

# KIN - Kinesiology

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## Kinesiology: KIN

### Lower-Division Courses

#### KIN 310. Physiological Basis of Conditioning.

Explores the ways that the human body responds to exercise and physical activity. Covers reasons that exercise is beneficial, how the body responds to exercise, and how to apply the principles of conditioning. Three lecture hours a week for one semester.

#### KIN 311. Water Safety Instruction and Lifeguard Training.

Principles and practical application of water safety instruction and lifeguard training, personal water safety skills sets, professional rescues, first aid, and CPR/AED programs. Successful completion of course sessions, activities, lectures, skill development and evaluation requirements will qualify the student to test for certifications from nationally recognized safety agencies. Three lecture hours and one laboratory hour a week for one semester. Only one of the following may be counted: Kinesiology 311, 213 (Topic 2: Water Safety Instruction), 213 (Topic 4: Lifeguarding Instruction). Offered on the letter-grade basis only.

#### KIN 311K. Sport Psychology.

Through the materials presented in this course, become familiar with the fundamental principles of sport and social psychology and their impact on sports performance and athlete well-being. Develop life-skills, such as, self-regulation, productive responses to adversity, stress-management, the setting of goals and achieving them, interpersonal communication, and leadership. Three lecture hours a week for one semester.

#### KIN 312. Topics in Kinesiology: Issues.

Analysis and discussion of current issues within the discipline of kinesiology. Three lecture hours a week for one semester. Additional hours may be required for some topics. May be repeated for credit when the topics vary.

**Topic 2 (TCCN: KINE 2356, PHED 2356): Care and Prevention of Athletic Injuries.** Principles of athletic training, including mechanisms, signs and symptoms, treatments, and basic rehabilitation of athletic injuries and illnesses. Three lecture hours and one laboratory/discussion hour a week for one semester.

**Topic 3: Fundamentals of Coaching.** An introduction to the principles and practices of coaching as they relate to the integration of sports science, practice structure and design, and the development of a coaching philosophy. Involves group work and field experience with youth athletic organizations.

**Topic 4: Philosophy and Leadership in Sport & Physical Activity.**

**Topic 5: Sport Industry in America.** Introduction to the history, growth, and diversity of the sport industry in school settings and the world of business. Kinesiology 312 (Topic: Sport Industry in America) and 312 (Topic 5) may not both be counted.

#### KIN 312G. Golf Instruction.

Designed to train students to teach the game of golf. Three lecture hours a week for one semester, with additional fieldwork hours to be arranged. Prerequisite: Consent of instructor.

#### KIN 312M. Management of Physical Activity and Sport Programs.

Designed for physical culture and sports, applied movement science, health education, and kinesiology majors. Introduction to the purpose and function of sport and sport management in society, including

management, marketing, events, and other components of the field. The equivalent of three lecture hours a week for one semester.

#### KIN 213. Topics in Safety Information and Procedures.

Factors affecting human safety; techniques and procedures to promote and ensure safe living. The equivalent of three lecture hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 1: First Aid.**

**Topic 2: Water Safety Instruction.** Restricted to Kinesiology and Health Education majors; open to others with consent of instructor. Trains instructor candidates to teach courses in swimming and water safety by developing their understanding of how to use the course materials, conduct training sessions and evaluate participants' progress. Students will be introduced to several swimming strokes, springboard diving, cardiovascular conditioning, exercise physiology, nutrition, personal safety. Elementary rescue skills and basic snorkeling techniques. Culminates in American Red Cross certification. Prerequisite: Swimming proficiency and confidence in deep water.

**Topic 3: Lifeguarding.**

**Topic 4: Lifeguarding Instruction.**

#### KIN 314 (TCCN: KINE 1331, PHED 1331). Children's Movement.

Covers skills to support positive, effective physical education and to implement well-planned and stimulating physical activity for children. Focus on integrating academic content with physically active classrooms. Subjects include principles of movement and motor development in children, curriculum, legislation and policy, physiological principles, learning principles, coordinated school health (CSH), and comprehensive school physical activity programming (CSPAP). The equivalent of three lecture hours and three laboratory hours a week for one semester, with additional off-campus school service learning project hours to be arranged. EDC 314 and KIN 314 may not both be counted.

#### KIN 315. Motor Learning.

Psychological factors affecting performance and acquisition of motor skills. Three lecture hours and one laboratory hour a week for one semester. Kinesiology 315 and 335C may not both be counted. Prerequisite: Psychology 301.

#### KIN 316. Structure and Organization of Sport Programs.

Introduction to sport management and effective organizational behavior for sport programs. Analysis of the dynamic management process necessary for the improvement of organizational productivity. Three lecture hours a week for one semester. May be repeated once for credit.

#### KIN 217. Advanced Scuba Diving Leadership.

Designed to prepare experienced scuba divers to instruct, organize, and conduct safe, appropriate-level dives for certified divers. Also designed to prepare students to apply for certification as a National Association of Underwater Instructors (NAUI) Assistant Instructor or Divemaster. Three lecture or open-water hours a week, and three internship hours a week for one semester participating in the training of entry-level students. Prerequisite: Certification as a scuba rescue diver and as a National Association of Underwater Instructor (NAUI) Master Scuba Diver, or equivalent knowledge and experience.

#### KIN 119. Topics in Movement Competence.

Designed for applied movement science, health education, and kinesiology majors. Introduces a variety of movement and dance activities that can be used to teach rhythm to youth, with an emphasis on grades K-6. The equivalent of three laboratory hours a week for one semester. May be repeated for credit when the topics vary.

**Topic 1: Archery.**

**Topic 2: Ballet.**

**Topic 3: Bowling.**

**Topic 4: Diving.**

**Topic 5: Fencing.**

**Topic 6: Golf.**

**Topic 7: Scuba Diving.**

**Topic 8: Swimming.** Designed for kinesiology and health education majors. Development of swimming techniques including instruction in seven swimming strokes, springboard diving, cardiovascular conditioning, exercise physiology concepts, nutrition, personal safety, elementary rescue skills, CPR/AED and basic snorkeling techniques. Provides preparation for American Red Cross certification. Additional prerequisite: Comfortable in deep water and able to swim two lengths using two strokes, or consent of instructor; for non-kinesiology majors, consent of instructor.

**Topic 10: Conditioning.** Basic principles involved in designing a sound conditioning program emphasizing resistance training techniques.

**Topic 11: Rhythmic Activities and Dance.** Designed for applied movement science majors, and kinesiology and health education majors. Introduces a variety of movement and dance activities that can be used to teach rhythm to youth, with an emphasis on grades K-6.

**Topic 12: Gymnastics.**

**Topic 13: Manipulative Activities.**

**Topic 14: Tennis.** Introduction to methods, progressions, strategies, and teaching cues appropriate for playing, teaching, and coaching basic tennis.

**Topic 15: Volleyball.** Introduction to methods, progressions, and teaching cues appropriate for playing, teaching, and coaching basic volleyball.

**Topic 16: Social Dance: Leads.** Introduction to popular social dances, including swing, waltz, bachata, nightclub two-step, cross-step waltz, salsa, west coast swing, and tango. Emphasis on connecting with a dance partner and the art of leading and following. Must register for the role you want to learn: lead or follow. Optional dance labs for additional practice are offered. Only one of the following may be counted: Kinesiology 119 (Topic 16), Kinesiology 119 (Topic 20), Physical Education 103L (Topic 1), 103L (Topic 7). Additional prerequisite: Consent of instructor.

**Topic 17: Basketball.** Designed for applied movement science majors, and kinesiology and health education majors. Introduces methods, progressions, strategies and teaching cues appropriate for playing, teaching, and coaching basic basketball.

**Topic 18: Adventure Activities.** Acquisition and knowledge of basic skills needed to participate in outdoor/adventure activities. Examines methods, progressions, drills, and performance cues appropriate for participating in and leading outdoor/adventure activities. Includes off-campus activities. Students will need to demonstrate basic swimming skills during the first week of class.

