Nutrition and Exercise Physiology

Nutrition and Exercise Physiology
Department Chair: Christopher Hardin
204 Gwynn Hall Phone: (573) 882-4288
hardinc@missouri.edu
http://nep.missouri.edu

Human Physiology and Translational Sciences
Catherine Peterson
204 Gwynn Hall Phone: (573) 882-4288
petersonca@missouri.edu

Nutrition and Foods
Program Director: Nikki Raedeke
204 Gwynn Hall Phone: (573) 884-1500
raedekem@missouri.edu

Physical Activity, Nutrition and Human Performance
Director of Graduate Studies - Exercise Physiology
Jill Kanaley
204 D Gwynn Hall Phone: (573) 882-2519
kanaleyyj@missouri.edu

Director of Graduate Studies - Nutritional Sciences
Pamela Hinton
124 McKee Phone: (573) 882-4137
hintonp@missouri.edu

Advising Contact
Tammy Conrad
106 Gwynn Hall Phone: (573) 882-6424
conradt@missouri.edu

HES Student Services Office (Undergraduate)
Victoria Shahan
106 Gwynn Hall Phone: (573) 882-6424
hesstudentservices@missouri.edu
http://hes.missouri.edu

Scholarship Contact
HES Development Office
122 Gwynn Hall Phone: (573) 882-5142
hesdevelopment@missouri.edu

Faculty

Associate Professor S. Gable**, C. A. Peterson**, R. S. Rector**, V. Vieira-Potter**
Assistant Professor J. Limberg*, J. Padilla**
Assistant Research Professor Keller, K
Teaching Assistant Professor J. Bean*, L. Hudson*, M. Raedeke*, D. Smith
Joint Faculty M. J. Petris**, L. Pulakat**
Adjunct Faculty F. W. Booth*, J. A. Ibdah**, D. Lubahn**, F. Nassir**, S. Sayers
Adjunct Instructor J. B. Mann, T. Roberts, D. Showers, M. Stevens,
Extension Faculty J. Britt-Rankin*, C. Gabel, S. Mills-Gray


• Graduate Faculty Member - membership is required to teach graduate-level courses, chair master’s thesis committees, and serve on doctoral examination and dissertation committees.
•** Doctoral Faculty Member - membership is required to chair doctoral examination or dissertation committees. Graduate faculty membership is a prerequisite for Doctoral faculty membership.

Undergraduate

• BS in Nutrition and Exercise Physiology (http://catalog.missouri.edu/undergraduate/collegesofhumanenvironmentalsciences/nutritionandexercisephysiology/bs-nutrition-exercise-physiology)
  • with emphasis in Human Physiology and Translational Sciences (http://catalog.missouri.edu/undergraduate/collegesofhumanenvironmentalsciences/nutritionandexercisephysiology/bs-nutrition-exercise-physiology-emphasis-human-physiology-translational-sciences)
  • with emphasis in Nutrition and Foods (http://catalog.missouri.edu/undergraduate/collegesofhumanenvironmentalsciences/nutritionandexercisephysiology/bs-nutrition-exercise-physiology-emphasis-nutrition-foods)
  • with emphasis in Physical Activity, Nutrition and Human Performance (http://catalog.missouri.edu/undergraduate/collegesofhumanenvironmentalsciences/nutritionandexercisephysiology/bs-nutrition-exercise-physiology-emphasis-physical-act-nutrition-human-perform)

The mission of the Department of Nutrition and Exercise Physiology at the University of Missouri is to improve the health of Missourians and the larger population through research, teaching, and outreach related to nutrition and physical activity. We strive to be a diverse set of leaders, innovators, and educators who promote improved human health through our focus on nutrition and physical activity.

The department has a long tradition of education excellence and is the only department on campus that spans three colleges (School of Medicine, College of Human Environmental Sciences, and College of Agriculture, Food, and Natural Resources). This unique configuration poises and challenges us to be a model of interdisciplinary research and education on campus. We hold the honor of being the longest standing Coordinated Programs in Dietetics in the country and the only one in the state of Missouri; it also holds the designation of the first combined 5 year bachelor’s and master’s degree. We have recently been recognized as a partner with Exercise is Medicine® on Campus (EIM-OC), a global health initiative managed by the American College of Sports Medicine (ACSM).

