

# KINESIOLOGY

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The Kinesiology program is committed to the study and research of human movement in all its dimensions. Undergraduate study focuses on exercise stress, movement efficiency, and fitness; the social, cultural, and psychological aspects of participation in physical activity and sport; coordinaton, control, and skill of physical activity; physical growth, development, and body form throughout the lifespan; the effects of therapeutic techniques of kinesiology upon recovery from physical injury; and the instructional process of teaching/coaching of physical activity and sport.

The curriculum combines a comprehensive liberal arts and sciences education with in-depth study in a particular area of interest. The program of study provides knowledge and understanding essential for human movement and sport careers in either public or private agencies. The hours required for graduation include prescribed courses for all students as well as requirements determined by the various areas of emphasis selected by the student. Teaching and research emphasize hands-on learning through the use of technology and modern laboratory equipment. Graduates find employment in a variety of fields including teaching, corporate fitness, coaching, and athletic training. Many students continue their education and become physical therapists, physicians, exercise physiologists, and sport psychologists.

A 5 year BS MPH joint degree program is available for students majoring in Community Health, I-Health, or Kinesiology. Students apply for the program in the latter part of their third year (junior year) of study. Students accepted into the BS MPH joint degree program take 12 credit hours of coursework in their senior year that apply to both BS and MPH degrees. In the 5th year of study, students complete the remaining requirements for the MPH degree, and graduate simultaneously with both BS and MPH degrees. The requirements are explained in more detail on the MPH program website: <http://www.mph.illinois.edu/Program/>.

## For the Degree of Bachelor of Science in Kinesiology

### Requirements Including General Education

The Kinesiology Program requires that General Education requirements must be selected from the Campus General Education course list. The prescribed courses prepare the student for upper division study and may be used to satisfy General Education requirements provided they are on the appropriate General Education list. Specifically required General Education courses are listed below.

Code	Title	Hours
<b>Communication Arts</b>		
	Composition I and an approved speech performance course; or CMN 111 and CMN 112	6-7
	Advanced Composition (KIN 340 fulfills requirement)	3
<b>Quantitative Reasoning I &amp; II</b>		
	From the approved campus list	6
<b>Humanities and Arts</b>		
	From the approved campus list	6

<b>Behavioral and Social Sciences</b> <sup>1</sup>		
KIN 140	Social Sci of Human Movement (Social Science)	3
KIN 259	Motor Development and Control	3
<b>Natural Sciences</b>		
KIN 150	Bioscience of Human Movement (Life Science)	3
	From the approved campus physical science list	3
<b>Cultural Studies</b> <sup>2</sup>		
	From Western cultures approved campus list	3
	From U.S. minority cultures or non-Western cultures approved campus list	3
	Foreign language: Completion through the third level of the same language in high school or college	
<b>Anatomy</b>		
MCB 244 & MCB 245	Human Anatomy & Physiology I and Human Anat & Physiol Lab I	5
MCB 246 & MCB 247	Human Anatomy & Physiology II and Human Anat & Physiol Lab II	5
<b>Kinesiology and Community Health Department Core</b>		
CHLH 101	Introduction to Public Health	3
KIN 122	Physical Activity and Health	3
<b>Kinesiology Core Requirements</b>		
KIN 125	Orientation KIN & Comm Health	1
KIN 140	Social Sci of Human Movement <sup>3</sup>	3
KIN 150	Bioscience of Human Movement <sup>3</sup>	3
KIN 201	Physical Activity Research Methods	3
KIN 259	Motor Development and Control <sup>3</sup>	3
KIN 340	Soc & Psych of Phys Activity <sup>3</sup>	3
KIN 352	Bioenergetics of Movement	3
KIN 355	Biomechanics of Human Movement	3

<sup>1</sup> Students pursuing teacher licensure must complete PSYC 100 or PSYC 103 in addition to KIN 259.

<sup>2</sup> Courses in cultural studies may be completed through other categories where appropriate.

