

KINESIOLOGY AND SPORT SCIENCES

<https://kin.edu.miami.edu/index.html>

Dept. Code: KIN

Programs

Doctor of Philosophy (Ph.D.)

- Exercise Physiology

Master of Science in Athletic Training (M.S.A.T.)

- Athletic Training

Master of Science in Education (M.S.Ed.)

- Applied Physiology
- Sport Administration

Masters Programs in Kinesiology and Sport Sciences

- M.S. in Athletic Training (<http://bulletin.miami.edu/graduate-academic-programs/education-human-development/kinesiology-sport-sciences/msed-athletic-training/>)
- M.S.Ed. in Applied Physiology (<http://bulletin.miami.edu/graduate-academic-programs/education-human-development/kinesiology-sport-sciences/exercise-physiology-msed/>)
- M.S.Ed. in Sport Administration (<http://bulletin.miami.edu/graduate-academic-programs/education-human-development/kinesiology-sport-sciences/sport-administration-msed/>)
- M.S.Ed. in Sport Administration (Online) (<http://bulletin.miami.edu/graduate-academic-programs/education-human-development/kinesiology-sport-sciences/online-sport-administration-msed/>)

Doctoral Programs in Kinesiology and Sport Sciences

- Ph.D. in Exercise Physiology (<http://bulletin.miami.edu/graduate-academic-programs/education-human-development/kinesiology-sport-sciences/exercise-physiology-phd/>)

KIN 601. Organization and Administration of Sport Programs. 3 Credit Hours.

Administrative and organizational procedures and problems specific to athletic administration, recreation and leisure sports administration, and physical education.

Components: DIL.

Grading: GRD.

Typically Offered: Fall.

KIN 602. Fiscal Management in Sport Administration. 3 Credit Hours.

Fiscal management as related to athletic sports administration, recreation and leisure sports administration, and physical education.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 603. Principles of Sport Marketing. 3 Credit Hours.

This course will focus on the vast world of sports marketing. The basic principles of marketing and marketing management will be introduced and integrated with application of these principles to sport and sports-related organizations.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 604. Essential Leadership Skills in Sport. 3 Credit Hours.

This course will examine the concept of leadership as it pertains to sports and other professions. Various leadership and management skills will be included with a focus on practical applications in a work environment. Theory and self-assessment strategies will be incorporated.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 605. Sport Sponsorship and Promotion. 3 Credit Hours.

This course is designed to provide a detailed examination of the relationship between sport and corporate sponsorship. Topics covered will include the theoretical premise of sponsorship, alignment marketing, strategic communication through sponsorship, sponsorship sales and service, determining the value of sponsorship, and evaluation of sponsor activities. Individual athlete endorsement and mega-event sponsorship such as the Olympics will be examined in-depth. Objectives, risks, and benefits from the property or platform offering a sponsorship and from the sponsoring organization will be considered.

Components: LEC.

Grading: GRD.

Typically Offered: Summer.

KIN 606. Ethical Decision Making in Sports. 3 Credit Hours.

This course will examine ethical decision-making in a variety of environments with an emphasis on sport professions. Real and hypothetical situations will be utilized, and the course will combine theory with practical application. The case method in sport ethics will be incorporated.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 607. Legal Aspects of Sports. 3 Credit Hours.

Legal liability, personal injury, negligence and other related legal aspects of sports and exercise science.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 608. Advanced Globalization in Sport. 3 Credit Hours.

This course will address the intertwined relationship between globalization, sport, and development from a critical global perspective. This course highlights the extent to which contemporary sport cultures are the result of an interplay between local and global forces. We will explore the international character of professional and amateur sports including international competitions, league expansions beyond national boundaries, and the movement of athletes. Course topics include international sport organization, international competition, sport governance, international dispute resolution, international sports law, and new media.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 609. Advanced Sport Information Management. 3 Credit Hours.

This course examines the complex fields of sport communication. Students will investigate the unique, symbiotic relationship that exist between sport and the media; examine various theoretical framework (e.g., agenda set, hegemonic, uses and gratification, elaboration likelihood model) that are pertinent to developing an understanding of the sport/media complex.

Components: LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

KIN 610. Event Management. 3 Credit Hours.

This course is designed to introduce students to principles and practices of planning, funding and managing facilities associated with sports participation including professional sport venues, college sports, parks, recreational sport and health/fitness clubs. Students will gain an understanding of promoting, marketing, and maintaining sport facilities.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 611. Field Experience in Sport Administration I. 1-3 Credit Hours.

Practical experience not ordinarily available through coursework sequences. Placement in a variety of settings, clinics, public and private voluntary agencies and schools. Supervised by a faculty member of the department.

Components: PRA.

Grading: GRD.

Typically Offered: Fall.

KIN 612. Field Experience in Sport Administration II. 1-3 Credit Hours.

Practical experience not ordinarily available through coursework sequences. Placement in a variety of settings, clinics, public and private voluntary agencies and schools. Supervised by a faculty member of the department.

Components: SEM.

Grading: GRD.

Typically Offered: Spring.

KIN 613. Field Experience in Sport Administration III. 1-3 Credit Hours.