**Topic 19: Kinesthetic Awareness and Core Body Development.**

Introduction to basic movement skills from simple to more complex, and how they relate to more advanced sport skills through developmental gymnastics, yoga, Pilates, and martial arts. Additional prerequisite: A major in applied movement science.

**Topic 20: Social Dance: Follows.** Introduction to popular social dances, including swing, waltz, bachata, nightclub two-step, cross-step waltz, salsa, west coast swing, and tango. Emphasis on connecting with a dance partner and the art of leading and following. Must register for the role you want to learn: lead or follow. Optional dance labs for additional practice are offered. Only one of the following may be counted: Kinesiology 119 (Topic 16), Kinesiology 119 (Topic 20), Physical Education 103L (Topic 1), 103L (Topic 7). Additional prerequisite: Consent of instructor.

## **KIN 119C. Aiding for Social Dance.**

Supervised aiding in social dance leads/follows courses. Three laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Consent of instructor.

## **KIN 219D. Movement Analysis: Dual Activities.**

Designed for applied movement science, health education, and kinesiology majors. Application of biomechanical and motor learning principles to selected movement activities, with particular emphasis on dual sports. Includes physical activity. The equivalent of two lecture hours and one laboratory hour a week for one semester.

## **KIN 219G. Advanced Golf.**

Designed for the advanced golfer. Includes technical swing analysis and instruction, course management and course play, and tournament play. Two lecture hours a week for one semester, with additional fieldwork hours to be arranged. Prerequisite: Consent of instructor, and a certified Professional Golfers Association (PGA) handicap of 15 or below or equivalent proficiency.

## **KIN 219K. Topics in Athletics.**

Knowledge and skills required for officials, coaches, and athletic trainers of interschool sports. Two lecture hours and two laboratory hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Coaching.**

**Topic 2: Officiating.**

**Topic 3: Introduction to Athletic Training.** Designed for athletic training majors. An introduction to athletic training principles and theories, including the prevention, recognition, and management of athletic injuries and illnesses. Includes basic skill development in areas such as first aid, emergency care, and supportive taping, wrapping, and bracing. Requires completion of a one-day CPR and AED (BLS) course outside of class time.

## **KIN 219L. Teaching Social Dance.**

Examine social dance and social dance pedagogy. Explore new dances, higher-level partnering, and skills for teaching social dance in one-on-one and group contexts. Three laboratory hours a week for one semester. Prerequisite: Physical Education 103L (Topic 1) or 103L (Topic 7), or Kinesiology 119 (Topic 16) or 119 (Topic 20), and consent of instructor.

## **KIN 219M. Advanced Running.**

Explores various advanced aspects of running training regimens, with emphasis on interval training, fartlek, speed play, long slow distance used in competitive running. Includes functional assistive training movements: flexibility and stretching, plyometrics and bounding. Three laboratory hours a week for one semester. Prerequisite: PED 106D (Topic 2) or consent of instructor.

## **KIN 219N. Advanced Volleyball.**

For those with high levels of skills and knowledge of multiple offenses and defenses. Explores various aspects of competitive volleyball with emphasis on strategic utilization of defenses used in interscholastic and intercollegiate competitive teams. Three laboratory hours a week for one semester. Prerequisite: Physical Education 108J (Topic 2) or 109D (Topic 2) or consent of instructor.

## **KIN 219P. Advanced Swimming.**

Designed for the advanced swimmer. Includes technical stroke analysis on four power strokes and exposure training/conditioning programs used by interscholastic and intercollegiate competitive programs. Expanded emphasis is on body form, stroke efficiency, and conditioning in all strokes. Three laboratory hours a week for one semester. Prerequisite:

Physical Education 106C (Topic 1) or Physical Education 101J (Topic 5) or consent of instructor.

### **KIN 119R, 219R, 319R, 419R, 519R, 619R, 719R, 819R, 919R. Topics in Kinesiology.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Kinesiology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **KIN 219S. Movement Analysis: Individual Activities.**

Restricted to kinesiology and health education majors. Application of movement skill analysis and biomechanical principles, physical laws of movement, fitness training principles and programs, exercise physiology, performance techniques, and skill progressions in individual activities and sport. Two lecture hours and one laboratory hour a week for one semester.

### **KIN 219T. Movement Analysis: Team Activities.**

Application of scientific and psychosocial aspects of team sports, basic mechanical principles, and basic progressions relevant to performing and teaching selected team sport skills. Students also learn basic strategies and tasks related to coaching and organizing a team. Two lecture hours and one laboratory hour a week for one semester.

## **Upper-Division Courses**

### **KIN 320. Applied Biomechanics of Human Movement.**

Designed to provide students with an understanding of applied scientific analysis of movement. Examines the physiological, structural, and mechanical bases for human movement, with examples drawn from sport and rehabilitation. Lectures concentrate on a scientific approach to mechanisms underlying human movement and to strategies and practices of clinical and sport applications. Laboratory sessions focus on both theoretical and applied aspects of selected mechanical concepts. Two lecture hours and one and one-half laboratory hours a week for one semester. Prerequisite: Kinesiology 424K and Mathematics 305G, 408K, 408C, or 408N.

### **KIN 321. Theory of Human Performance.**

Designed for applied movement science, health education, and kinesiology majors. Examines foundational knowledge of theories of human performance and development and the concomitant changes that occur during an individual's lifespan. Explores interactive theories of the associated physiological, biomechanical, and cognitive disciplines that explain the control systems of the human body while in motion and subsequent development. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **KIN 321M. Motor Development and Performance.**

A review of movement skill progressions with emphasis on the processes that underlie changes in movement competence. Typical growth and maturation from birth to adulthood serves as the metric against which to identify atypical development. The principles underlying motor skill changes are applied to teaching, coaching, and clinical applications. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: Upper-division standing.

### **KIN 322. Diagnosis and Evaluation of Fitness.**

Covers the science behind assessing physical fitness, and the role of physical activity and exercise in prevention and rehabilitation of cardio-respiratory and metabolic diseases. Two lecture hours and three laboratory hours a week for one semester. Prerequisite: For Athletic

Training and Kinesiology and Health majors, Kinesiology 310 and Kinesiology 424K; for others, Kinesiology 310; and Kinesiology 424K or 446L.

### **KIN 424K. Applied Human Anatomy.**

Combines the study of systematic and regional human anatomy. Includes applications of the skeletal system, and attachments and actions of muscles, with an emphasis on the mechanics of support and motion and their clinical applications. Three lecture hours and two laboratory hours a week for one semester. Only of the following may be counted: Biology 478L, Integrative Biology 478L, Kinesiology 424K. Prerequisite: For applied movement science, health education, and kinesiology majors, Kinesiology 310.

### **KIN 425K. Physiology of Exercise.**

Application of principles of physiology to muscular activities and an examination of physiological responses and adaptations to both acute and chronic exercise. Three lecture hours and one and one-half laboratory hours a week for one semester. Kinesiology 325K and 425K may not both be counted. Prerequisite: For Athletic Training and Kinesiology and Health majors, Kinesiology 424K; for others, Kinesiology 424K, Biology 416K, or 446L.

### **KIN 226. Advanced Weight Training.**

Explores various advanced techniques of weight training, with emphasis on the lifts used in the competitive strength sports of weightlifting and powerlifting. Includes plyometrics and functional training movements for athletic enhancement. Two lecture hours a week for one semester. Prerequisite: Physical Education 106C or Kinesiology 119 or consent of instructor.

### **KIN 326K. Biomechanical Analysis of Movement.**

Study of the principles of equilibrium, force, and motion as applied to humans. Includes applications to human movement and to biological tissues and structures, with emphasis on practical applications (e.g., human performance, causes/prevention of injury etc.). Three lecture hours a week for one semester. Prerequisite: For athletic training and kinesiology and health education majors: Kinesiology 424K; Mathematics 403K, 408C or 408K or 408N; and Physics 302K or 317K. For others: Biology 416K or Biology 446L; Kinesiology 424K; Mathematics 403K, 408C or 408K or 408N; and Physics 302K or 317K.

