

# KINESIOLOGY AND SPORT SCIENCES

Dept. Code: KIN

## Programs

### Doctor of Philosophy (Ph.D.)

- Exercise Physiology

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

- Exercise Physiology (NOTE: accelerated tracks are offered in each of the following, pursuant to a BS degree in Exercise Physiology or Athletic Training from the University of Miami.)
  - Clinical and Applied Exercise Physiology
  - Nutrition for Health and Human Performance
  - Strength and Conditioning/Fitness Entrepreneurship
- Sport Administration
- Sports Medicine with a Concentration in Athletic Training (Note: an accelerated track is offered pursuant to a BS degree in Athletic Training from the University of Miami)

### Certificate in Kinesiology and Sport Sciences (Non-Degree, Graduate Program)

- Women's Health

## Masters Programs in Kinesiology and Sport Sciences (<http://sites.education.miami.edu/kin>)

- M.S.Ed. in Exercise Physiology
- M.S.Ed. in Exercise Physiology - Strength and Conditioning/Fitness Entrepreneurship Track
- M.S.Ed. in Nutrition for Health and Human Performance
- M.S.Ed. in Sports Medicine - Athletic Training Concentration
- M.S.Ed. in Sport Administration

## Doctoral Programs in Kinesiology and Sport Sciences (<http://sites.education.miami.edu/kin>)

- Ph.D. in Exercise Physiology

## Certificate in Kinesiology and Sport Sciences (<http://sites.education.miami.edu/kin>)

- Women's Health

### 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:** Spring.

**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:** Fall & Summer.

**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 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:** Fall.

**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:** Fall, Spring, & Summer.

**KIN 624. Athletic Training Techniques - Rehabilitation. 3 Credit Hours.**

This course will introduce theoretical concepts that must be understood in order to be able to rehabilitate a musculoskeletal injury. Regarding actual rehabilitation techniques, the emphasis will be on therapeutic exercise with only a brief introduction to therapeutic modalities.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**KIN 625. Advanced Kinesiology. 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 & Spring.

**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:** Spring.

**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:** Spring.

**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 & 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:** Fall.

**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.**

**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 course 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 lifestyle disease related to metabolism such as diabetes and obesity.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall & 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:** Fall.

**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 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 & Spring.

**KIN 670. Advanced Programming. 3 Credit Hours.**

Advanced 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, Spring, & Summer.

**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 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:** Spring.

**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 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:** Fall.

**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. Course is held at the University of Miami, 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 undergraduate Athletic Training majors and for the 5- year Sports Medicine with a Concentration in Athletic Training program students only.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**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 & 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:** Fall & Spring.

**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 715. Evidence-Based Sports Medicine. 3 Credit Hours.**

Introduction to clinical epidemiology and the evaluation of the efficacy of prevention, diagnostic, and treatment strategies or orthopedic injuries in sports medicine.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Spring.

**KIN 716. Advanced Rehabilitation Techniques in Sports Medicine. 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:** Spring.

**KIN 717. Advanced Evaluation Techniques in Sports Medicine. 3 Credit Hours.**

A lecture/lab course stressing clinical techniques involved in the use of posture evaluation, back evaluation, advanced orthopedic evaluation, and gait analysis, in conjunction with the scientific foundations of physiology and biomechanical principles associated with advanced evaluation techniques.

**Components:** LEC.

**Grading:** GRD.

**Typically Offered:** Fall.

**KIN 720. Practicum in Athletic Training. 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 as a clinical instructor.

**Components:** PRA.

**Grading:** GRD.

**Typically Offered:** Fall.

**KIN 721. Independent Study I. 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, and current issues of relevance to certified trainers and other professionals in the sports health care 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.

**Components:** THI.

**Grading:** GRD.

**Typically Offered:** Fall.

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

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

**Components:** PRA.

**Grading:** GRD.

**Typically Offered:** Spring.

**KIN 723. Independent Study 2. 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:** LAB.

**Grading:** GRD.

**Typically Offered:** Spring.

**KIN 724. Practicum in Athletic Training III. 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:** 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 Ecg. 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 ES S 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 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.

**KIN 784. Energetics of Obesity. 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 & 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 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.