Our faculty is nationally-recognized for their contributions to the fields of nutrition and exercise. Students in our programs are prepared for a wide variety of career paths in the healthcare/medical fields, corporate and commercial industries, government and non-profit sectors, and graduate programs. Typical areas our students are found in, are: Medicine (allopathic and osteopathic), Dentistry and Pharmacy, Physicians Assistants, Registered Dietitian Nutritionists, Exercise Physiologist, Physical Therapy, Occupational Therapy, cardiac rehab, wellness resource centers, and community health programs. Students who major in Nutrition and Exercise Physiology may choose from three emphasis areas:
• Human Physiology and Translational Sciences (previously Nutritional Sciences)
• Nutrition and Foods/Master’s in Dietetics
• Physical Activity, Nutrition and Human Performance (previously Nutrition and Fitness)

Students majoring in NEP are exposed to a strong science base including biology, chemistry, biochemistry, physics, anatomy, physiology, kinesiology, exercise science/exercise physiology, and human nutrition. In addition, they must take a set of core courses for each emphasis area and complete the required general education requirements for the University of Missouri. Specific GPA requirements and/or grades are required in each area. This information can be found on our department website: http://nep.missouri.edu

Students who want to explore the major can take
• NEP 1034 Introduction to Human Nutrition
• NEP 1340 Introduction to Exercise and Fitness
• NEP 1485 Career Exploration in Exercise Science
• NEP 2380 Diet Therapy for Health Professionals.

Two minors are available:
• Nutritional Sciences (http://ns.missouri.edu/minors.html) (intended for students majoring in food science, biological sciences, biochemistry, health sciences, or related fields)
• Wellness (http://ns.missouri.edu/minors.html) (intended for both non-science and science students interested in coursework focused on empowering them to make informed decisions related to lifelong personal nutrition and exercise choices)

Graduate
• MS in Nutrition and Exercise Physiology (http://catalog.missouri.edu/undergraduategraduate/collegeofhumanenvironmentalsciences/nutritionandexercisephysiology/ms-nutritionandexercisephysiology)
  • with emphasis in Exercise Physiology (http://catalog.missouri.edu/undergraduategraduate/collegeofhumanenvironmentalsciences/nutritionandexercisephysiology/ms-nutritionandexercisephysiologyemphasisinnutritionandexercisephysiology)
  • with emphasis in Nutritional Sciences (http://catalog.missouri.edu/undergraduategraduate/collegeofhumanenvironmentalsciences/nutritionandexercisephysiology/ms-nutritionandexercisephysiologyemphasisinnutritionandexercisephysiology)

NEP 1001: Topics in Nutritional Sciences
Supervised study in specialized topic of nutritional sciences.
Credit Hour: 1-99

NEP 1034: Introduction to Human Nutrition
Basic nutrition principles, including: nutrient functions, food sources, and needs; healthy eating tools; energy balance and weight management; nutrition and fitness; nutrition through the life cycle; food safety; and consumer topics. No credit if taken after NEP 2340.
Credit Hours: 3
Prerequisites: consent required

NEP 1034H: Introduction to Human Nutrition - Honors
Basic nutrition principles, including: nutrient functions, food sources, and needs; healthy eating tools; energy balance and weight management; nutrition and fitness; nutrition through the life cycle; food safety; and consumer topics. No credit if taken after NEP 2340.
Credit Hours: 3
Prerequisites: Honors eligibility required

NEP 1310: Food and Cultures of the World
Trans-disciplinary approach to nutrition, considering anthropological, physiological, geographical, socioeconomic and psychological elements in world nutrition. These ideas will be explored in the context of cuisines and cultures that are found in the US, but originate elsewhere.
Credit Hours: 3

NEP 1310W: Food and Cultures of the World - Writing Intensive
Trans-disciplinary approach to nutrition, considering anthropological, physiological, geographical, socioeconomic and psychological elements in world nutrition. These ideas will be explored in the context of cuisines and cultures that are found in the US, but originate elsewhere.
Credit Hours: 3

NEP 1340: Introduction to Exercise and Fitness
Provides students with practical information about exercise and physical fitness. After taking this class, students will be prepared to be physically active, understand the "Do's and Don'ts" of exercise, and know how to live a healthy way of life. As part of the course, students will assess their current level of activity/fitness, develop a plan for improvement, and put that plan into action.
Credit Hours: 3