### **KIN 127D, 227D, 327D, 627D. Fieldwork: Aiding.**

Supervised fieldwork in appropriate activity courses. For 127D, up to three hours of fieldwork a week for one semester; for 227D, up to six hours of fieldwork a week for one semester; for 327D, up to nine hours of fieldwork a week for one semester; for 627D, up to twenty hours of fieldwork a week for one semester. May be repeated for credit up to twelve semester hours. No more than twelve semester hours in kinesiology or health education fieldwork or internship credit may be counted. May be repeated for credit. Prerequisite: Consent of instructor.

### **KIN 127E, 227E, 327E, 627E. Fieldwork: Applied Learning and Development Majors.**

Restricted to applied learning and development majors. Supervised fieldwork or clinical work in appropriate activities. For 127E, up to three hours of fieldwork a week for one semester; for 227E, up to six hours of fieldwork a week for one semester; for 327E, up to nine hours of fieldwork a week for one semester; for 627E, up to twenty hours of fieldwork a week for one semester. May be repeated for credit up to twelve semester hours. No more than twelve semester hours in kinesiology or health education fieldwork or internship credit may be counted. May be repeated for credit. Prerequisite: Consent of instructor.

### **KIN 627F. Topics in Internship.**

Restricted to health education and kinesiology majors. Supervised fieldwork or clinical work in appropriate activities. The equivalent of twenty lecture hours a week for one semester; additional hours may be required for some topics. May be repeated for credit when topics vary up to twelve semester hours. No more than twelve semester hours in health education or kinesiology fieldwork or internship credit may be counted. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, Kinesiology 327T (Topic 1) or 327T (Topic 2), a University grade point average of at least 2.50, and consent of instructor.

**Topic 1: Internship in Health Fitness.**

**Topic 2: Internship in Medical Fitness.**

### **KIN 127J, 227J, 327J, 627J. Internship/Fieldwork: Off Campus.**

Supervised fieldwork or clinical work in appropriate activities off campus. For 127J, up to three hours of fieldwork a week for one semester; for 227J, up to six hours of fieldwork a week for one semester; for 327J, up to nine hours of fieldwork a week for one semester; for 627J, up to twenty hours of fieldwork a week for one semester. May be repeated for credit up to twelve semester hours. No more than twelve semester hours in kinesiology or health education fieldwork or internship credit may be counted. May be repeated for credit. Prerequisite: Consent of instructor.

### **KIN 127K, 227K, 327K, 627K. Fieldwork: On Campus.**

Supervised fieldwork or clinical work in appropriate activities on campus. For 127K, up to three hours of fieldwork a week for one semester; for 227K, up to six hours of fieldwork a week for one semester; for 327K, up to nine hours of fieldwork a week for one semester; for 627K, up to twenty hours of fieldwork a week for one semester. May be repeated for credit up to twelve semester hours. No more than twelve semester hours in kinesiology or health education fieldwork or internship credit may be counted. May be repeated for credit. Prerequisite: Consent of instructor.

### **KIN 127M. Exploring Teaching and Physical Activity Leadership.**

Restricted to applied movement science majors. Supervised fieldwork or clinical work in appropriate activities. One lecture hour and two hours of fieldwork each week for one semester. No more than twelve semester hours in kinesiology or health education fieldwork or internship credit may be counted. May be repeated for credit. Prerequisite: Consent of instructor.

### **KIN 127R, 227R, 327R, 627R. Fieldwork: Lab Research.**

Supervised fieldwork or clinical work in appropriate activities. For 127R, up to three hours of fieldwork a week for one semester; for 227R, up to six hours of fieldwork a week for one semester; for 327R, up to nine hours of fieldwork a week for one semester; for 627R, up to twenty hours of fieldwork a week for one semester. May be repeated for credit up to twelve semester hours. No more than twelve semester hours in kinesiology or health education fieldwork or internship credit may be counted. May be repeated for credit. Prerequisite: Consent of instructor.

### **KIN 327T. Topics in Internship.**

Designed for health education and kinesiology majors or minors. Supervised fieldwork or clinical work in appropriate activities. Students are required to obtain 135 hours of supervised internship. May be repeated for credit when topics vary up to twelve semester hours. No more than twelve semester hours in health education or kinesiology fieldwork or internship credit may be counted. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing, a University grade point average of at least 2.50, and consent of instructor; additional prerequisites vary by topic.

**Topic 1: Clinical Exercise Testing.** Kinesiology 327L (Topic 6) and 327T (Topic 1) may not both be counted. Additional prerequisite: Kinesiology 332.

**Topic 2: Personal Training.** Kinesiology 327L (Topic 5) and 327T (Topic 2) may not both be counted. Additional prerequisite: Kinesiology 332.

**Topic 3: Practicum in Disabilities.** Supervised academic service learning or clinical hours in instructor approved environments. Kinesiology 327L (Topic 9) and 327T (Topic 3) may not both be counted.

**Topic 4: Internship in Strength and Condition Coaching.** Additional prerequisite: Credit or concurrent enrollment in Kinesiology 226 or 363.

### **KIN 628. Internship/Fieldwork in Sport Management.**

Restricted to sport management majors. Twenty-seven hours of fieldwork a week for one semester. Requires 270 hours overall or about 20 hours per week. Students will be required to have no more than six hours remaining in their cognate to be eligible. May be taken twice for credit. No more than twelve semester hours in the following courses may be counted: Kinesiology 127L, 227L, 327L, 627L, 628. May be repeated for credit. Prerequisite: Upper-division standing, a University grade point average of at least 2.50, and consent of the faculty adviser.

### **KIN 328C. Internship in Sport Management.**

Restricted to students majoring in sport management. Supervised fieldwork or clinical work in appropriate activities. Students are required to obtain 135 hours of supervised internship. No more than twelve semester hours in health education or kinesiology fieldwork or internship credit may be counted. Only one of the following may be counted: Kinesiology 327L (Topic: Fieldwork in Sport Management), 327L (Topic 2), 628, 328C. May be repeated for credit. Prerequisite: Upper-division standing, a major grade point average of 2.50, and consent of instructor.

### **KIN 129S, 229S, 329S, 429S, 529S, 629S, 729S, 829S, 929S. Topics in Kinesiology.**

This course is used to record credit the student earns while enrolled at another institution in a program administered by the University's Study Abroad Office. Credit is recorded as assigned by the study abroad adviser in the Department of Kinesiology. University credit is awarded for work in an exchange program; it may be counted as coursework taken in residence. Transfer credit is awarded for work in an affiliated studies program. May be repeated for credit when the topics vary.

### **KIN 330E. Sport Nutrition.**

Explore the nutritional needs of people whose physical activity ranges from recreational to elite athletes. Develop practical dietary strategies based upon understanding how macronutrients, vitamins, minerals, water, and dietary supplements are digested and absorbed and how they effect metabolism. Three lecture hours a week for one semester.

### **KIN 331. Physical Aging in America.**

Three lecture hours a week for one semester. Kinesiology 331 and 352K (Topic: Physical Aging in America) may not both be counted. Prerequisite: Upper-division standing; Kinesiology 310, 315, or 325K; and six additional semester hours of coursework in kinesiology.

### **KIN 332. Techniques of Fitness Leadership.**

Practical application of theoretical content from exercise physiology, anatomy, and biomechanics. Emphasis on program design and development for healthy adults and special populations. Three lecture hours a week for one semester, with additional laboratory hours to be arranged. Prerequisite: Kinesiology 310.



**KIN 334. Children's Exercise and Physical Activity.**

Focuses on the capacity for physical performance by children and adolescents from both physiological and psychosocial perspectives. Addresses children's readiness for physical training and competitive activities. Considers the active and inactive child with, and without, disabilities and secondary disabling conditions. Entails development of programs designed to keep children appropriately active for a lifetime of positive health outcomes. Three lecture hours a week for one semester. Prerequisite: Kinesiology 310.

