



Nutrition for Health and Human Performance

Mission:

The Master's of Science degree track in Exercise Physiology entitled "Nutrition for Health and Human Performance" was designed to develop an interface between Exercise Physiology and Nutrition Science. It can be taken as a one year accelerated program for UM Exercise Physiology graduates or a 36 credit two-year program for students from outside the major. Only students with a BS degree in Exercise Physiology from the University of Miami are eligible for the Accelerated Masters Program.

Program Description:

The degree is rooted in a scientific background in the applied sciences, which integrates the nutritional components of wellness programming and key elements of nutrition for optimal performance. The curriculum represents the biological synergy between nutrition and exercise physiology so that students can take leadership roles in clinical-based wellness programs, exercise physiological and nutritional research, as well as tailoring the optimal, evidence-based nutritional practices for coaches and athletes.

Graduates of the program may practice independently, conduct nutritional, health and fitness education seminars, and/or tailor nutrition programs for:

- Medical Practices/Rehabilitation Centers
- Professional and amateur sport teams and organizations; coaches and athletes
- Diabetes treatment and cardiac rehabilitation centers
- Hospitality industry-hotels, spas, cruise ships, resorts
- Health Clubs/Spas/Gyms
- Summer camps, youth organizations
- Community Wellness Centers
- Corporate Wellness Programs
- Health Maintenance Organizations
- Weight Management Programs
- Media and Internet
- Culinary cooking schools
- The military and police forces
- Functional medicine research and practice
- Non-profit Health Centers
- Community and faith-based organizations

Upon graduation, students will be able to take the exam to become a Sports Nutritionist under the auspices of the International Society of Sports Nutrition (ISSN). Students who complete all the required professional supervised hours in clinical, community and food service will be prepared to sit for the exam to become a Licensed Dietitian/Nutritionist (LD/N) as approved by the Dietetics and Nutrition Practice Council in the State of Florida. Knowledge gained from completion of the track and acquired credentials will enable graduates to assess the dietary needs of individuals or groups of individuals and make appropriate nutritional recommendations.

NOTE: Eligibility to sit for the Florida Licensed Dietitian/Nutritionist (LD/N) governed by the DIVISION OF MEDICAL QUALITY ASSURANCE, DIETETICS AND NUTRITION PRACTICE COUNCIL, State of Florida. Eligibility requirements are subject to change. Current requirements include additional coursework that may be



completed at either the graduate or the undergraduate level; and hence, those courses are not included in this program. For further information, please contact the Program Director.

Graduation Requirements

Students must complete the one year, 30 credits or two year 36 credits M.S. track in Exercise Physiology entitled "Nutrition for Health and Human Performance. **Before graduation**, students must **1) pass a comprehensive examination that demonstrates mastery of the theory and application of nutrition and exercise physiology; or 2) complete a research project.**

Admission Procedures

Applicants must apply to and be accepted into the University of Miami Graduate School before they can be accepted into the Nutrition for Health and Human Performance track.

All new applicants should possess:

- A Bachelor of Science degree in the Applied Sciences (Kinesiology, Nutrition, Athletic Training or its equivalent); Health Sciences, (Nursing, Pre-physical Therapy or its equivalent); and/or Basic Sciences (Chemistry, Biochemistry, Biology or its equivalent).
- Evidence of completing the GRE's with a preferred combined score of at least 297.
- Three letters of recommendation from the school, work, or community/religious/volunteer internships.
- A statement of professional goals
- Official transcripts that provide evidence of prerequisites or the equivalent of undergraduate courses in:
 - 1) *At least 2 credits of Anatomy (KIN 233 or equivalent)*
 - 2) *At least 3 credits of Physiology (KIN 232 or equivalent)*
 - 3) *At least 3 credits of Biochemistry (KIN 221 or equivalent)*
 - 4) *At least 3 credits of Basic Nutrition (KIN 150 or KIN 202 or the equivalent)*
 - 5) *At least 3 credits of Exercise Physiology (KIN 321, 421, or the equivalent)*

*Applicants may take all pre-requisite courses at the University of Miami.

Eligibility to sit for the Florida Licensed Dietitian/Nutritionist (LD/N):

- Food Science (3 credits) and Quantity Food Service/Preparation (3 credits) may be taken elsewhere i.e., Miami Dade College or Florida International University for those interested in pursuing Florida licensure in Dietetics/Nutrition (LD/N).
- Successful completion of 900 hours of pre-professional planned and continuous supervised practice in dietetics or nutrition.

Curriculum

Requirements for the Nutrition for Health and Human Performance track in the graduate Exercise Physiology Master's of Science degree program.