<sup>3</sup> Fulfills University General Education Requirements

### Kinesiology Program Guided Electives

Code	Title	Hours
<b>Elective Kinesiology Courses</b>		
	All courses must be at the 200, 300, or 400 level. At least six or more hours must be at the 400 level (at least 12 hours).	12
<b>Correlate Area Studies</b>		
	Students select a standardized correlate that will prepare them for further education toward their career goals (at least 18 hours).	18

## Summary of Degree Requirements

Code	Title	Hours
	General Education and supporting coursework	46
	Kinesiology and Community Health Department Core	6
	Kinesiology Core	22
	Elective Kinesiology courses	12
	Correlate Area	18

Free electives	24
Total Hours	128

## Requirements for Teacher Certification

Application to the Teacher Licensure curriculum is made at the end of the sophomore year. Admission depends on meeting minimum grade point average requirements and having passed an Illinois approved test of basic skills. Approved tests consist of the Illinois Test of Academic Proficiency (TAP), ACT or SAT with approved scores. In order to remain in good standing in this program and be recommended for licensure, candidates are required to maintain UIUC, cumulative, and content area grade point averages of 2.5 (A=4.0), and a professional education grade point average of 3.0. Candidates should consult their advisor or the Council on Teacher Education for the list of courses used to compute these grade point averages. In addition, candidates must receive a B- or higher in KIN 360, KIN 361, KIN 362, KIN 363, KIN 364, and KIN 460, and meet professional standards of scholarship, ethics, and responsibility as evaluated by the Physical Education Area of Specialization Committee. In addition, students must complete all professional education and content-area courses with a grade of C or better for licensure.

In addition to the General Education requirements for all Kinesiology undergraduates, the teacher licensure requirements for students in all curricula, and the Kinesiology core requirements, students pursuing licensure to teach physical education (K-12) must include the following courses in the elective kinesiology, correlate area studies, and free electives areas:

Code	Title	Hours
<b>Required Electives and Correlate Area Studies</b>		
KIN 360	Adapted Physical Education	3
KIN 361	Curriculum in Grades K-6	3
KIN 362	Curriculum in Grades 7-12	3
KIN 363	Instructional Strategies in PE	3
KIN 364	Exper in the Common School	3
KIN 401	Measure & Eval in Kinesiology	3
KIN 460	Technology & Pedagogical KINES	3
KIN 260	Teaching Activities I	3
KIN 261	Teaching Activities II	2
CI 473	Disciplinary Literacy	2
EPS 201	Foundations of Education	3
EPSY 201	Educational Psychology	3
EDPR 438	Educational Practice in Special Fields	8
EDPR 442	Educational Practice in Secondary Education	8

Students may not enroll for professional education courses from the Elective Kinesiology area until they have applied to the Teacher Education K-12 program and passed an Illinois approved test of basic skills. Approved tests consist of the Illinois Test of Academic Proficiency (TAP), ACT, or SAT with approved scores.

KIN Class Schedule (<https://courses.illinois.edu/schedule/DEFAULT/DEFAULT/KIN>)

## Courses

### KIN 100 Development Activities credit: 1 to 2 Hours.

Skills and knowledge essential for leisure-time activities which are classified as developmental activities. Prerequisites and descriptions for each developmental activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule. May be repeated to a maximum of 2 hours.

### KIN 101 Dance Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as dance activities. May be repeated; more than one activity (Sections A through Z) may be taken in the same term. Prerequisite: See Class Schedule for prerequisites for each dance activity.

### KIN 102 Individual and Dual Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as individual and dual activities. Prerequisites for each individual or dual activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule.

### KIN 103 Indoor Court Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as indoor court activities. Prerequisites for each indoor court activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term.

### KIN 104 Skating Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as skating activities. Prerequisites for each skating activity are provided in the Class Schedule. Additional Ice Skating Rink Facility charges are required and provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule.

### KIN 107 Aquatic Sport Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as aquatic sport activities. Prerequisites for each aquatic sport activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term. Additional fees may apply. See Class Schedule.