**KIN 335C. Motor Learning.**

Psychological, behavioral, physiological, and environmental factors involved in performance and learning of motor skills; covers both theoretical and experimental evidence for the effects of these factors, with applications in physical activity, sport, and rehabilitation. Weekly laboratory sessions to collect and analyze data to assess motor performance and learning. Two lecture hours and one and one-half laboratory hours a week for one semester. Kinesiology 315 and 335C may not both be counted. Prerequisite: Psychology 301.

**KIN 336. Neuromuscular Control.**

Study of the brain and motor and sensory pathways involved in the control of movement. Covers nerve, muscle, and sensory cell function along with spinal cord reflexes. Application to research and clinical populations is emphasized. Three lecture hours a week for one semester. Prerequisite: For Athletic Training and Kinesiology and Health majors, Kinesiology 424K; for others, Kinesiology 424K or 446L.

**KIN 338. Motor Development and Assessment.**

Training in screening, diagnostic, and programmatic motor assessment instruments. Designed to give students practical experience in assessing physical and motoric development in children with and without disabilities. Three lecture hours a week for one semester. Prerequisite: Kinesiology 321M; Kinesiology 360 topic 9 is recommended.

**KIN 340. Modern Olympic Movement in World Affairs.**

Examination of the place of the modern Olympic movement in world affairs. The cultural, political, and economic dynamics of this relationship will receive special emphasis.

**KIN 140C. Practicum in Athletic Training: Level 1A.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, and immediate care of injuries and illnesses suffered by athletic and physically active populations. Students use cognitive, psychomotor, and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

**KIN 140D. Practicum in Athletic Training: Level 1B.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, and treatment of injuries and illnesses suffered by athletic and physically active populations. Emphasizes the application of therapeutic modalities and soft-tissue therapy techniques. Students use cognitive psychomotor and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of a clinical preceptor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

**KIN 140E. Practicum in Athletic Training: Level 2A.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate

care, treatment, evaluation, and diagnosis of injuries and illnesses suffered by athletic and physically active populations. Emphasizes clinical evaluation and assessment techniques. Students use cognitive, psychomotor, and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

**KIN 140F. Practicum in Athletic Training: Level 2B.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, treatment, evaluation, diagnosis, rehabilitation, and reconditioning of injuries and illnesses suffered by athletic and physically active populations. Emphasizes therapeutic exercise and rehabilitation procedures. Students use cognitive, psychomotor, and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of a clinical preceptor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

**KIN 140G. Practicum in Athletic Training: Level 3A.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, treatment, evaluation, diagnosis, rehabilitation, and reconditioning of injuries and illnesses suffered by athletic and physically active populations. Emphasizes general medical conditions. Students use cognitive psychomotor and affective skills and knowledge to complete a prescribed set of educational competencies and clinical proficiencies under the direction of an approved clinical instructor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

**KIN 140J. Practicum in Athletic Training: Level 3B.**

Supervised clinical experiences in the application of concepts, theories, and techniques associated with the prevention, recognition, immediate care, treatment, evaluation, diagnosis, rehabilitation, and reconditioning of injuries and illnesses suffered by athletic and physically active populations. Emphasizes the administrative and professional aspects of managing these conditions. Students use cognitive psychomotor and affective skills and knowledge to complete a prescribed set of education competencies and clinical proficiencies under the direction of a clinical preceptor. One lecture hour and twenty hours of fieldwork a week for one semester. Prerequisite: Consent of instructor.

**KIN 140M. Advanced Manual Therapy.**

Designed for athletic training majors. Examines the theory and application of manual therapy techniques in patient care. The athletics and physically active populations will be targeted and an aggressive treatment approach for the restoration of function as quickly and as safely as possible will be emphasized. One lecture hour and one laboratory hour a week for one semester. May be repeated for credit.

**KIN 140S. Senior Seminar in Athletic Training.**

Designed for athletic training majors. Explores the study and practice of reviewing and applying research findings and evidence based practice concepts to ask and answer clinically relevant questions affecting clinical practice for athletic trainers. One lecture hour a week for one semester. May be repeated for credit. Prerequisite: Enrollment in the Athletic Training Program or consent of instructor.

**KIN 341. Therapeutic Modalities in Athletic Training.**

Designed for athletic training majors. The study and practice of using therapeutic modalities, including soft tissue and manual therapy techniques, to treat athletic injuries. Covers physiological effects,

indications, contraindications, protocols, injury pathology, and tissue healing. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: For non-athletic training majors, consent of instructor.

#### **KIN 342. Clinical Evaluation of Athletic Injuries in the Lower Body.**

Designed for athletic training majors. The study and practice of techniques involved in the evaluation of athletic injuries affecting the lower body. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: For non-athletic training majors, consent of instructor.

#### **KIN 343. Clinical Evaluation of Athletic Injuries in the Upper Body.**

Designed for athletic training majors. The study and practice of techniques involved in the evaluation of athletic injuries affecting the upper body. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: For non-athletic training majors, consent of instructor.

#### **KIN 344. Therapeutic Exercise and Rehabilitation Techniques: Lower Body.**

Designed for athletic training majors. The study and practice of therapeutic exercise techniques and rehabilitation protocols in treating athletic injuries and illnesses. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: For non-athletic training majors, consent of instructor and concurrent enrollment in Kinesiology 344U.

#### **KIN 344U. Therapeutic Exercise and Rehabilitation: Upper Body.**

Designed for athletic training majors. Explores the theory and application of therapeutic exercise techniques and rehabilitation protocols. The athletics and physically active populations will be targeted and an aggressive treatment approach for the restoration of function as quickly and as safely as possible will be emphasized. The classroom and laboratory experiences will provide the student with opportunities to apply these techniques under the direct guidance of knowledgeable clinicians specializing in athletic training. Three lecture hours and one laboratory hour a week for one semester. May be repeated for credit. Prerequisite: For non-athletic training majors, consent of instructor and concurrent enrollment in Kinesiology 344.

#### **KIN 345. General Medical Conditions in Athletic Training.**

Designed for athletic training majors. Presentations, including some by medical and allied medical specialists, covering topics in athletic training and sports medicine. Three lecture hours and one laboratory hour a week for one semester. Prerequisite: For non-athletic training majors, consent of instructor.

#### **KIN 346. Athletic Training Program Administration.**

Designed for athletic training majors. The study of organizational and administrative principles involved with athletic training programs. Includes legal issues, budgetary concerns, and policies and procedures. Also includes resume development and career planning. Three lecture hours a week for one semester. Prerequisite: For non-athletic training majors, consent of instructor.

#### **KIN 347. Historical and Ethical Issues in Physical Culture and Sports.**

Designed for kinesiology and health education majors. Explores the history of sport industry and sport science and how laboratory revelations lead to new fitness regimens. Covers ethical issues in the field of physical culture and sport, such as the use of ergogenic drugs,

the social consequences of high performance sport, and professional ethics in the fields of kinesiology and health education. Two lecture hours and one discussion section hour a week for one semester.

#### **KIN 348. Psychological Aspects of Exercise.**

Designed for applied movement science, health education, and kinesiology majors. Examines both the psychological benefits that accrue from exercise, such as reduced depression and stress, as well as the psychological predictors of exercise adherence. Three lecture hours a week for one semester.

#### **KIN 349. History of Sport and Physical Activity.**

Restricted to students in the Bachelor of Science in Kinesiology and Health with a major in physical culture and sports or sport management. Significant developments in sport and physical activity since prehistoric time; emphasis on events influencing contemporary American programs and the International Olympic Games. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **KIN 350. Sociological Aspects of Sport and Physical Activity.**

Restricted to students in the Bachelor of Science in Kinesiology and Health with a major in physical culture and sports or sport management. Three lecture hours a week for one semester. Kinesiology 350 and 352K (Topic: Sociological Aspects of Sport and Physical Activity) may not both be counted.

#### **KIN 351. Philosophy of Sport and Physical Activity.**

Designed for kinesiology and health education majors. Introduction to the ideas and methodologies of the philosophic exploration of play, sport, athletics, exercise, and the body. Emphasis on the study of sport and ethics. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

#### **KIN 352K. Topics in Human Movement Studies.**

Analysis and synthesis of the literature and discussion of current and specific issues in kinesiology. Three lecture hours a week for one semester. Laboratory work is required for some topics. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 5: Sport, Fitness, and Mass Media.** Examine the evolution of sport media related to competitive sports and physical culture in print, television, and online.