Practical experience not ordinarily available through coursework sequences. Placement in a variety of settings, clinics, public and private voluntary agencies and schools. Supervised by a faculty member of the department.

Components: PRA.

Grading: GRD.

Typically Offered: Summer.

KIN 615. Practical Approach to Motivation and Ethical Decision Making. 1-3 Credit Hours.

A critical study of practical problems of professionals in Exercise and Sport Sciences.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 616. Advanced Sport Governance. 3 Credit Hours.

This course provides the student with an examination of the governing organizations of sport at the youth, secondary, intercollegiate, professional, international, sport specific and Olympic levels. In addition, policy development in sport management will be explored.

Components: LEC.

Grading: GRD.

Typically Offered: Spring & Summer.

KIN 617. Creative Approaches to Problem Solving and Conflict Management. 3 Credit Hours.

This hands-on course will examine the concepts of problem solving and conflict management from both personal and organizational perspectives. Students will have the opportunity to study in-depth both of these concepts (and the relationship between them) through a combination of lecture, theory, individual and group activities, readings, practical exercises, and self-assessment tools.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 619. Advanced International Club/Sport Management. 3 Credit Hours.

This course is designed to examine the various international sport-based organizations that comprise the sport industry. Examined areas will include products/services offered, marketing opportunities and challenges, public relations, economic impact on the local community, physical facilities, internship/employment opportunities, strengths, weaknesses, opportunities, threats, and the unique aspects and challenges of sport. The class will also compare and contrast sport in the United States and sport in the country visited.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 620. Contemporary Issues in Sport. 3 Credit Hours.

Problem identification, investigation, analysis, and problem solving approaches in Kinesiology and Sport Sciences.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 621. Advanced Systemic Exercise Physiology. 3 Credit Hours.

The study of the physiological effects of acute vs. chronic training on homeostatic function, musculoskeletal systems, energy system function, cardiovascular and the pulmonary systems. Students will be able to understand and interpret terminology and research literature published in the field.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 623. Food Science and Management Principles. 3 Credit Hours.

A comprehensive course designed to provide knowledge of food chemistry, safety, service and management.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 624. Athletic Training Techniques - Manual Therapy. 3 Credit Hours.

This course will introduce theoretical concepts and hands-on techniques to mobilize joints and soft tissue in order to modulate pain, facilitate healing, and restore mobility and function.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 625. Applied Biomechanics in Athletic Training. 3 Credit Hours.

In-depth study of the human skeletal and muscular systems with a focus on the mechanics of movement as related to physical activity, sports, and athletics.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 626. Nutrition Diet and Exercise. 3 Credit Hours.

Students will learn the latest concepts in weight management, physical fitness, and healthy eating. They will be able to understand the complex interplay of carbohydrates, protein, fat, water, fiber, vitamins, and minerals in the nourishment of their body and overall well-being. They will also examine serious health issues such as the use/misuse of anabolic steroids, weight control, and eating disorders.

Components: LEC.

Grading: GRD.

Typically Offered: Summer.

KIN 627. Community and Global Nutrition. 3 Credit Hours.

This course is designed to provide an overview of nutritional issues & related aspects of infectious and chronic disease impacting the health and performance of athletes, individuals & groups domestically & globally. Economic and environmental issues which impact nutritional status and deficiency in the Western societies & third world countries will be addressed. An international and cultural perspective on food, eating behaviors and customs will be explored.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 628. Basic Statistics in Kinesiology and Sport Sciences. 3 Credit Hours.

Introduction to basic statistical techniques commonly used in the Exercise and Sport Sciences. Designed as a prerequisite for KIN 646 (Formally ESS 646).

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Summer.

KIN 630. Cellular Exercise Physiology. 3 Credit Hours.

The course examines Bioenergetics and Muscular Physiology in training and detraining. Topics include the energy systems and their functional application during exercise, muscle structure and function, cellular and sub-cellular modifications of organelles and contractile mechanisms as result of training and physiological bases of training techniques.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 631. Laboratory Techniques in Functional Evaluation of Skeletal Muscle. 3 Credit Hours.

This course examines the theories of data collection and collection techniques used to evaluate musculo-skeletal and neuromuscular function. The application of both computerized and non-computerized collection systems for performance evaluation is covered. The course is also designed to establish a clear linkage between the acute and chronic musculo-skeletal and neuromuscular changes that occur during exercise and the laboratory methods used to assess those changes. Collection theory, musculoskeletal and neuromuscular function, methods of strength evaluation, anaerobic power testing, electromyography, and a number of other functional parameters will be discussed.

Components: LAB.

Grading: GRD.

Typically Offered: Fall.

KIN 632. Sports Injuries: Prevention and Treatment. 3 Credit Hours.

Prevention, diagnosis, treatment and rehabilitation of sports injuries. Anatomical and Kinesiological application to sports injuries.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 634. Integrative and Functional Nutrition. 3 Credit Hours.

This course will discuss integrative and functional medicine and how it emerged. This course will analyze the healthcare models that include personalized care and the whole-person perspective. In this course we will discuss various factors that influence disease including diet and nutrition, stress, activity level, pharmaceuticals and environmental pollutants. Alternative approaches to treatment will also be discussed.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 635. Clinical Biomechanics for Sport Medicine Professionals. 3 Credit Hours.