### KIN 109 Team Sport Activities credit: 1 Hour.

Skills and knowledge essential for leisure-time activities which are classified as team sport activities. Prerequisites for each team sport activity are provided in the Class Schedule. More than one activity (Sections A through Z) may be taken in the same term.

### KIN 110 Intro to the Health Sciences credit: 3 Hours.

Same as CHLH 110. See CHLH 110.

### KIN 111 Prescribed Exercise credit: 1 Hour.

Prescribed exercises adapted to individual needs, capacities, and interests; open to persons with paraplegia, permanently disabled, and individuals with significant temporary disabilities who will require long term rehabilitation. Students must be registered or eligible to register with DRES. May be repeated to a maximum of 4 hours. Prerequisite: Enrollment restricted to students with permanent disabilities or disabilities which are long-term in nature. Student should be registered or eligible to register with DRES.

### KIN 120 Injuries in Sport credit: 2 Hours.

Emphasizes injury mechanisms, means of injury prevention, and emergency care applied to various types of sport injuries; laboratory sessions emphasize preventive and therapeutic taping and emergency first aid. Additional fees may apply. See Class Schedule.

**KIN 121 Survey of Sports Medicine credit: 3 Hours.**

Introduction to sports medicine for non-kinesiology majors; includes discussion of training, conditioning, preparation for sports, injury aspects of sports, and rehabilitation.

**KIN 122 Physical Activity and Health credit: 3 Hours.**

Provides the scientific evidence of physical activity in preventing disease and optimizing quality of life. Teaches behavioral change strategies to achieve an active lifestyle.

**KIN 125 Orientation KIN & Comm Health credit: 1 Hour.**

Serves as an introduction to the Kinesiology and Community Health Department and provides an overview of the Kinesiology and Community Health curricula, areas of study, and opportunities available for a career in the field. Enrollment required for Kinesiology freshmen and transfer students. Credit is not given for both KIN 125 and CHLH 125.

**KIN 130 Analysis of Basic Movement credit: 2 Hours.**

Introduction to human movement through development of skills and knowledge relative to structure and function of the human body in selected physical activities including: basic postural and locomotion patterns and fundamental throwing patterns; also studies developmental aspects of typical and atypical movement skills. Emphasizes performance and qualitative analysis of movement skills.

**KIN 140 Social Sci of Human Movement credit: 3 Hours.**

Introduction to the social scientific aspects of human movement including sport; particular emphasis on concepts derived from the social sciences (including psychology) that are appropriate to human movement. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

**KIN 142 Contemporary Issues in Sport credit: 3 Hours.**

Examines current issues in sport relative to competition, economics, race, sex, youth, educational institutions, deviant behavior, religion, psychology, and the media.

**KIN 150 Bioscience of Human Movement credit: 3 Hours.**

Integrates anatomical and physiological aspects of human movement; emphasizes how the body moves, physiological responses to exercise stress, physical conditioning and physical fitness. Additional fees may apply. See Class Schedule.

This course satisfies the General Education Criteria for:

Nat Sci Tech - Life Sciences

**KIN 160 Introduction to Kinesiology credit: 3 Hours.**

Kinesiology is the interdisciplinary study of physical activity that includes a number of sub-disciplines. This course will examine these areas of study within Kinesiology from scientific, applied, and experiential perspectives. Students will study fundamental/introductory concepts associated with each area of Kinesiology, explore those concepts within research and applied contexts, and complete activities in which they experience various dimensions of those concepts.

**KIN 199 Undergraduate Open Seminar credit: 0 to 5 Hours.**

Additional fees may apply. See Class Schedule. Approved for letter and S/U grading. May be repeated.

**KIN 201 Physical Activity Research Methods credit: 3 Hours.**

This course provides an introduction of physical activity measurement and methods. The course will focus on (a) defining physical activity and associated terms and concepts; (b) providing detailed understanding of approaches and tools for measuring physical activity; and (c) facilitating understanding of scientific methods for physical activity research (e.g., experimental and non-experimental designs).

**KIN 230 Diversity in Recreation, Sport, and Tourism credit: 3 Hours.**

Same as HDFS 263 and RST 230. See RST 230.