**Topic 6: Race and Sport in African American Life.** Only one of the following may be counted: African and African Diaspora Studies 372E (Topic 19), 374 (Topic 27), Anthropology 324L (Topic 26), Kinesiology 352K (Topic 6) Additional prerequisite: Upper-division standing.

**Topic 18: Physiology of Brain Injury.** Examines the physiology of healthy brain and neural function and the pathophysiology associated with brain injury and the subsequent detection, diagnosis, treatment, short and long term consequences, and strategies to protect from and prevent brain injury. Additional prerequisite: Upper-division standing, Kinesiology 324K, and 325K.

**Topic 28: Musculoskeletal Functional Anatomy.** Explore a hands-on application of human anatomy as it applies to injury and strength/conditioning. Kinesiology 352K (Topic 28) and 352K (Topic: MUSCULOSKLTL FUNCTNL ANTMY) may not both be counted. Additional prerequisite: Kinesiology 424K and consent of department.

**Topic 29: Research Methods in Exercise Science.** Engage in every part of the research process, from defining a specific research question, designing the experimental protocol and performing data collection to presenting results and conclusions in a poster presentation. Three lecture hours a week for one semester. Kinesiology 352K (Topic: Research Methods in Exer Sci) and 352K (Topic 29) may not both be counted. Offered on the letter-grade basis only. Additional prerequisite: Upper-division standing.

**Topic 30: Sport Pedagogy.** Kinesiology 352K (Topic: Sport Pedagogy) and 352K (Topic 30) may not both be counted. Additional prerequisite: Upper-division standing.

**Topic 31: Sport, Society, and the International Olympic Movement.** Kinesiology 352K (Topic: Spt, Soc, Intl Olympic Mt) and 352K (Topic 31) may not both be counted. Additional prerequisite: Upper-division standing.

**Topic 32: History of Physical Culture.** Survey the history of major trends and movements in physical culture, including fitness and exercise, strength sports, body cultures, and alternative health. Additional prerequisite: Upper-division standing.

**Topic 33: Nutrition: Exercise, Health, and Sport.** Explore general nutrition concepts including basic definitions and how nutrition affects health. Examine the current nutrition recommendations at various ages. Kinesiology 352K (Topic: Ntr: Exercise/Health/Sport) and 352K (Topic 33) may not both be counted.

**Topic 34: Exercise Physiology Cardiovascular Disease.** Explore cardiovascular diseases and the effect of exercise in patient populations. Examine current research in the field by reading peer-reviewed, published articles. Kinesiology 352K (Topic: Exer Phys Cardiovsclr Disease) and KIN 352K (Topic 34) may not both be counted.

**Topic 35: Client Services and Venue Management.** Examine the Americans with Disability Act and how it designates accessibility and services in public spaces. Identify client/attendee escalation and the dispute resolution practices necessary for successful return to common interest. Explore different models and techniques adopted by entities with respect to fundamentals of marketing. Kinesiology 352K (Topic: Client Svcs and Venue Mgmt) and KIN 352K (Topic 35) may not both be counted.

**Topic 36: Exercise Physiology in Cardiovascular Diseases.** Examine the physiology of cardiovascular diseases and their consequences on autonomic regulation during exercise in these patient populations. Analyze and synthesize the literature and discussion of current peer-reviewed research articles. Additional prerequisite: Kinesiology 310, 424K (or equivalent), and 425K

**Topic 37: Environmental Physiology.** Learn responses and adaptations of the cardiovascular and pulmonary systems to different extreme environments. Kinesiology 352K (Topic: Environmental Physiology) and Kinesiology 352K (Topic 7) may not both be counted. Additional prerequisite: Kinesiology 425K.

**Topic 38: Exercise and Sport for Health, Fitness, and Performance.** Discuss the impacts that sports and exercise have on health, fitness, and performance. Kinesiology 352K (Topic: Exer Spt For Hlth Fit Perf) and 352K (Topic 38) may not both be counted.

### **KIN 352L. Women and Sport.**

Same as Women's and Gender Studies 345U. Examine the role sport and exercise has played in the lives of women since ancient times with an emphasis on events influencing American women in sport, their fight for access to sport, and the International Olympic Games. Three lecture hours a week for one semester. Only one of the following may be counted: Kinesiology 352K (Topic 3), Kinesiology 352L, Women's and Gender Studies 345 (Topic 5), 345U. Prerequisite: Upper-division standing.

### **KIN 352M. Sport, Fitness, and Mass Media.**

Examine the evolution of sport media related to competitive sports and physical culture in print, television, and online. Three lecture hours a week for one semester. Kinesiology 352M and Kinesiology 352K (Topic 5) may not both be counted.

### **KIN 352N. History of Physical Culture.**

Survey the history of major trends and movements in physical culture, including fitness and exercise, strength sports, body cultures, and

alternative health. Three lecture hours a week for one semester. Kinesiology 352N and 352K (Topic 32) may not both be counted. Prerequisite: Upper-division standing.

### **KIN 353. Sport Law.**

Designed for sport management majors. Introduction to the United States legal system and to the major cases, laws, and regulations that together make up "sports law." Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **KIN 354. Sport and Event Marketing.**

Restricted to sport management majors. Application of the fundamental principles used in the marketing of sport and events, with an emphasis on how sport marketing is distinct from traditional goods and services marketing. Focus on key consumption behaviors in sport and their implications for sport marketing practice. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **KIN 355. Media and Public Relations in Sport.**

Designed for sport management majors. Examination and application of the concepts of public and media relations to sport and leisure organizations. Subjects include effective interpersonal communication, persuasion, media relations, publicity tactics, social and new media, and writing and oral communications skills. Three lecture hours a week for one semester. Prerequisite: Upper-division standing.

### **KIN 356. Revenue and Budgeting in Sport.**

Restricted to students in the Bachelor of Science in Kinesiology and Health with a major in sport management. Introduction to financial analysis and budgeting techniques in the context of sport organizations; conventional and innovative methods for the acquisition of revenue available to sport organizations. Examine financial trends in various sectors of the sport industry, including: professional, college, government/public, and nonprofit sport. Three lecture hours a week for one semester.

### **KIN 357. Strategic Management of Sport Organizations.**

Designed for sports management majors. Examines the strategic development of sport and health promotion programs. Focus on strategy development within organizations, which includes complementary course material deriving from various sub-disciplines related to strategic thinking and decision-making. Two lecture hours and one discussion hour a week for one semester. Prerequisite: Upper-division standing; Kinesiology 354; and Kinesiology 356 or three hours of Accounting or three hours of Finance coursework.

### **KIN 360. Programming for People with Disabilities.**

Covers early detection of disabilities in children, assessment, recommendations for educational settings, and writing an Individualized Education Program. Reviews real-life scenarios featuring individuals with disabilities in active settings. Covers skills useful for a career in a school environment, public policy, and recreation. Three lecture hours a week and twelve service learning hours arranged with instructor for one semester. Prerequisite: Six semester hours of coursework in kinesiology, or consent of instructor.

### **KIN 361. Coaching Theory and Principles I.**

Examines the philosophy, ethics, strategies, motivational techniques, performance analysis, program organization, contest administration, and facilities management related to coaching. Three lecture hours a week for one semester. Prerequisite: Kinesiology 312.



**KIN 362. Coaching Theory and Principles II.**

Examines the process of becoming a successful coach and developing a coaching protocol for a specific sport. Three lecture hours a week for one semester. Prerequisite: Kinesiology 361

**KIN 363. Theory and Practice in Strength Coaching.**

Examine the physiology and biomechanics of strength and conditioning training, as well as popular assessment protocols and exercise prescription principles. Explore the management of a strength/conditioning facility, including organization and administration, staff utilization, integration of weight training with other training techniques, and standard strength coaching practices. Three lecture hours a week for one semester. Prerequisite: Kinesiology 310 or 424K.