A lecture course stressing biomechanics of joints and pathomechanics of orthopedic injuries.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Summer.

KIN 636. Strength and Conditioning I. 3 Credit Hours.

This course serves as the practical/technical foundation for major compound movements and Olympic lifts. It also provides comprehension of movement specific dynamic warm-ups, advanced stretching techniques, methods for identifying movement compensations and underlying issues as well as evaluating Olympic techniques. Due to the practical nature of the course, all the sections of this course are held in the Hecht Athletic Center (HAC).

Components: LAB.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 637. Strength and Conditioning II. 3 Credit Hours.

This course is the continuation of Strength and Conditioning I (KIN 536). It provides more advanced Olympic weightlifting techniques and ballistic training, alongside a continued focus on corrective exercises to ensure a reduced risk of injury. The course also provides an introduction to exercise programming including specialized training techniques for athletic development. Due to the practical nature of the course, all sections of this course are held in the Hecht Athletic Center (HAC).

Components: LAB.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 638. Nutrition during the Lifecycle. 3 Credit Hours.

This course is designed to examine the changes in nutrition requirements during the life cycle, particularly as related to growth, development and aging. Psychosocial, cultural, and economic issues related to food intake at various life stages will be reviewed.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 639. Dietary Supplements and Human Performance. 3 Credit Hours.

Evidence-based examination of supplements, food phytochemicals, and their relation to disease & performance.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 640. Exercise Psychobiology. 3 Credit Hours.

This course is designed primarily for graduate level Exercise and Sport science students who are interested in the biochemical basis of personality as affected by exercise and sport. The course involves interdisciplinary integration and comprehensive reviews of ancient and current literature dealing with exercise, stress, emotional, personality, immune system function and neuroendocrine function.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 641. Neurophysiology in Exercise Science. 3 Credit Hours.

Examination of the functions of the central, peripheral, and autonomic nervous systems in regulating exercise homeostasis and the structural and functional modifications to the systems through training. NOTE: This course is a writing intensive course. This means that all examinations and papers include a critical evaluation of the student's ability to convey information using the written word.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 642. Strength and Conditioning. 3 Credit Hours.

A comprehensive overview of strength and conditioning.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 643. Professional Training and Counseling for Integrative Health. 3 Credit Hours.

Students will learn the integrative health care model, theories, behavior change models, approaches & techniques used in nutritional counseling to help athletes, individuals and groups implement and sustain behaviors, lifestyles, and attitudes to achieve optimal health. Lecture & personal application will allow for the development of skills in each of these areas.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 645. Therapeutic Lifestyle to Combat Chronic Disease. 3 Credit Hours.

This course presents an in-depth examination of chronic conditions and medical problems commonly observed in athletes. Students will learn about the etiology of the medical condition, how exercise affects the condition, how nutrition affects the condition, and the most recent therapeutic treatments prescribed for the condition.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 646. Elite Conditioning I. 3 Credit Hours.

Elite Conditioning I provides an introduction to evaluation techniques catered specifically to the athletic population including tests for strength, power, speed, agility, balance and stability. The courses also provides instruction on how to apply these evaluations to their respective sports/positions. These evaluation techniques provide data that students will use in the process of corrective exercise prescription. Students are taught how to implement corrective strategies to improve athletic performance. Due to the practical nature of the course, all sections of this course are held in the Hecht Athletic Center(HAC).

Components: LAB.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 647. Elite Conditioning II. 3 Credit Hours.

Elite Conditioning II is the continuation of Elite Conditioning I (KIN 546). This course provides students with an understanding of the design and implementation of periodized conditioning programs for athletes based on the testing, evaluation, and applications to specific sports learned in Elite Conditioning I. The course focuses on speed agility and quickness for sports. It also includes practical implementation of ballistic, plyometric, speed, and conditioning drills emphasizing evidence based methods and training techniques. Due to the practical nature of the course, all sections of this course are held in Hecht Athletic Center(HAC).

Components: LAB.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 649. Nutrition Assessment and Lab. 3 Credit Hours.

Application of the principles of normal and therapeutic nutrition, nutrition assessment, evaluation and intervention as related to sports performance and the management and treatment of disease states. Laboratories will allow for the development of skills in each of these areas.

Components: LAB.

Grading: GRD.

Typically Offered: Fall.

KIN 650. Nutritional Biochemistry. 3 Credit Hours.

To learn the fundamental biochemical structure and pathways governing nutrient intake and utilization. Students will learn how major forms of nutrients (macro-nutrients, vitamins, minerals and trace elements) are processed and utilized by different organs with a particular emphasis on muscle metabolism. Students will also learn how to relate their newly acquired knowledge to health and disease outcomes with focus on lifestyles disease related to metabolism such as diabetes and obesity.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 655. Medical Nutrition Therapy. 3 Credit Hours.

The role of nutrition in the prevention and treatment of various disease states including diabetes, cardiovascular disorders, endocrine and gastrointestinal disorders, enteral feeding, renal disease, cancer and AIDS/HIV, and weight management. This course instructs on the use of the Nutrition Care Process for assessment and documentation.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 657. Diagnostic Imaging Techniques in Sports Medicine. 3 Credit Hours.