This course satisfies the General Education Criteria for:

Cultural Studies - US Minority

**KIN 247 Intro to Sport Psychology credit: 3 Hours.**

Analysis of the competitive sport process, with study of how personality and situational variables affect motivation, anxiety, and aggression in sport. Attention is given to the psychological skills needed by coaches and athletes for successful and enjoyable sports participation.

**KIN 249 Sport & Modern Society credit: 3 Hours.**

The sociological analysis of sport in modern societies with regard to social class, politics, community, education, and collective behavior.

Same as SOC 249.

This course satisfies the General Education Criteria for:

Social Beh Sci - Soc Sci

**KIN 257 Coordination, Control & Skill credit: 3 Hours.**

Introduction to the concepts and principles of the coordination and control of movement and the development of skilled action. The course will focus on such topics as fundamental movement activities; movement control processes; acquisition, retention and transfer of skill; and the role of constraints to action. These topics have implications for understanding skilled performance, motor development and human performance in general. Additional fees may apply. See Class Schedule. Prerequisite: KIN 140 and KIN 150 or consent of instructor.

**KIN 259 Motor Development and Control credit: 3 Hours.**

This course provides students with an overview of motor development across the life span as well as an introduction to the discipline of motor behavior/control. Specifically, it focuses on the concepts and principles of coordination, the control of movement, and development of skilled action throughout the life span. The course focuses on such topics as the development of fundamental movement activities; movement control processes; acquisition, retention and transfer skill; and the role of constraints to action. Same as HDFS 259. Additional fees may apply. See Class Schedule. Credit is not given for both KIN 259 and KIN 257.

This course satisfies the General Education Criteria for:

Social Beh Sci - Beh Sci

**KIN 260 Teaching Activities I credit: 3 Hours.**

An activity-based course focusing on skills, knowledge, and teaching progressions related to territorial and net sports for school age students. Students will develop knowledge of the basic skills and teaching progressions related to the activities covered in the class. Prerequisite: KIN 130.

**KIN 261 Teaching Activities II credit: 2 Hours.**

An activity-based course focusing on skills, knowledge, and teaching progressions related to target sports, rhythms, dance and fitness activities, and adventure education activities for school age students. Students will develop knowledge of the basic skills and teaching progressions related to the activities covered in the class. Prerequisite: KIN 130.

**KIN 262 Motor Develop, Growth & Form credit: 3 Hours.**

Examination of the concepts of motor development, physical growth, and body form throughout the lifespan. Major emphasis is on the period of birth through adolescence. Same as HDFS 262.

This course satisfies the General Education Criteria for:

Social Beh Sci - Beh Sci

**KIN 268 Children's Movement credit: 3 Hours.**

Introduction and overview of kinesiology principles and physical activity related to children. Laboratory portion of class focuses on the application of information to teaching physical activity to elementary school children. Prerequisite: For non-kinesiology majors.

**KIN 340 Soc & Psych of Phys Activity credit: 3 Hours.**

Discusses how social and psychological processes and constraints affect human action in physical activity environments. Attention is given to socialization, personal dynamics, stratification, and ideological and economic constraints upon the manifestations of physical activity. Prerequisite: KIN 140 or PSYC 100 and completion of the Campus Composition I general education requirement.

This course satisfies the General Education Criteria for: Advanced Composition

**KIN 345 Sport and Society credit: 3 Hours.**

Same as HIST 390. See HIST 390.

**KIN 346 Case Study: Endless Summer credit: 3 Hours.**

The 1966 classic film –The Endless Summer– and related films and literature are used as lenses for the historical-cultural study of human movement in the form of riding waves of water. Surf culture and films are global phenomena and by using such as unique cases, students gain mastery in cultural-interpretive theories, themes, and vocabulary, and in articulating perspectives on social roles, knowledge, and power. Same as RST 346 and MACS 346.