**KIN 364. Aquatic Facility Operator: Management and Administration.**

Designed to prepare the aquatic professional for leadership in the management of indoor and outdoor facilities. Includes aquatic facility operation, administration of programs, physical operations, policies and procedures, and staff development and training. Includes design, pool operation, water chemistry, facility management, safety procedures and risk management, budgeting, and marketing aquatic programs. Studies educational, sport, and recreational aspects of pools, lakes, camps, and beachfronts. Three lecture hours a week for one semester.

**KIN 365. The Business of Golf.**

Restricted to students in the College of Education. Designed for students pursuing a career in the golf business. Includes clubhouse and links management, sales, agronomy, technology, and equipment. Three lecture hours a week for one semester.

**KIN 366R. Adapted Fitness and Recreation.**

Investigate fitness and recreation as integral components of optimal health and well-being for individuals with illnesses and disabling conditions. Explore the benefits of exercise for people with disabilities and the preparation necessary to clear the pathways for individuals to successfully pursue a lifetime of fitness and recreation. Three lecture hours a week for one semester. Kinesiology 352K (Topic: Adapted Fitness/Recreation) and 366R may not both be counted. Offered on the letter-grade basis only. Prerequisite: Upper-division standing.

**KIN 367S. Sport and Disability.**

Delve into a comprehensive look at the history of disability sport and current elite and Paralympic athletes. Explore disability sport in its historical context; organizations, competitions, and sport opportunities for athletes with disabilities; international perspectives; and coaching and training of athletes with disabilities, including sports medicine issues, activity modifications, equipment uses, and event management for both adult and young athletes. Three lecture hours a week for one semester. Kinesiology 352K (Topic: Sport and Disability) and 367S may not both be counted. Offered on the letter-grade basis only.

**KIN 368T. Perspectives in Assistive Devices, Products and Technology.**

Participate in a multidisciplinary collaborative approach in the development of devices and products to assist people with disabilities in recreational and daily life pursuits. Join a team of medical and engineering students in prototyping technologies, and be guided through early insight marketing research, and development strategies. Engage with leaders in successful business ventures and learn from experts in technology, medicine and product development. Present concluding projects to a panel of mentors in the fields of research, marketing, development and patenting. Three lecture hours a week for one semester. Offered on the letter-grade basis only.

**KIN 370K. Topics in Health Promotion: Seminar.**

Identification, causes, incidence, prevention, control, and social implications of major problems in health. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Varies with the topic.

**Topic 1: Emergency Medical Technology.****KIN 375. Issues and Trends in Developmental Movement Programs.**

Introduction to issues related to the goals, organization, and success of developmental movement programs, such as school physical education, youth sports, YMCA, and other recreation programs and community activities. Issues include equity, competition, fitness, social development, safety and liability, and sportsmanship. Involves group work and observation and involvement in community programs. Two lecture hours and three laboratory hours a week for one semester.

**KIN 376. Measurement in Kinesiology.**

Measurement and assessment procedures; application of statistical procedures; standards for authentic assessment; measurement/assessment selection and evaluation; use of technology in tracking development of motor skills and fitness. Three lecture hours a week for one semester. Prerequisite: Six semester hours of upper-division coursework in kinesiology.

**KIN 178, 278, 378, 678. Topics in Fieldwork in Health.**

Undergraduate research and/or experience with a health agency in the field attempting to analyze or solve community health problems through education; supervision by the health agency and by the kinesiology and health education faculty. For each semester hour of credit earned, two laboratory hours a week for one semester. Some topics are offered on the pass/fail basis only; these are identified in the Course Schedule. May be repeated for credit when the topics vary. Prerequisite: Upper-division standing and consent of instructor.

**Topic 1: Substance Abuse Prevention I.****Topic 2: Substance Abuse Prevention II.****Topic 3: Sexual Health I.****Topic 4: Substance Abuse Prevention III.****KIN 379H. Honors Tutorial Course.**

Readings or a research project, under the supervision of a faculty member, in specific areas of research within kinesiology. Three lecture hours a week for one semester. May be repeated for credit. Prerequisite: A University grade point average of at least 3.00 and consent of instructor.

**Graduate Courses****KIN 382. Topics in Conference- Laboratory.**

Laboratory or workshop-type instruction dealing with selected problems in specialization areas of kinesiology. Conference course. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**Topic 1: Laboratory Techniques in Exercise Physiology.** Study techniques to measure the cardiovascular and metabolic responses to exercise. Additional prerequisite: Consent of instructor.

**Topic 4: Biomechanics Laboratory.** Prerequisite: Kinesiology 395 (Topic 36: Biomechanics of Human Movement), two semesters of calculus, and one semester of college physics (mechanics); or consent of instructor.

**Topic 6: Advanced Laboratory Techniques in Exercise Physiology.**

Knowledge and skills needed to assess the metabolic characteristics of the rat, to evaluate the metabolic characteristics of skeletal muscle, and to perform essential biochemical assays and procedures that



are typically used in biochemical and molecular biology experiments. Prerequisite: Consent of instructor.

**Topic 7: Clinical Exercise Physiology: Theory and Practice.** Designed for students interested in assessing physical fitness and well-being and designing exercise programs in corporate, community, clinical, occupational, and commercial settings. Students receive practical experience assessing physical fitness. Prerequisite: Kinesiology 325K or the equivalent.

**Topic 9: Motor Development: Assessment.** Review of screening, diagnostic, or programmatic motor assessment instruments. Includes test psychometrics, test content, appropriate population, and comparable or competing assessments. Prerequisite: Kinesiology 321M or the equivalent, Kinesiology 395 (Topic 45: Seminar in Motor Development), or consent of instructor.

**Topic 10: Pedagogical Technology.** Analysis and application of fundamental and advanced technologies in physical activity settings. Prerequisite: Graduate standing, or consent of instructor.

### KIN 386. Topics in Research Methodologies.

Disciplines of research methods, research design, data-producing techniques, treatment and interpretation of data, reporting on research. Three lecture hours a week for one semester. May be repeated for credit when the topics vary. Prerequisite: Graduate standing.

**Topic 1: Research Methods: Proposal Writing.** Required of all candidates for the master's degree in kinesiology with thesis or report. Additional prerequisite: Educational Psychology 371 or an equivalent introductory statistics course with a grade of at least C.

**Topic 2: Research Methods: Applied Research Techniques.**

**Topic 3: Qualitative Research Methods PCSS.** Introduction to the theoretical and methodological aspects of qualitative research, as well as qualitative research approaches from a variety of disciplines and philosophical traditions with an emphasis on the application of research designs, data collection, and analysis techniques for researchers of sport, physical culture, exercise, and physical activity. Recommended for students specializing in sport management or interdisciplinary sport studies. Kinesiology 386 (Topic: Qualitative Research Methods PCSS) and Kinesiology 386 (Topic 3) may not both be counted.

**Topic 4: Research Methods: Grant Writing.** Restricted to students in the Department of Kinesiology and Health Education. Disciplines of research methods, research design, data-producing techniques, treatment and interpretation of data, and reporting on research. Recommended for doctoral students interested in pursuing a post-doctoral experience. Kinesiology 386 (Topic: Research Methods: Grant Writing) and Kinesiology 386 (Topic 4) may not both be counted.

**Topic 5: Archival Research Methods in Physical Culture and Sport History.** Selected research methods and techniques used in archival research at the theoretical and pragmatic level. Familiarizes students with research methods for both paper-based and digital archives.

### KIN 395. Topics in Advanced Studies.

Graduate seminar in topics related to specialization areas. Three lecture hours a week for one semester. Additional hours may be required for some topics. May be repeated for credit when the topics vary. Prerequisite: Graduate standing; additional prerequisites vary with the topic.

**Topic 1: Ergogenic Aids for Exercise.** Additional prerequisite: Kinesiology 325K or consent of instructor.

**Topic 2: Cardiac Metabolism.** Additional prerequisite: Kinesiology 395 (Topic 46), and Chemistry 339 or consent of instructor.