This course is designed as an elective for undergraduate KIN students or graduate students. The basic physics of radiological imaging will be covered including radiology, fluoroscopy, CT scan, ultrasound, MRI, and nuclear medicine including image archiving. Normal anatomy will be compared to the corresponding radiographic anatomy. Common sports injuries will be evaluated by multiple radiographic modalities and will be correlated with the clinical condition. Discussion will include bony pathology as well as soft tissues such as ligaments, tendons, and menisci.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 661. Facility Management. 3 Credit Hours.

Facility management provides students with an understanding of fitness entrepreneurship, giving students a comprehensive understanding of the laws, regulations, policies, and work involved in setting up a fitness facility such as a gym, wellness center, or athletic training center. Students are responsible for developing a viable sports or fitness complex including all aspects of administrative and facility management.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 662. Fitness Facility Management II. 3 Credit Hours.

Fiscal management as related to athletic sports administration, recreation and leisure sports administration, and physical education.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 663. Foundations of Athletic Training. 3 Credit Hours.

This course will cover foundational knowledge in Athletic Training with an emphasis on health promotion and injury and disease prevention. Public Health and Epidemiology, Nutrition Health and Wellness, and basic principles of Exercise Physiology will be covered. Students will be required to complete an IPE service learning project with another health professional to promote health, wellness, or physical activity research, practice, and/or policy on campus or at the community, state, or federal level. Prerequisite: American Heart Association BLS CPR/AED certification for the Health Care Providers (or approved equivalent).

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 664. Orthopedic Assessment 1: Pathophysiology of Injuries. 3 Credit Hours.

This course provides the student with an analysis of the etiology, pathology, and clinical science of muscular and skeletal diseases, disorders, and conditions. An introduction to clinical/laboratory assessment techniques, basic injury management, and knowledge of common imaging and surgical procedures are presented.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 665. Orthopedic Assessment 2: Examination of the Musculoskeletal System. 3 Credit Hours.

This course will prepare students to examine a patient with a musculoskeletal condition by obtaining a pertinent history from the patient, performing relevant systems review, and by selecting appropriate diagnostic tests and measures. The student will be able to synthesize examination data to complete the orthopedic evaluation and engage in the diagnostic process.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 667. Elements of Sports Psychology. 3 Credit Hours.

Introduction to the study of sport and exercise psychology including theory, current research and practical application.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 668. Developmental Sports Psychology. 3 Credit Hours.

Examination of the concept of sport psychology which includes but is not limited to performance, enhancement, student performance and academic application.

Components: LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

KIN 669. The Foundations of Exercise Programming. 3 Credit Hours.

Students will learn various assessments of Health and Wellness, and discover how to most effectively prescribe exercise strategies to treat the diagnosed needs of an individual.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 670. Advanced Programming. 3 Credit Hours.

Advance programming allows students to dissect sports by movement, metabolism and limitation. The course investigates current trends and evidenced based applications of specific training techniques for optimal sport performance. Students will perform complete sports analysis and develop periodized programs for major sports.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 671. Sport Industry in South Florida. 3 Credit Hours.

This course will examine the various sport based organizations/events that are part of the sport industry in South Florida. Study of these organizations/events will include (a) products/services produced, (b) organizational structure, (c) economic impact on the local community, (d) key management personnel, (e) physical facilities, and (f) internship/employment opportunities.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 673. Advanced Sport Governance. 3 Credit Hours.

This course provides the student with an examination of the governing organizations of sport at the youth, secondary, intercollegiate, professional, international, sport specific and Olympic levels. In addition, policy development in sport management will be explored.

Components: LEC.

Grading: GRD.

Typically Offered: Spring & Summer.

KIN 677. Advanced Nutrition for Health and Fitness. 3 Credit Hours.

This course presents an in-depth study of the nutritional concerns of today's Recreational and competitive athlete. Topics include dehydration, classic carbohydrate loading, protein needs, ergogenic aids, and more. State-of-the-art research in the field is provided. This is also a writing intensive course. Thus, writing skills will represent an integral part of one's grade.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 678. Pharmacology for Allied Health Professionals. 3 Credit Hours.

The study of drug families and drugs in common use across spectra of age, illness, disease, and disability. Students will understand body systems treated with current pharmaceuticals over-the-counter (OTC) medications, and nutraceuticals. Actions, key adverse effects, and influences on individuals undergoing physical activity will be emphasized.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 679. Principles of Exercise Prescription/Assessment: Cardiovascular. 3 Credit Hours.

This course presents a comprehensive overview of the physical, physiological and metabolic responses of the human body to exercise testing and training both in health and disease. The successful student will gain an understanding of the process involved in prescribing safe and effective therapeutic exercise in healthy individuals as well as patients with heart and lung disease, diabetes and obesity. An overview of environmental and legal considerations in the prescriptive process will also be discussed.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 680. Principles of exercise Prescription: Neuromuscular. 3 Credit Hours.

An examination of the scientific bases of modern training techniques designed to optimize performance, their functional application and potential impact on performance in sport and everyday activity.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 681. Development and Maturation of Athletes.. 3 Credit Hours.