**KIN 352 Bioenergetics of Movement credit: 3 Hours.**

Study of the nature of energy transfer during physical activity; mechanisms of metabolic control, force production, cardiorespiratory support and adaptation relative to physical activity. Additional fees may apply. See Class Schedule.

**KIN 355 Biomechanics of Human Movement credit: 3 Hours.**

Studies the biological and mechanical principles of human motor performance; analyzes selected movement skills in depth. Additional fees may apply. See Class Schedule.

**KIN 360 Adapted Physical Education credit: 3 Hours.**

Organization, administration, and conduct of physical education programs for the most prevalent types of medical conditions found in school settings; emphasis on analyzing motoric needs and prescribing programs of motor activity for special populations, including individuals with mental retardation and learning disabilities Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of instructor.

**KIN 361 Curriculum in Grades K-6 credit: 3 Hours.**

Examines the theoretical and philosophic curricular principles necessary to the development of a sound, professionally grounded, and research-based curriculum for children in grades K-6. Requires planning a variety of developmentally appropriate learning activities that are taught to children during micro-teaching experiences in the field. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of the instructor.

**KIN 362 Curriculum in Grades 7-12 credit: 3 Hours.**

Provides students with theoretical knowledge and professional practice in secondary physical education curriculum and instruction. This research-based course emphasizes effective teaching, development of content, and analysis of curricular models in grades 7-12. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of instructor.

**KIN 363 Instructional Strategies in PE credit: 3 Hours.**

Analyzes the teaching-learning process, emphasizing the identification of instructional strategies specific to the development of skilled performance in movement activities. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program.

**KIN 364 Exper in the Common School credit: 3 Hours.**

Supervised practice in observing, assisting, and teaching children in elementary, junior high school, and senior high school. Emphasis is on understanding motor behavior, teacher-learner behavior, and interrelatedness with other aspects of the learning environment. May be repeated to a maximum of 6 hours. Prerequisite: Junior standing or above and enrollment in the Teacher Certification program or consent of the instructor.

**KIN 365 Civic Engagement in Wellness credit: 3 Hours.**

Provides scholarly knowledge and practical experience related to environmental, intellectual, physical, psychological, spiritual, and social wellness. Students acquire leadership and real-world skills while working in teams to develop and implement projects that facilitate health and well-being in the population of adults living in the community. Projects emphasize integrative learning and are showcased in both written and oral formats. Same as AHS 365, CHLH 365, RST 365, and SHS 370.

**KIN 369 Coaching Strategies credit: 3 Hours.**

Examination of philosophy, ethics, strategies, motivational techniques, performance analysis, program organization, contest administration, and equipment and facility management related to coaching.

**KIN 375 Comm Partners & Health credit: 3 Hours.**

Same as AHS 375 and SHS 375. See SHS 375.

**KIN 385 Exper in Kinesiology Research credit: 3 Hours.**

Supervised laboratory experiences in kinesiology research; individual work under the supervision of members of the faculty in their respective fields. The student assists with data collection, processing, and analysis for research in progress. May be repeated to a maximum of 12 hours. Prerequisite: Consent of instructor.

**KIN 386 Exercise Instruction & Elderly credit: 3 Hours.**

This course is designed to offer practical experience opportunities to undergraduate Kinesiology students aspiring to work in applied exercise fields with a diverse aged population. It will entail extensive "on the job" training through the Lifetime Fitness Program, an older adult service program of the Department of Kinesiology. Additionally, students will gain training in current program management practices. May be repeated to a maximum of 6 hours. Prerequisite: KIN 352 or consent of instructor is required. A current CPR is required at the beginning of the term and certification must remain current.

**KIN 387 Exper in the Agency Setting credit: 3 Hours.**

Supervised practical experience in leadership roles in nonschool agency settings; emphasis on observing, planning, and conducting physical activity programs for children and/or adults in preschool, recreation, or other social agencies. May be repeated for a maximum of 6 hours.

**KIN 390 Honors credit: 2 Hours.**

Course is restricted to James Scholars pursuing the Civic Commitment and Leadership Tracks. Designed to support completion of the James Scholar honors project. Same as CHLH 390 and RST 390. May be repeated to a maximum of 6 hours. Prerequisite: James Scholar standing.