**Topic 3: Physiology of Aging.** Additional prerequisite: Kinesiology 395 (Topic 46).

**Topic 4: Biomechanics of Sport.** Additional prerequisite: Kinesiology 324K and 326K, or consent of instructor.

**Topic 5: Exercise and Preventive Medicine.** Additional prerequisite: Kinesiology 325K.

**Topic 8: Motor Control: Neuromuscular Bases.** Additional prerequisite: Kinesiology 336 or consent of instructor.

**Topic 9: Motor Control: Performance and Learning.** Additional prerequisite: Kinesiology 315 or consent of instructor.

**Topic 10: Neural Control of Posture and Locomotion.** Additional prerequisite: Kinesiology 336 or consent of instructor.

**Topic 11: Pulmonary Exercise Physiology.** Restricted to graduate students in exercise physiology. Examine the interactions between the cardiovascular and pulmonary systems at rest and during exercise. Three lecture hours a week for one semester. Kinesiology 395 (Topic: Pulmonary Physiology) and 395 (Topic 11) may not both be counted. Offered on the letter-grade basis only. Additional prerequisite: Kinesiology 395 (Topic 16).

**Topic 12: Muscle Physiology and Plasticity.** Additional prerequisite: Kinesiology 395 (Topic 46) or consent of instructor.

**Topic 13: Aging Motor Systems.**

**Topic 15: Conditioning for Competitive Athletes.** The physiological factors that govern the adaptations derived from acute and chronic exercise training. Focus will be placed on training adaptation in competitive athletes as they represent the extreme. Additional prerequisite: Kinesiology 325K or consent of instructor.

**Topic 16: Cardiovascular Response to Exercise.** Additional prerequisite: Kinesiology 325K or consent of instructor.

**Topic 18: Fitness Testing and Evaluation.**

**Topic 21: Children's Exercise and Activity.** Physiological bases for changes in exercise and sports performance and in exercise capacity throughout childhood and adolescence. Includes aspects of cardiovascular, respiratory, and metabolic changes and issues related to thermoregulation, training, gender, and health and fitness. Additional prerequisite: Kinesiology 321M and 325K, or consent of instructor.

**Topic 23: Critical Issues and Events in American Sport.** Introduction to historical research process through a reading and analysis of significant works in the field of sport history and the writing of a research paper.

**Topic 25: Fat Metabolism during Exercise.** Additional prerequisite: Kinesiology 395 (Topic 46), or 325K and consent of instructor.

**Topic 26: Legal Issues in Sport.**

**Topic 27: Athletics Administration.**

**Topic 28: Physical Dimensions of Aging.**

**Topic 29: Ethics in Sport.**

**Topic 32: Sport Marketing.** Apply the fundamental principles used in the marketing of sport and events. Additional prerequisite: An introductory undergraduate or graduate survey course in marketing.

**Topic 33: Musculoskeletal Biomechanics.** Synthesis of properties of the musculotendon and skeletal systems to construct detailed computer models that quantify human performance and muscular coordination. Prerequisite: For kinesiology majors, Mathematics 341, Kinesiology 395 (Topic 36), and consent of instructor.

**Topic 36: Biomechanics of Human Movement.** Same as Biomedical Engineering 383J (Topic 4). Additional prerequisite: Kinesiology 326K, two semesters of calculus, one semester of college physics (mechanics), and consent of instructor.

**Topic 38: Muscle Metabolism during Exercise.**

**Topic 42: Facility and Event Management.** Management and operation of sport, recreation, convocation, convention, and other public assembly facilities.

**Topic 43: Psychology of Exercise.** The benefits of exercise in moderating negative psychological states such as anxiety, stress reactivity, and depression. Additional prerequisite: Kinesiology 325K.

**Topic 44: Sport Finance.** Examine finance in sports organizations. Explore the knowledge and skills needed in the administration of both sport and non-sport organizations or firms.

**Topic 45: Pediatric Motor Development.** Additional prerequisite: Kinesiology 321M, or consent of instructor.

**Topic 46: Advanced Exercise Physiology I.** Designed to provide students with the essential graduate background for the application and practice of exercise physiology. The integration of the nervous, skeletal muscle, and cardiovascular systems from the subcellular level to the whole-organism level. Additional prerequisite: Kinesiology 325K.

**Topic 47: Advanced Exercise Physiology II.** The physiological and metabolic response to exercise, with emphasis on integrating the whole-body and cellular responses. In a variety of topics, students review basic physiology, focus on responses during exercise, and apply their findings to situations in the clinical and sporting environments. Additional prerequisite: Kinesiology 395 (Topic 46).

**Topic 48: Social Psychology of Sport and Physical Activity.** The theoretical structure that underlies social psychology as it has been applied to sport. Emphasis on the psychological concerns that confront coaches in their interactions with individual athletes and teams. Additional prerequisite: Kinesiology 311K or consent of instructor.

**Topic 49: Sports Nutrition.** The nutritional needs of people whose physical activity ranges from recreational to elite competitive athletics. Development of practical dietary strategies that recognize the unique nature of sport and the role of diet in promoting optimal physiological adaptation to training. Three lecture hours and one and one-half discussion hours a week for one semester. Additional prerequisite: Kinesiology 325K or consent of instructor.

**Topic 50: Sport Psychology.** The general field of experimental sport psychology, with emphasis on the psychological components of individual performance. Designed to prepare students to discuss the important questions, methodology, and experimental literature in selected areas of sport psychology. Additional prerequisite: Kinesiology 311K or consent of instructor.

**Topic 51: Adult Development, Aging, and Health.**

**Topic 52: Organizational Behavior in Sport.** Determinants and consequences of individual motivation and attitudes in organizations generally and in sport organizations specifically. Theory related to the individual often responsible for motivating people toward organizational goals, the leader. Additional prerequisite: For students in the College of Education, Management 320F or the equivalent; for others, Management 320F or the equivalent, and consent of instructor.

**Topic 53: Sport Public Relations and Sales.** Detailed study of the relationship between the media, corporate sponsorship, and sport. Focus on various media techniques utilized by sport managers and sport sponsorship basics. Additional prerequisite: Kinesiology 395 (Topic 32) or the equivalent or consent of instructor.

**Topic 54: The Biology of Aging.**

**Topic 55: Assessment of Physical Function in Older Adults.** Introduction to the goals, issues, and procedures that relate to the clinical assessment of physical function in the elderly (sixty-five and older).

**Topic 56: Sport and Special Event Management.** Introduction to key considerations when planning, implementing, and evaluating an event. Considers the organization of the events industry worldwide and examines how events link to other sectors of the economy. Specialized skills for the management and marketing of events. Students have the opportunity for hands-on practice in the use of the necessary tools for planning, programming, administering, and evaluating an event.

**Topic 57: Managing People and Organizations.** Graduate-level preparation in select subjects in organizational behavior and human resources management. Additional prerequisite: Previous coursework in foundations of organizational behavior and administration.

**Topic 58: Sport Consumer Behavior.** An examination of contemporary theory and research on the subject of sport consumer behavior.

**Topic 59: Biomechanics in Clinical Settings.** Designed to provide students with the basic biomechanical competence required to understand how normal human movements are generated, how movements are altered by injury or pathology, and how clinical intervention can improve performance. Additional prerequisite: Kinesiology 324K and 326K, or the equivalent.

**Topic 60: Sport Policy.** The formulation and analysis of sport policies: the uses of policy analysis in sport settings; environmental, economic, and sociopolitical impacts of sport, including policy implications.

**Topic 61: Central Questions in Biomechanics and Motor Control.** Designed to allow students to explore specific topics of current interest in biomechanics and/or motor control; to learn to evaluate the scientific literature in areas of current debate or controversy; and to develop scientifically sound, relevant, and experimentally testable research hypotheses. Additional prerequisite: Kinesiology 382 (Topic 4: Biomechanics Laboratory), and Kinesiology 395 (Topic 36) or written consent of instructor.

**Topic 62: Aging and Cardiovascular Function and Disease Risks.** Cardiovascular changes associated with aging; scientific issues and hypotheses in the area of aging and cardiovascular function and disease risks; and presenting critical analyses of these issues. Additional prerequisite: An upper-division course in human or vertebrate physiology.