Accelerated Masters Program – one year (All Courses 3 Credits)

<i>Mandatory Prerequisites</i>			
Number	Title	Semester	Instructor
KIN 645	Special Sport Populations	SPRING (Senior Year)	Smith
KIN 679	Principles of Exercise Assessment: Cardiovascular	FALL (Senior Year)	Jacobs

<i>Fall Semester</i>		
Number	Title	Instructor
KIN 638	Nutrition during the Lifecycle	Meyer
KIN 698	Professional Training & Counseling for Integrative Health	Meyer
KIN 648	Food Science and Management Principles	Meyer
KIN 784	Neurological Mechanisms of Metabolism and Weight Regulation	Witte

<i>Spring Semester</i>		
Number	Title	Instructor
KIN 634	Integrative & Functional Medicine	Yahia
KIN 639	Dietary Supplements and Human Performance	Tiozzo
KIN 650	Nutritional Biochemistry	Witte
KIN 655	Medical Nutrition Therapy	Rarback

- Eligible to UM Exercise Physiology Students Only. Eligibility includes a B or better in KIN 477/677 and KIN 365/669



Masters Program – two years (All Courses 3 Credits)

<i>Fall Semester Year 1</i>		
Number	Title	Instructor
KIN 638	Nutrition During the Lifecycle	Rarback
KIN 677	Advanced Nutrition for Health and Fitness	Smith
KIN 679	Principles of Exercise Assessment: Cardiovascular	Jacobs
<i>Spring Semester Year 1</i>		
Number	Title	Instructor
KIN 634	Integrative & Functional Nutrition	Meyer
KIN 645	Special Sport Populations	Smith
KIN 655	Medical Nutrition Therapy	Rarback
<i>Fall Semester Year 2</i>		
Number	Title	Instructor
KIN 698	Professional Training & Counseling for Integrative Health	Meyer
KIN 648 or KIN 600	Food Science and Management Principles or Supervised Practicum in Nutrition	Meyer Smith
KIN 784	Neurological Mechanisms of Metabolism and Weight Regulation	Witte
<i>Spring Semester Year 2</i>		
Number	Title	Instructor
KIN 639	Dietary Supplements and Human Performance	Tiozzo
KIN 650	Nutrition Biochemistry	Whitte
KIN 669 or KIN 600	Principles of Exercise Prescription or Supervised Practicum in Nutrition	Smith Smith

To be eligible to become a licensed nutritionist, students must take KIN 600. This includes a comprehensive supervised practical experience in nutrition for 900 hours over the course of two semesters (450 hours per semester) for a total of 6 credits.



Course Descriptions:

KIN 634 Integrative & Functional Nutrition

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 as treatment will also be discussed. **Number of credits: 3**

KIN 638 Nutrition During the Lifecycle

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. **Number of credits: 3**

KIN 639 Dietary Supplements and Human Performance

Critical evaluation of issues, concepts, and controversies about dietary supplements and nutraceutical ingredients. Emphasis on the importance of scientific investigations to evaluate their efficacy, safety, and value for health promotion, disease prevention, and treatment. **Number of Credits: 3**

KIN 645 Wellness Programming for Special Populations

A comprehensive exploration of the evidence-based guidelines for exercise in the prevention, treatment and amelioration of prevalent chronic disease conditions. **Number of credits: 3**

KIN 650 Nutritional Biochemistry

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 basis of fatigue. Both the instructor and the students will incorporate current peer-reviewed research in the field. **Number of credits 3-6**

KIN 655 Medical Nutrition Therapy

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. **Number of credits: 3**

KIN 669: Principles of Exercise Prescription

Students will learn various assessments of health and lifestyle, and discover how to most effectively prescribe exercise strategies to treat the diagnosed needs of an individual and optimize health and performance. Evidence based exercise programming recommendations are made to foster improved cardiovascular, musculoskeletal, and metabolic health using methods of prescribing exercise and advising subject with prudent dietary recommendations. **Number of Credits: 3**

KIN 677 Advanced Nutrition for Health and Fitness

A comprehensive review of current research on nutritional strategies to combat obesity and chronic disease and the latest guidelines for proper fueling and hydration for athletes in competition and trends regarding nutritional supplementation. **Number of credits: 3**

KIN 679 Principles of Exercise Assessment: Cardiovascular

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. **Number of Credits: 3**

KIN 698 Professional Training and Counseling for Integrative Health

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. **Number of credits: 3**

KIN 600 Supervised Practicum

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 & food service to meet licensure requirements. **Number of credits 3**

KIN 648 Food Science and Management Principles

A comprehensive course designed to provide knowledge of food chemistry, safety, service, and management. **Number of Credits: 3**