**KIN 391 Special Project-Problems credit: 2 or 3 Hours.**

Special projects in research and independent investigation in any phase of health, kinesiology, physical education, and related areas selected by the students. May be repeated to a maximum of 6 hours. Prerequisite: Junior or senior standing; grade-point average of 2.5; consent of instructor.

**KIN 393 Honors Thesis credit: 3 Hours.**

Planning, researching and writing of an honors thesis, under supervision of a faculty member, on a problem of appropriate scope and character. Paper will be presented at a suitable meeting and/or seminar. May be repeated to a maximum of 6 hours. Prerequisite: Senior standing when enrolling; minimum grade point average (total, University and Kinesiology prefix courses) of 3.25; a minimum of one full year (2 semesters) remaining at the University of Illinois, Urbana-Champaign campus; and submission of a written proposal.

**KIN 401 Measure & Eval in Kinesiology credit: 3 or 4 Hours.**

Examines the concepts of observation, measurement, and evaluation of human motor performance and functioning in physical activity contexts. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 140 and KIN 150, or graduate standing, or consent of instructor.

This course satisfies the General Education Criteria for: Quantitative Reasoning II

**KIN 407 Disability, Culture & Society credit: 3 or 4 Hours.**

Same as ANTH 404, CHLH 407, and REHB 407. See CHLH 407.

**KIN 442 Body, Culture & Society credit: 3 or 4 Hours.**

Analysis of the significant social aspects of the human body including anthropological, historical, psychological and sociological perspectives. Places emphasis on cross-culture and cross-national studies of bodily behavior with particular stress on exercise, health and sport practices. Same as GWS 442. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 249 or SOC 249, or graduate standing; or consent of instructor.

**KIN 443 Psychophysiology in Ex & Sport credit: 3 or 4 Hours.**

Designed to give the student an understanding of the interaction between psychological processes and physiological parameters in exercise and sport. Examines psychophysiological exercise and sport research with particular attention to relevant models and theories. Same as PSYC 443. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior or senior standing, KIN 340, or graduate standing, or consent of instructor.

**KIN 444 Physical Activity and Chronic Diseases credit: 3 or 4 Hours.**

Focuses on the scientific evidence regarding the health benefits of exercise, physical activity, and physical fitness in the prevention and management of chronic diseases. 3 undergraduate hours. 4 graduate hours.

**KIN 447 Psych of Sport Performance credit: 3 or 4 Hours.**

Outlines the social psychological parameters which influence behavior and performance in sport; emphasizes the impact of social influences upon the individual within the sport context, including such factors as achievement motivation, competition, anxiety, aggression, and personality. Same as PSYC 447. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 140, KIN 247, or PSYC 201, or graduate standing, or consent of instructor.

**KIN 448 Exercise & Health Psychology credit: 3 or 4 Hours.**

Examines the psychological determinants and consequences of exercise and physical activity as a health promoting behavioral process. Same as CHLH 448. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing or above, or graduate standing, or consent of instructor.

**KIN 450 Biochemistry of Exercise credit: 3 or 4 Hours.**

Introduces the metabolic and biochemical adaptation of the body in response to acute and chronic physical activity. Primary focus is given to the subcellular and enzymatic regulation and integration during exercise. Substrate metabolism, bioenergetics, hormonal action and nutritional influences as related to exercise are emphasized. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 352 or MCB 450; or consent of instructor.

**KIN 451 Skeletal Muscle Physiology credit: 3 or 4 Hours.**

Offers basic information on skeletal muscle anatomy, physiology and function which will provide a basis for understanding changes in muscle structure and function during periods of increased or decreased use. Knowledge gained in this course can be used in areas such as design of training programs, physical therapy, or injury prevention. 3 undergraduate hours. 4 graduate hours. Prerequisite: The student is expected to have taken at least one or more of the following: MCB 103, MCB 240, KIN 352 or prior consent of the instructor.