NEP 1485: Career Exploration in Exercise Science
Undergraduate course designed to provide an overview of the components important to developing an understanding and appreciation of all aspects of Exercise Science. Graded on A-F basis only.
Credit Hour: 1

NEP 1995: Nutritional Food Science
The study of components of food systems and how they are affected by processing, preservation, preparation and by techniques that improve taste, texture, flavor, appearance and nutrient retention. This course is 100% online and includes a virtual lab. Graded on A-F basis only.
Credit Hours: 3

NEP 2085: Problems in Nutritional Sciences
Supervised study in a specialized phase of nutritional sciences.
Credit Hour: 1-99
Prerequisites: consent required

NEP 2222: Landscape of Obesity
The societal, economic, medical, behavioral, and psychological causes and results of the obesity epidemic and potential modes of treatment and prevention. Lecture course. Graded on A-F basis only.
Credit Hours: 3
Prerequisites: sophomore standing required
NEP 2340: Human Nutrition I
Basic concepts of normal nutrition related to physiological/chemical processes; changing nutrient needs during human life cycle, emphasis on adult; some social/psychological influences on dietary habits.

Credit Hours: 3
Prerequisites: CHEM 2030 or CHEM 2100 or CHEM 2160H

NEP 2340H: Human Nutrition I - Honors
Basic concepts of normal nutrition related to physiological/chemical processes; changing nutrient needs during human life cycle, emphasis on adult; some social/psychological influences on dietary habits. Includes weekly discussion on controversial issues. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: CHEM 2030 or CHEM 2100 or CHEM 2160H. Honors eligibility required

NEP 2380: Diet Therapy for Health Professionals
Principles underlying normal nutrition and diet for health and disease. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: sophomore standing

NEP 2450: Nutrition Throughout the Life Span
Nutritional requirements, challenges, community nutrition programs, and eating patterns throughout the life span with emphasis on health promotion and disease prevention; Role of beliefs, culture, socio-psychological influences, and economic resources in food selection and nutrition/health status. Lecture/discussion course.

Credit Hours: 3
Prerequisites: NEP 1034 or NEP 2340 or NEP 2380 or equivalent

NEP 2460: Eating Disorders
Definition, etiology, treatment, and research related to eating disorders: anorexia nervosa, bulimia nervosa and binge eating disorder/obesity. Graded on A-F basis only.

Credit Hours: 2
Recommended: NEP 1034 or NEP 2340 or NEP 2380 or NEP 4360

NEP 3001: Topics in Nutritional Science
Instruction in specific subject matter areas in the field of food science and nutrition.

Credit Hour: 1-99

NEP 3085: Problems in Nutritional Sciences
Advanced problems in a selected field of food science and nutrition.

Credit Hour: 1-99
Prerequisites: consent required

NEP 3085W: Problems in Nutritional Sciences - Writing Intensive
Advanced problems in a selected field of food science and nutrition.

Credit Hour: 1-99
Prerequisites: consent required

NEP 3131: International Nutrition and Exercise Physiology
Immersion into and examination of selected cultures - beliefs, practices, policies and social structures around food, physical activity and health. Graded on A-F basis only.

Credit Hour: 0-6
Prerequisites: instructor's consent

NEP 3290: Food Service I: Supervised Practice Experience
A practicum designed to expose the student to concepts of quantity food production, evaluation of products and resources, personnel administration and application of food microbiological principles. 4 hours of supervised practice per week.

Credit Hour: 1
Prerequisites: concurrent enrollment in NEP 3280; open to students enrolled in the Coordinated Program in Dietetics only

NEP 3360: Nutritional Assessment Supervised Practice Experience
Supervised practice to develop skills in screening individuals for nutrition risk; use of dietary, anthropometric, laboratory, clinical and sociocultural criteria to assess nutritional status of individuals. 8 hours of supervised practice per week. Enrollment limited to students who have taken or are concurrently enrolled in NEP 4360; Open to Nutrition and Food majors in the Coordinated Program in Dietetics only.

Credit Hours: 2
Prerequisites: Departmental consent required

NEP 3370: Nutrition Therapy I: Supervised Practice Experience
Practice and application of principles of nutrition care for selected disease states. 12 hours of supervised practice per week.

