatomy and how electrical activity of the heart can be properly interpreted in order to detect abnormalities in the cardiovascular system. Emphasis is placed on identifying criteria for abnormal heart rhythms including conduction disturbances, and ventricular and supraventricular arrhythmias. Other topics to be addressed include systematic EKG interpretation techniques, myocardial ischemia and infarction, and the role of pharmacological agents and electrolytes on the EKG.

**Prerequisite:** Graduate Standing.

**KINE 5388. Strength Training Principles. 3 Hours.**

Students develop, instruct, and evaluate resistance training exercises and programs for diverse populations and settings. Students apply physiological and mechanical principles related to resistance training to study human performance, injury prevention, and rehabilitation.

**KINE 5389. Sports in American Culture. 3 Hours.**

Students explore North American sport from a viewpoint that sport is a microcosm of society. Social structures, sub-cultures, and ethics are explored.

**KINE 5390. Exercise Science Lab Practicum. 3 Hours.**

Students study advanced laboratory methods typically utilized in applied exercise science. The student gains understanding of equipment used for assessment and evaluation of persons with varying needs. A research project is a major component of this course.

**Prerequisite:** Graduate standing.

**KINE 5391. Motor Control in Practice. 3 Hours.**

Students identify principles of motor control with emphasis on the application of these principles to Sport and Human Performance (SHP). Students investigate how motor control affects everyday movement and performance, and review and synthesize current literature and present the findings to their peers. **Prerequisite:** Graduate Standing.

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**KINE 5393. Adv Studies in Psy of Sport. 3 Hours.**

Students engage in an advanced study of the psychological factors that affect, and are influenced by, sports participation. Both the coach and the athlete are considered in this analysis.

**KINE 5395. Advanced Biomechanics. 3 Hours.**

Students study the mechanical analysis of motion as it applies to the human musculoskeletal system. The course stresses advanced concepts of functional anatomy, linear and angular kinetics and kinematics, and application of those concepts in a laboratory/research setting. Emphasis is placed on data collection and evaluation in a semester research project.

**Prerequisite:** Graduate Standing.

**KINE 5396. Aerobic and Anaerobic Training. 3 Hours.**

Students engage in a detailed study of training techniques for competitive athletes are presented. Evaluation of the competitive athlete, including test selection, administration, and integration into training programs, are presented, as well. Students learn to design effective training and conditioning programs based on the specific needs of the competitive athlete.

**Prerequisite:** Graduate standing.

**KINE 5397. Current Issues in Kinesiology. 3 Hours.**

Students study topics and specific issues germane to current concerns in the areas of Physical Education, health-related wellness, sport on the professional level, and interscholastic and intercollegiate athletics. Students are required to complete a research project requiring data collection and analysis.

**KINE 5398. Significance of Motor Learning. 3 Hours.**

Students are presented the theoretical and experimental bases for the understanding of human behavior in movement. Areas of study include feedback manipulation, motor programming, dynamic systems theory, generalizability of schema, forgetting, and compatibility analysis. Students are required to plan and conduct a research study testing a motor learning postulate of their own choosing.

**Prerequisite:** KINE 2363 or permission of instructor.

**KINE 5399. Workshop in Kinesiology. 3 Hours.**

Students engage in an intensive laboratory-oriented experience for practitioners seeking to upgrade teaching, coaching, or leadership competencies in areas related to Kinesiology, Coaching, and Athletics. May be repeated for credit with approval of the Kinesiology Graduate Coordinator.

**KINE 6098. SHP Thesis I. 1-3 Hours.**

This phase of the thesis investigation includes the completion of the review of the related literature, formulation of the research design and procedures and related pilot studies. Some data collection may also occur, and the thesis symposium must be completed to the satisfaction of the advisor and members of the thesis committee. Variable Credit (1-3).

**KINE 6099. SHP Thesis II. 1-3 Hours.**

This phase of the thesis includes the completion of the data collection, as well as the actual writing and defense of the thesis. Variable Credit (1 to 3).