This course is an in-depth study of pediatric exercise physiology with special emphasis on growth, maturation, physical activity, and performance. Topics include a comprehensive summary of biological growth and maturation, processes as it impacts physical performance. Additionally, students will learn the bases of pediatric exercise physiology in order to understand the concepts of motor development, strength, aerobic and anaerobic performance in the pediatric population.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 682. Clinical Pathology and Immediate Primary Care. 3 Credit Hours.

This course will focus on the pathology of non-orthopedic conditions including medical emergencies. Students will be able to recognize common injuries and illnesses, provide immediate treatment interventions, and make medical referrals and transport decisions when necessary. Pre-requisite: KIN663 and Current AHA BLS CPR/AED certification for the Health Care Providers (or approved equivalent as determined by ECC requirements from the BOC).

Prerequisite: KIN 663.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 684. Obesity, Metabolic Disease, and Inflammation. 3 Credit Hours.

The focus of this course is on the integrative neurophysiological functions that regulate and influence obesity, metabolic disease, and inflammation. Students will be able to understand the role that chronic inflammation plays in the pathology of disease. A combination of lecture, critical reading, and group discussion will be utilized to explore the underlying basis for metabolic abnormalities.

Components: LEC.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 685. Advanced Topics in Kinesiology and Sport Sciences. 3 Credit Hours.

This course will provide a synthesis of essential concepts in specialty subjects relevant to one's field of interest.

Components: THI.

Grading: GRD.

Typically Offered: Spring & Summer.

KIN 686. Exercise Prescription/Assessment Laboratory. 3 Credit Hours.

This course presents an overview of the laboratory techniques used to assess cardiovascular endurance and general fitness, pulmonary function and anaerobias observed during competition.

Components: LAB.

Grading: GRD.

Typically Offered: Spring.

KIN 687. Laboratory Experience in Sports Nutrition. 3 Credit Hours.

This laboratory class provides case study analyses and computerized nutrient analysis systems designed to evaluate nutrition and hydration needs of the recreational and competitive athlete. From urinalysis and blood work, to body composition and computerized nutrient data base systems, this laboratory provides a clinical approach to evaluating the nutrition status of the exercising individual. Corequisite: ESS 577.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 688. Advanced Gross Anatomy in Kinesiology and Sport Sciences. 3 Credit Hours.

Human dissection of the major muscles, arteries, and nerves of the body. This course is held at the Medical Campus, cadaver laboratory. Special consideration is given to injury sites in sports such as the knee, shoulder, elbow, neck and spinal areas. Students are required to pay a \$100 laboratory fee for the class. This course is to be taken by Athletic Training majors only.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 689. Directed Readings in Kinesiology and Sport Sciences. 3 Credit Hours.

Directed Readings focusing on research and contemporary trends in the field.

Components: PRA.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 690. Special Topics in Kinesiology and Sport Sciences. 1-3 Credit Hours.

This course is designed for students wishing to focus on a specific area of study within the umbrella of the Kinesiology and Sport Sciences curriculum. Students will be given supervision and support in a direction relevant to their needs and interests in a structured setting.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 698. Professional Training and Counseling for Integrative Health. 3 Credit Hours.

Current research in nutrition and nutritional care, nutrition profession, ethics and roles in food service, clinical and community. Seminars designed to cover state-of-the-art overview of current and emerging topics will be presented by invited outside guest speakers.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 699. Advanced Programming for Endurance Athletes. 3 Credit Hours.

This course provides students with training techniques to improve aerobic capacity, endurance, and lactate threshold for optimal performance. Students will review evidenced based principles of sports nutrition, strategies to ensure proper hydration, thermoregulation, and fuel (substrate) availability during prolonged exercise as well as develop programs for competitive sports including triathlon, marathon, and cycling.

Components: LEC.

Grading: GRD.

Typically Offered: Summer.

KIN 702. Athletics in the United States. 3 Credit Hours.

An Assessment of athletics in the United States. Focus on historical perspectives, contemporary issues, interface with international athletics, and future trends.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 704. Recreation in the United States. 3 Credit Hours.

An assessment of recreation and leisure in the United States. Focus on past, present, and future trends, problems, and issues.

Components: LEC.

Grading: GRD.

Typically Offered: Offered by Announcement Only.

KIN 710. Advanced Adolescent Growth and Maturation. 3 Credit Hours.

This course is an in-depth study of pediatric exercise physiology with special emphasis on growth, maturation, physical activity, and performance. Topics include a comprehensive summary of biological growth and maturation, processes that impact physical performance. Additionally, students will learn the basis of training pediatric populations.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 712. Applied Sport Psychophysiology. 3 Credit Hours.

The study of the physiological effects of acute vs. chronic training on homeostatic function, musculoskeletal systems, energy system function, cardiovascular system, and the pulmonary system. Students will be able to understand and interpret terminology and research literature published in the field.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 714. Therapeutic Interventions. 3 Credit Hours.