Credit Hours: 3
Prerequisites: Concurrently enrolled in NEP 4370; Open to students enrolled in the Coordinated Program in Dietetics only

NEP 3390: Teaching and Counseling Techniques in Nutrition
Principles and theories of learning; Resources, methods and techniques for teaching food/nutrition principles and dietary guidelines; Group dynamics and facilitation; Introduction to counseling theories and methods used in nutrition care of individuals. Lecture course.

Credit Hours: 2
Prerequisites: PSYCH 1000 and NEP 2340

NEP 3400: Teaching & Counseling Techniques in Nutr. Supervised Practice Exp
Skill development and practice in counseling individuals for health promotion and disease prevention and the teaching of food and nutrition topics to groups. 4 hours of supervised practice per week.

Credit Hour: 1
Prerequisites: concurrent enrollment in NEP 3390; Open to students enrolled in the Coordinated program in Dietetics only

NEP 3450: Activity Throughout the Lifespan
Course is designed to develop knowledge and understanding of the value of physical activity across the lifespan. The physiology, psychology, and guidelines of exercise, along with the integration of nutrition with physical
activity, will be explored from pregnancy through early development and into old age. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: NEP 1340; May be restricted to Nutrition and Fitness majors only during early registration

NEP 3550: Corporate, Community, and Personal Fitness
Course is designed to develop the knowledge and understanding of exercise application for corporate wellness, community programs, and personal fitness. Topics covered will include exercise prescription, behavioral and motivational theories, legality, ethics and professionalism, and how these topics relate to corporate, community, and personal fitness clients. Students should be able to understand the various needs of these populations and how to apply the science of physical activity, nutrition, and human performance to each.

Credit Hours: 3
Prerequisites: NEP 2340 or NEP 2380 and NEP 3450

NEP 3590: Community Nutrition Supervised Practice Experience
A practicum which explores and applies the concepts and techniques of nutrition programming in a community setting. 4 hours of supervised practice per week. Enrollment limited to students who have taken NEP 4590. Open to students enrolled in the Coordinated Program in Dietetics only.

Credit Hour: 1
Prerequisites: Departmental consent required

NEP 3800: Prevention and Care of Athletic Injury
Theory, practice in prevention, emergency care, rehabilitation of injuries encountered in vigorous games.

Credit Hours: 3
Prerequisites: PTH_AS 2201. Restricted from Pre-Nutrition and Fitness majors

NEP 3810: Advanced Athletic Training
Advanced study in areas of prevention, evaluation, care, and treatment and rehabilitation of athletic injuries at high school and college level. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: NEP 3800 and instructor's consent

NEP 3850: Physiology of Exercise
This is the basic course in exercise physiology, which applies specific principles and concepts of human physiology to the physical work situation. This course will look at ventilation, oxygen transport, cardiovascular physiology, muscle physiology and the metabolic systems; and emphasis will be given to the adaptations to exercise and training. This course will first explore basic exercise physiology and then will explore many of the applied issues pertaining to performance and health. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: PTH_AS 2201; MPP 3202 or BIO_SC 3700. Restricted from Pre-Nutritional and Fitness students

NEP 3850W: Physiology of Exercise - Writing Intensive
This is the basic course in exercise physiology, which applies specific principles and concepts of human physiology to the physical work situation. This course will look at ventilation, oxygen transport, cardiovascular physiology, muscle physiology and the metabolic systems; and emphasis will be given to the adaptations to exercise and training. This course will first explore basic exercise physiology and then will explore many of the applied issues pertaining to performance and health. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: PTH_AS 2201; MPP 3202 or BIO_SC 3700. Restricted from Pre-Nutritional and Fitness students

NEP 4001: Topics in Nutrition and Exercise Physiology
Instruction in specific subject matter areas in the field of nutrition science and exercise physiology.

Credit Hour: 1-3

NEP 4200: Sports Performance and Conditioning
(cross-leveled with NEP 7200). Course utilizes scientific theory and applied instruction to teach procedures, techniques, and modalities used to improve physical sports performance. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: Physiology and Anatomy, Kinesiology; junior or senior standing required

NEP 4280: Food Service Management
(cross-leveled with NEP 7280). Issues related to marketing and financial control in the foodservice sector. Lecture course. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: MANGMT 3000 or equivalent

NEP 4290: Food Serv. II: Adv. Food Service Manage. Supervised Practice Exp
A practicum tailored to apply marketing and budgetary principles in the foodservice industry. 8 hours of supervised practice per week. Enrollment limited to students with concurrent enrollment in NEP 4280. Open to students admitted to the Dietetics program.