**KIN 452 Clin & Applied Ex Physiology credit: 3 Hours.**

Physical fitness appraisal and guidance in clinical and applied settings with emphasis on medical clearance, risk factor assessment, physical fitness assessment and exercise prescription. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 352, or graduate standing, or consent of instructor.

**KIN 453 Nutrition for Performance credit: 3 or 4 Hours.**

Nutrition for performance is the fusion of two disciplines, nutrition and exercise physiology, which provides the knowledge-base to support and optimize training, performance, and recovery. This course will provide information regarding the use of nutrition to increase performance in athletes training for strength or endurance. Same as FSHN 453. 3 undergraduate hours. 4 graduate hours.

**KIN 457 Motor Learning & Control credit: 3 Hours.**

Discussion and analysis of scientific principles related to the learning and control of motor skills; review of related literature and research in motor learning and control. The focus of the course is on mechanisms for the control of movement and recent theories of how movements are acquired and performed. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 257 or graduate standing or consent of instructor.

**KIN 458 Neurobio of Aging credit: 0 to 4 Hours.**

Same as PSYC 451 and NEUR 451. See PSYC 451.

**KIN 459 Physical Activity & Aging credit: 3 or 4 Hours.**

Examines aging and age-related changes in the cells, tissues, organs, and systems of the human body; emphasizes the role of physical activity and other lifestyle choices in modifying the aging process and in influencing the onset and progression of the chronic diseases which accompany aging. Same as HDFL 459. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior, Senior, or graduate standing or consent of instructor.

**KIN 460 Technology & Pedagogical KINES credit: 3 or 4 Hours.**

Promotes mastery of technology skills and complex computer applications through the analysis of research and critical issues related to technology in Kinesiology. The completion of technology modules, requiring problem solving and the collection and analysis of assessment data, will culminate in an interactive, multimedia project. 3 undergraduate hours. 4 graduate hours. Prerequisite: Junior standing.

**KIN 470 Exercise Endocrinology credit: 3 or 4 Hours.**

The objective of this course is to gain a better understanding of the endocrine system and its response to physical exercise. Therefore, this course will provide a basic review of 1) the major glands and tissues that secrete chemical messengers, 2) the ability of acute exercise and exercise training to regulate chemical messengers, and 3) the physiological consequences of endocrine adaptation to exercise. Clinical disorders associated with endocrine dysfunction will also be discussed when relevant. 3 undergraduate hours. 3 or 4 graduate hours. Prerequisite: MCB 103, MCB 240, KIN 352.

**KIN 473 Skill Acquisition Strategies credit: 3 or 4 Hours.**

Examines theory and practice related to structuring practice conditions to maximize the acquisition and performance of motor skills. The nature of skill, activities, and strategies for enhancing skill are discussed with particular emphasis placed on strategies that instructors, teachers, and/or coaches can use to enhance skill acquisition and performance. 3 undergraduate hours. 4 graduate hours. Prerequisite: KIN 257 or graduate standing or consent of instructor.

**KIN 474 Tech-Driven Health Intervention credit: 3 or 4 Hours.**

Course will review and critique the state of the science of technology-driven health behavior interventions. A broad scope of technologies and health behaviors will be covered and students will acquire an understanding of current uses of technology for facilitating health behavior change and maintenance. Students will examine the efficacy and potential for large-scale adoption and dissemination; and develop skills necessary to apply technology-based solutions to address public health problems. 3 undergraduate hours. 4 graduate hours.

**KIN 485 Clin Exper in Sports Medicine credit: 2 to 8 Hours.**

Clinical experiences in medical supervision of sports programs, in the areas of therapeutic exercises, fitness programming, and cardiac rehabilitation. 2 to 8 undergraduate hours. 2 to 8 graduate hours. May be repeated to a maximum of 8 hours. Prerequisite: Consent of instructor.

**KIN 494 Special Topics credit: 1 to 4 Hours.**

Lecture course on topics of current interest; specific topics announced in the Class Schedule. 1 to 4 undergraduate hours. 1 to 4 graduate hours. May be repeated.