Students will acquire the theoretical knowledge necessary for the clinical application of therapeutic exercise, modalities, and evidenced based rehabilitation programs. Principles of therapeutic exercise, open and closed chain exercise, muscle re-education, and special therapeutic techniques such as aquatic therapy. In addition, students will apply specific physiological effects, therapeutic indications, and contraindications associated with thermal, mechanical, electromagnetic, and acoustic modalities.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 715. Evidence-Based Sports Medicine and Research Methods. 3 Credit Hours.

The student will learn the systematic approach to creating and answering clinical questions through review and application of existing research. Students will learn how to develop a relevant clinical question using a pre-defined question format, use standard criteria or developed scales to critically appraise the structure, rigor, and overall quality of research studies, and determine the effectiveness and efficacy of an athletic training intervention. Students will also learn the theoretical foundation of clinical outcomes assessment and the standard methods of outcomes assessment in athletic training clinical practice.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 716. Advanced Rehabilitation Techniques in Athletic Training. 3 Credit Hours.

This is an advanced athletic training course designed to enhance the athletic trainer's ability to plan and implement a comprehensive sports injury rehabilitation program based on the sequential events of musculoskeletal tissue healing. Discussion focuses on the development of a conceptual model for sports injury rehabilitation which incorporates rehabilitation phases, intervention goals, and progression criteria. Application of the problem-oriented approach to the management of athletic injuries is a predominant theme throughout this course

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 717. Applied Clinical Techniques in Athletic Training. 3 Credit Hours.

This clinical laboratory course focuses on athletic training skills utilized in the diagnosis and treatment of primary care of patients. Students will become proficient in utilizing diagnostic tools and tests. In addition, students will become proficient in wound care, suturing, initiating and maintaining appropriate intravenous (IV) therapies and the collecting, handling, and processing of blood specimens for analysis.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 718. Administration and Professional Development. 3 Credit Hours.

Concepts of legal liability, insurance, budget/financial management, human resources, inventory control, facilities design and maintenance will be addressed. This course will enable the student to understand reimbursement guidelines; understand medical delivery systems, health care policy, and legislation in the United States. In addition, students will learn the basics related to accounting, billing, coding, accounts payable, and risk management.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 720. Practicum in Athletic Training. 3 Credit Hours.

Clinical education and field experience in a healthcare setting. Students are assigned to a licensed health care professional who will serve as the student's preceptor. Students will learn alongside their preceptors as they are exposed to the role, and function of a health care provider while practicing clinical skills with a variety of patient populations. In addition, students will meet for scheduled in-services and clinical labs with a focus on emergency preparedness and readiness through Simulation and Interprofessional Education. Prerequisite: KIN 663 Foundations of Athletic Training
Prerequisite: KIN 663.

Components: PRA.

Grading: GRD.

Typically Offered: Fall.

KIN 721. Independent Study 1: Clinical Internship Experience. 3 Credit Hours.

This elective internship course will allow students to seek a professional Athletic Training internship in a particular area of clinical interest under the supervision of a licensed/certified health care clinician.

Components: IND.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 722. Practicum in Athletic Training 2. 3 Credit Hours.

Clinical education and field experience in a healthcare setting. Students are assigned to a licensed athletic trainer who will serve as the student's preceptor. Students will learn alongside their preceptors as they are exposed to the role and function of an athletic trainer while practicing clinical skills with a variety of patient populations. In addition, students will meet for scheduled in-services and clinical labs with a focus on utilizing Interprofessional Education (IPE) and simulation to enhance physical evaluation and assessment skills. Prerequisite: KIN 720 Practicum in Athletic Training 1

Prerequisite: KIN 720.

Components: PRA.

Grading: GRD.

Typically Offered: Spring.

KIN 723. Independent Study 2: Research Experience. 3 Credit Hours.

This elective research experience course will allow students to pursue research in an area of particular interest under the supervision of a faculty member.

Components: IND.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 724. Practicum in Athletic Training III. 3 Credit Hours.

Clinical education and field experience in a healthcare setting. Students are assigned to a licensed health care professional who will serve as the student's preceptor. Students will learn alongside their preceptors as they are exposed to the role, and function of a health care provider while practicing clinical skills with a variety of patient populations. In addition, students will meet for scheduled in-services and clinical labs with a focus on integrating athletic training knowledge and skills through Simulation and Interprofessional Education (IPE). Prerequisite: KIN 722 Practicum in Athletic Training 2

Prerequisite: KIN 722.

Components: PRA.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 725. Independent Study III. 1 Credit Hour.

This course is an advanced study of a particular theme or topic in the athletic training field such as students' research topic, current issues of relevance to certified athletic trainers and other professionals in the sports health care professions. Students will prepare for class discussion by reviewing assigned readings from professional journals and other pertinent sources. Class sessions will consist of lectures, laboratories, and discussion sessions.

Components: THI.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 726. Practicum in Athletic Training IV. 3 Credit Hours.

Field experience at the athletic training setting through working with collegiate athletes to expose students to the role and function of athletic training as a certified athletic trainer and clinical instructor as well.

Components: PRA.

Grading: GRD.

Typically Offered: Spring.

KIN 727. Pract in Nutrition. 3 Credit Hours.

Planned supervised practice experience component in dietetic and nutrition practice of up to 900 hours shall provide the applicant with a broad spectrum of experiences in dietetics and Nutrition in clinical, community and food service to meet licensure requirements.