Credit Hours: 2
Prerequisites: Departmental consent required

NEP 4340: Human Nutrition II Lecture
(cross-leveled with NEP 7340). Physiological and biochemical aspects of nutrition; functions of methods of measuring nutritional status; various aspects of applied nutrition. Continuation of NEP 2340.

Credit Hours: 3
Prerequisites: NEP 2340 and either BIOCHM 3630, BIOCHM 4270 or BIOCHM 4272. Restricted from Pre-Nutrition and Fitness majors

NEP 4360: Nutritional Assessment
(cross-leveled with NEP 7360). Introduction to the nutrition assessment process. The identification of dietary, anthropometric, laboratory, clinical and sociocultural parameters used to assess nutritional status of individuals. Lecture course.
Credit Hours: 3  
Prerequisites: PSYCH 1000, NEP 2340. Restricted from Pre-Nutrition and Fitness Majors

NEP 4370: Nutrition Therapy I  
(cross-leveled with NEP 7370). In-depth study of physiological/biochemical changes in selected disease states (cardiovascular disease, rehabilitation, diabetes and cancer); development of principles underlying nutrition therapy. Lecture course.

Credit Hours: 3  
Prerequisites: NEP 4360

NEP 4380: Nutrition Therapy II  
(cross-leveled with NEP 7380). Evaluation, design and monitoring of the nutrition care of complex health disorders such as advanced gastrointestinal complications, major organ transplant, and metabolic disorders with an emphasis on nutrition support. Graded on A-F basis only.

Credit Hours: 3  
Prerequisites: NEP 4370

NEP 4381: Nutrition Therapy II: Supervised Practice Experience  
Practice in the nutrition care of complex health disorders with emphasis on nutrition support. 16 hours of supervised practice per week. Enrollment limited to students with concurrent enrollment in NEP 4380. Open to students admitted to Dietetics program only.

Credit Hours: 4  
Prerequisites: Departmental consent required

NEP 4385: Professional Development I  
(cross-leveled with NEP 7385). Course designed to provide career exploration and assessment and prepare students for the final rotations in the coordinated program in dietetics. Graded on A-F basis only. Enrollment limited to students enrolled in the coordinated program in Dietetics.

Credit Hour: 1  
Prerequisites: Departmental consent required

NEP 4390: Issues in Dietetic Practice  
Lectures and discussions focus on issues and trends in dietetics. Discussions are used to encourage the development of skills and attitudes which foster life-long professional learning. Lecture/discussion course.

Credit Hour: 1  
Prerequisites: NEP 4950 and NEP 4380; or instructor's consent

NEP 4480: Pediatric Exercise Physiology  
Course is designed to develop knowledge and understanding of the value of physical activity in the pediatric population. The physiology, psychology, and guidelines of exercise will be explored in the developmental process of youth. Graded on A-F basis only.

Credit Hours: 3  
Prerequisites: NEP 1340, NEP 3450 and NEP 3850 or NEP 4850

NEP 4590: Community Nutrition  
(cross-leveled with NEP 7590). Public health nutrition and chronic disease prevention, food security, nutrition programs and food access, public policy, sustainable agriculture and food production systems, cultural food practices, needs assessment. Graded on A-F basis only.

Credit Hours: 3  
Prerequisites: NEP 2340 or NEP 2380. Restricted from Pre-Nutrition and Fitness majors

NEP 4750: Cardiopulmonary Rehabilitation - A Multifactorial Process  
A guide to the practice of Cardiopulmonary Rehab in the 21st Century. We will explore the interdisciplinary aspects of a successful approach to the delivery of cardiac and pulmonary rehabilitation throughout a broad spectrum of patients. Graded on A-F basis only.

Credit Hours: 3  
Prerequisites: NEP 1340, NEP 3450 and NEP 3850 or NEP 4850

NEP 4860: Exercise Prescription  
Course investigates theory and methods of testing and prescribing exercise for circulatory fitness, body composition, muscle strength, joint and muscle ranges in motion, and posture. Graded on A-F basis only.

Credit Hours: 3  
Prerequisites: MPP 3202 or MPP 3333 and MPP 3337, PTH_AS 2201 and NEP 4850 or concurrent. Restricted from Pre-Nutrition and Fitness majors

NEP 4940: Internship in Nutritional Science and Exercise Physiology  
Combines study, observation and employment in an area of exercise physiology and/or nutrition. Written reports, faculty evaluation.