**Topic 63: Introduction to Nonlinear Dynamics in Biological Systems.** Same as Biomedical Engineering 383J (Topic 5). Basic concepts of nonlinear mathematics and their application to biological systems. Additional prerequisite: Two semesters of college-level calculus and consent of instructor.

**Topic 64: Neuromuscular Aspects of Fatigue and Training.** The role of the central nervous system during muscular fatigue and exercise training. Additional prerequisite: Consent of instructor.

**Topic 65: Sport Development.** Examine contemporary theory and research on the subject of sport systems and athlete development.

**Topic 66: Marketing Research for Sport.**

**Topic 67: Theories and Issues in Sport Management.** Examine legal, policy, financial, and marketing trends and how they affect the management of sport organizations and systems.

**Topic 68: Human Resource Management in Sport Organizations.**

**Topic 69: Physical Activity Assessment in Individuals and Populations.** Provides an understanding of the various methods used to measure physical activity and related constructs (such as sedentary behavior, movement, and physiological attributes), and the mechanisms by which physical activity influences health outcomes. Covers all forms of physical activity measurement, assessment of built environment, and psychosocial correlates of physical activity, as well as validity, reliability, and related statistical strategies.

**Topic 70: Human Cardiovascular and Autonomic Physiology.** Introduction to the regulation of the cardiovascular and autonomic nervous system in health and disease.

**Topic 71: Cognition and Exercise Across the Lifespan.** Same as Health Education 395 (Topic 71). Detailed study of the relationship between brain health and physical activity behaviors across the developmental life stages; focused on the effects of physical activity programming on cognitive control and performance. Only one of the following may be counted: Health Education 395 (Topic: Cogn/Exerc Across Lifespan), 395 (Topic 71), Kinesiology 395 (Topic 71).

**Topic 72: History of Strength and Strength Training.** Explore the history of the physiological understanding of human strength, training methodologies to promote strength, the evolution of the profession of strength coaching, gendered-attitudes toward the possession of physical strength, and the rise of competitive strength sports. Using a cultural studies approach, consider ideas about strength (and muscularity) from Ancient Greece and Rome. Examine

the rise of circus strongmen and strongwomen, the professional physical education community's shunning of "strength" as a desirable physiological goal, and the rise of non-professional entrepreneurs like Bob Hoffman, Joe Weider, and Arthur Jones who helped debunk the myth of muscle binding.

**Topic 73: History of Sport and Business.** Survey of the development of modern sport industry from late nineteenth-century roots to twenty-first century global phenomenon. Examines connections between media and sport; the role of IMG and other sport agencies in event sponsorship and creation of celebrity athletes; growth of professionalism in the Olympic movement; the rise of megacorporations; and the commercialization of college and high school athletics.

**Topic 74: History of Physical Culture and Alternative Medicine.** Examines the history of the various practices used to strengthen, enhance, and improve the health of the body through exercise, dietary manipulation, and other holistic practices. Kinesiology 395 (Topic: History of Physical Culture and Alternative Medicine) and Kinesiology 395 (Topic 74) may not both be counted.

**Topic 75: Sport and International Relations.** Examines the relationship between sport and international relations.

**Topic 76: History of Exercise Science and Sports Medicine.** Traces the evolution of exercise science and sports medicine from Classical Greece to the present.

**Topic 77: Strategic Management in Sport.** Graduate level preparation in developing and analyzing organizational strategies. Preparation for consultancy work as well as composing and analyzing business plans.

**Topic 78: History of Sports Nutrition.** Explore the many ways in which nutritional science, diet, and folk remedies came to be popularized among athletes, and what the ramifications of these developments were. Examine the relationship between exercise and diet in the early nineteenth century, with attention paid to British and American culture. Discuss the emergence of new dietary practices for athletes throughout time, ranging from vegetarian diets to high protein meals. Identify methods and theories found in histories of gender, sport, health, medicine, politics, and culture among other disciplines.

**Topic 79: Race, History and the Quest for Body Perfection.** Explore issues of race, gender, and sexuality as applied to the human body through the lens of cultural history. Examine beliefs about what has been considered "beautiful," "fit," "obese," and "healthy" and bodies have been defined as "masculine," "feminine," or outside this traditional binary. Assess how the human body has been measured and critiqued by physical educators, scientists, and government agencies; how muscularity and the quest for ideal measurements has been celebrated and derided in different historical eras; how beauty and physique contests celebrate particular kinds of bodies; and how ideal bodies have been portrayed in art, photography and film.

**Topic 80: Statistical Methods in Education and Health.**

**Topic 81: Leadership in Sport Organizations.** Kinesiology 395 (Topic: Leadership in Sport Orgs) and 395 (Topic 81) may not both be counted.

**Topic 82: Human Anatomy Dissection.** Analyze human anatomy and train in human cadaver dissection. Perform detailed regional dissections on human cadavers to study the anatomy and anatomical relationships of the entire human body with an emphasis on clinically relevant anatomy. Kinesiology 395 (Topic: Human Anatomy Dissection) and 395 (Topic 82) may not both be counted

**Topic 83: Sports Economics.** Examine the economics of sports leagues, particularly those in North America. Use a managerial economics approach to cover three core areas of sports economics: industrial organization, labor, and public policy.

**Topic 84: Endocrine Physiology of Exercise.** Examine the hormones involved in exercise physiology and maladaptation(s) in disease states.

**Topic 85: Environmental Physiology.** Learn responses and adaptations of the cardiovascular and pulmonary systems to different extreme environments. Kinesiology 395 (Topic: Environmental Physiology) and 395 (Topic 85) may not both be counted.

### **KIN 395D. Neurological Rehabilitation.**

Explore the scope, techniques, and research findings of the field of neuromuscular and biomechanical mechanisms in neurological rehabilitation. Review basic neuromuscular and biomechanical concepts and principles, and study recent efforts to apply them to selected clinical situations. Three lecture hours a week for one semester. Prerequisite: Graduate standing and consent of the graduate advisor.

### **KIN 196, 396. Doctoral Seminar.**

Individual or shared project research with reports evaluated by seminar participants and the instructor. The equivalent of one or three lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent form.

### **KIN 296T, 396T. Directed Research.**

Investigation of assigned problems under direction of a Graduate Studies Committee member; development and demonstration of competence in research design and execution; production of an acceptably written research report. Conference course. May be repeated for credit. Prerequisite: Graduate standing and written consent form.

### **KIN 197, 397. Research Problems.**

Individual or group research topics in a specialization area of kinesiology. One or three conference or lecture hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing and written consent form.

### **KIN 197C, 397C. Movement and Cognitive Rehabilitation Science Seminar.**

Participate in facilitated research and professional development. Share work with peers and faculty and receive friendly and constructive feedback. For each semester hour of credit earned, one lecture hour a week for one semester. May be repeated for credit. Prerequisite: Graduate standing.

### **KIN 197P, 397P, 697P. Graduate Internship.**

Supervised practice in a professional organization, business, or institution. The equivalent of three, nine, or eighteen laboratory hours a week for one semester. May be repeated for credit. Prerequisite: Graduate standing, a University grade point average of at least 3.00 and a grade point average in the major department of at least 3.00, and written consent form.

### **KIN 698. Thesis.**

The equivalent of three lecture hours a week for two semesters. Offered on the credit/no credit basis only. Prerequisite: For 698A, graduate standing in kinesiology and written consent of the graduate adviser; for 698B, Kinesiology 698A and written consent of the graduate adviser.

### **KIN 398R. Master's Report.**

Preparation of a report to fulfill the requirement for the master's degree under the report option. The equivalent of three lecture hours a week for one semester. Offered on the credit/no credit basis only. Prerequisite: Graduate standing in kinesiology and written consent of the graduate adviser.

### **KIN 399W, 699W, 999W. Dissertation.**

May be repeated for credit. Offered on the credit/no credit basis only. Prerequisite: Admission to candidacy for the doctoral degree .

## Professional Courses