Components: THI.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 735. Methods in Biomechanical Analysis. 3 Credit Hours.

Examination of methods of research, instrumentation, and quantitative application of kinematic and kinetic concepts in the biomechanical analysis of human movement.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 740. Neurophysiology in Exercise Science. 3 Credit Hours.

Examination of the functions of the central, peripheral, and autonomic nervous systems in regulating exercise homeostasis and the structural and functional modifications to the systems through training. NOTE: This course is a writing intensive course. This means that all examinations and papers include a critical evaluation of the student's ability to convey information using the written word.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 741. Aging: Physiological Changes and Their Implications of Training. 3 Credit Hours.

The physiological changes that occur due to aging and their impact on fall prevention, independence, and the application of prophylactic exercise prescriptions.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 742. Fundamentals of Cardiology. 3 Credit Hours.

This course represents an in-depth review and evaluation of the field of cardiology. Students must understand the etiology of coronary artery diseases, assessment techniques in the evaluation of cardiac pathologies, the latest risk factors, and most recent trends in treatment and rehabilitation. Phase I through Phase IV review of Cardiac Rehabilitation will be fully examined.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 743. Laboratory Experiences in Cardiac Rehabilitation. 3 Credit Hours.

This class provides hands-on clinical experiences in preparation of patient for testing, assessment of pre-existing medical conditions and risk factors as well as appropriate procedures for stress testing. Student will, in addition, have the opportunity to view Thallium stress tests, echocardiography and cardiac surgical procedures such as angioplasty and bypass surgery.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 744. Interpretation of the Electrocardiogram. 3 Credit Hours.

This class will provide information of the electrophysiology of the heart, medicines used to improve heart function, and critical examination of waveform analyses in interpreting the electrocardiogram. Prerequisite: KIN 642 (Formally ESS 642) or permission of the instructor.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 746. Research Methods in Kinesiology and Sport Sciences. 3 Credit Hours.

This Course reviews the approach and research methods used to evaluate quantitative research questions in the field of Kinesiology and Sport Sciences.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 747. Analytic Methods in Kinesiology and Sport Sciences. 3 Credit Hours.

Methods of analyzing research data in Kinesiology and Sport Sciences.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 755. Exercise Biochemistry. 3 Credit Hours.

This course presents an in-depth examination of the biochemical basis of exercise. Topics include carbohydrate and lipid metabolism at rest and during exercise, integration of metabolism, the use of stable isotopes in the characterization of substrate kinetics, and metabolic bases of fatigue. Both the instructor and the students will incorporate current peer-reviewed research in the field.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 763. Seminar and Special Topics in Athletic Training. 3 Credit Hours.

Scenarios and subject matter that will help facilitate the student's transition to practice will be emphasized. There will be a focus on current issues and emerging topics and technologies in the healthcare profession. Students will prepare for class discussion by reviewing assigned readings from professional journals and other pertinent sources. Class sessions will consist of lectures, laboratories, and discussion sessions. Also, career development and responsibility topics such as leaderships, entrepreneurship, ethics, patient values, diversity and cultural competency.

Components: SEM.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 764. Athletic Training Clinical Field Experience. 6 Credit Hours.

This course is an immersive clinical education experience, where Athletic Training students under the supervision of a preceptor will demonstrate the ability to integrate knowledge and skills with clinical problem-solving while assuming professional like roles in various clinical patient care settings. Students will be required to post weekly reflections in an electronic journal and to attend scheduled webinars.

Prerequisite: KIN 722.

Components: PRA.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 765. Teaching Assistant Training in Kinesiology. 3 Credit Hours.

This course involves training and teaching assistant experience under the supervision of faculty. Students will have the opportunity to assist faculty in the teaching of workshops, clinical laboratory and/or undergraduate theory courses offered in the Kinesiology department.

Components: PRA.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 766. Research in Athletic Training. 3 Credit Hours.

This course is an advanced study of a particular theme or topic in the athletic training field including a research topic, current professional issues of relevance to certified athletic trainers and other sports medicine/allied healthcare professionals.

Prerequisite: KIN 715 and KIN 763.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 781. Issues Specific to Women's Health. 3 Credit Hours.

This course focuses upon clinical health issues relevant to women. Students will acquire a body of knowledge concerning the specific biological and physiological changes women experience from birth to maturity, and from the pre- to post menopausal state. Women will learn significant issues related to women's health and be able to make more educated decisions regarding their health and treatment options.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 782. Psychosocial Issues in Women's Health. 3 Credit Hours.

This course covers a broad perspective of women and their self-esteem, their femininity, and their role in family household. Attention will be paid to the historical, cultural, and anthropological development of women and their role in society. The influence of gender will explore several areas which include a) pregnancy, b) menopause, c) menstrual cycle, d) stress and career vs. family, e) depression, and f) body image.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 783. Sports Medicine for the Female Athlete. 3 Credit Hours.

This course focuses upon the physiological effects of exercise on the female athlete as it relates to her performance and health. Physiological differences between male and female will be examined as it impacts the women's performance capabilities and potential. Gender specific problems regarding the exercising female will be explored.

Components: LEC.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 784. Energetics of Obesity and Weight Management. 3 Credit Hours.

This course is designed to evaluate dieting, rebound effect, set point theory, brown fat, and adaptive thermogenesis, as they relate to the etiology of obesity. The course will cover a step-by-step approach in the recognition, and management of the overweight patient. The course will also examine adipocyte morphology and the health implications of being overweight and obese. Students will examine the impact of both diet and exercise on long-term weight management.

Components: LEC.

Grading: GRD.

Typically Offered: Fall.

KIN 785. Neurological Mechanisms of Weight Regulation. 3 Credit Hours.

This course is designed to evaluate dieting, rebound effect, set point theory, brown fat, and adaptive thermogenesis, as they relate to the etiology of obesity. The course will cover a step-by-step approach in the recognition and management of the overweight patient. The course will also examine adipocyte morphology and the health implications of being overweight and obese. Students will examine the impact of both diet and exercise on long-term weight management.

Components: LEC.

Grading: GRD.

Typically Offered: Spring.

KIN 790. Strength and Conditioning Independent Study/Project. 3 Credit Hours.

Practical experience not ordinarily available through coursework sequences. Placement in a variety of settings, clinics, public and private voluntary agencies and schools. Supervised by a faculty member of the department.

Components: THI.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 791. Practicum in Kinesiology and Sport Sciences/Master's students. 1 Credit Hour.

The course presents graduate students with the theoretical and practical tools necessary for expanding their critical thinking and argumentative skills in order to present their scientific research results in an evaluative, logical and analytical manner. The course consists of weekly presentations of related literature, results, and findings on various Master's projects.

Components: PRA.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 792. Optional Internship-Strength and Conditioning. 1 Credit Hour.

This 1 credit internship allows students to pursue professional internships in the field of strength and conditioning/fitness entrepreneurship. Students will be provided with contact information and a number of opportunities by Dr. Biagioli respective to their interests.

Components: SEM.

Grading: SUS.

Typically Offered: Fall, Spring, & Summer.

KIN 793. Research Colloquium.. 1-3 Credit Hours.

This course presents graduate students with the theoretical and practical tools necessary for presenting their scientific research in an organized, logical, and analytical manner.

Components: THI.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 794. Advanced Individual Study. 1-3 Credit Hours.

The Application for Admission to Individual Study Form will be required.

Components: THI.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 795. Graduate/Clinical Field Experience in Kinesiology and Sport Sciences. 1-3 Credit Hours.

Practical experience not ordinarily available through coursework sequences. Placement in a variety of settings, clinics, public and private voluntary agencies and schools. Supervised by a faculty member of the department.

Components: PRA.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 799. Special Project. 1-3 Credit Hours.

This course represents the capstone course in a student's field and should represent a culmination of all information learned in class.

Components: THI.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 800. Supervised Practicum. 1-3 Credit Hours.

Students will be engaged in supervised experiential learning designed especially for their entry into their field. The student will be supervised by an approved preceptor (industry professional, clinician, or researcher) for the practical application of previously studied theory. Practicum hours will vary based on the nature of the experience.

Components: PRA.

Grading: SUS.

Typically Offered: Fall, Spring, & Summer.

KIN 810. Master's Thesis. 1-6 Credit Hours.

The student working on his/her master's thesis enrolls for credit, in most departments not to exceed six, as determined by his/her advisor. Credit is not awarded until the thesis has been accepted.

Components: THI.

Grading: SUS.

Typically Offered: Fall, Spring, & Summer.

KIN 820. Research in Residence. 1 Credit Hour.

Used to establish research in residence for the thesis for the master's degree after the student has enrolled for the permissible cumulative total in ESS 710 (usually six credits). Credit not granted. May be regarded as full time residence.

Components: PRA.

Grading: GRD.

Typically Offered: Fall & Spring.

KIN 825. Continuous Registration--Master's Study. 1 Credit Hour.

To establish residence for non-thesis master's students who are preparing for major examinations. Credit not granted. Regarded as full time residence.

Components: THI.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 830. Pre-Candidacy to Dissertation Research. 1-10 Credit Hours.

Admission to doctoral program. Requires approval of advisor and department chair.

Components: THI.

Grading: SUS.

Typically Offered: Fall, Spring, & Summer.

KIN 835. Practicum. 1-2 Credit Hours.

The course presents graduate students with the theoretical and practical tools necessary for expanding their critical thinking and argumentative skills in order to present their scientific research results in an evaluative, logical and analytical manner. The course consists of weekly presentations of related literature, results, and findings on various Doctoral projects.

Components: PRA.

Grading: GRD.

Typically Offered: Fall, Spring, & Summer.

KIN 840. Post-Candidacy Dissertation Research. 1-12 Credit Hours.

For doctoral students working on their dissertations.

Components: THI.

Grading: SUS.

Typically Offered: Fall, Spring, & Summer.

KIN 850. Research in Residence. 1 Credit Hour.

Used to establish research in residence for the PH.D. Student, after the student has been enrolled for the permissible cumulative total in appropriate doctoral research. Credit not granted. May be regarded as full-time residence as determined by the Dean of the Graduate school.

Components: THI.

Grading: SUS.

Typically Offered: Fall, Spring, & Summer.