Credit Hour: 1-6  
Prerequisites: instructor's consent required

NEP 4950: Capstone: Research in Nutritional Sciences  
Introduction to research, including the types of basic, clinical, and outcomes-based research. Defining research problems related to nutrition and exercise sciences, developing hypotheses, reviewing scientific literature, writing research protocols, analyzing data. Lecture course.

Credit Hours: 2  
Prerequisites: NEP 2340 and either STAT 2500 or ESC_PS 4170 and senior standing. Restricted from Pre-Nutrition and Fitness majors

NEP 4951: Nutrition Research Communication  
Analyze and interpret data; present results of a research study in manuscript and seminar presentation formats. Emphasis on effective communication of nutrition research to scientific and lay audiences. Graded on A-F basis only.

Credit Hour: 1  
Prerequisites: NEP 4950 or instructor's consent

NEP 4951W: Nutrition Research Communication - Writing Intensive  
Analyze and interpret data; present results of a research study in manuscript and seminar presentation formats. Emphasis on effective communication of nutrition research to scientific and lay audiences. Graded on A-F basis only.

Credit Hour: 1
### Prerequisites
- NEP 4950 or instructor’s consent

### NEP 4970: Nutrition Capstone: Sports Nutrition
Integration of research literature with knowledge from previous coursework, emphasis on sports nutrition research, nutrient requirements of athletes, critical evaluation of ergogenic aids. Graded on A-F basis only.

**Credit Hours:** 2

**Prerequisites:** NEP 2340, and either MPP 3202 or BIO_SC 3700, and either STAT 1200, STAT 1300, STAT 1400 or ESC_PS 4170; Senior Standing, open to Nutrition and Fitness majors only

---

### NEP 4975: Practice of Dietetics Supervised Practice Experience
Supervised practice in providing quality nutrition services in clinical, community, management and specialty settings. 40 hours of supervised practice per week.

**Credit Hours:** 10

**Prerequisites:** NEP 3590, NEP 4280, NEP 4290, NEP 4380, NEP 4381, and NEP 4590; Open to students admitted to the Dietetics Program only

---

### NEP 7001: Topics in Nutritional Science and Exercise Physiology
Instruction in specific subject matter areas in the field of food science and nutrition.

**Credit Hour:** 1-99

---

### NEP 7085: Problems in Nutritional Sciences and Exercise Physiology
Advanced problems in a selected field of food science and nutrition.

**Credit Hour:** 1-99

---

### NEP 7200: Sports Performance and Conditioning
(cross-leveled with NEP 4200). Course utilizes scientific theory and applied instruction to teach procedures, techniques, and modalities used to improve physical sports performance. Graded on A-F basis only.

**Credit Hours:** 3

**Prerequisites:** Physiology and Anatomy, Kinesiology; junior/senior standing

---

### NEP 7340: Human Nutrition II Lecture
(cross-leveled with NEP 4340). Physiological and biochemical aspects of nutrition; functions of methods of measuring nutritional status; various aspects of applied nutrition. Continuation of NEP 2340.

**Credit Hours:** 3

**Prerequisites:** NEP 2340, Biochemistry or instructor’s consent

---

### NEP 7360: Nutritional Assessment
(cross-leveled with NEP 4360). Introduction to the nutrition assessment process. The identification of dietary, anthropometric, laboratory, clinical and sociocultural parameters used to assess nutritional status of individuals. Lecture course.

**Credit Hours:** 3

**Prerequisites:** PSYCH 1000, NEP 2340

---

### NEP 7370: Nutritional Therapy I
(cross-leveled with NEP 4370). In-depth study of physiological/biochemical changes in selected disease states (cardiovascular disease, rehabilitation, diabetes and cancer); development of principles underlying nutrition therapy. Lecture course.

**Credit Hours:** 3

**Prerequisites:** NEP 4360

---

### NEP 7380: Nutrition Therapy II
(cross-leveled with NEP 4380). Evaluation, design and monitoring of the nutrition care of complex health disorders such as advanced gastrointestinal complications, major organ transplant, and metabolic disorders with an emphasis on nutrition support. Graded on A-F basis only.

**Credit Hours:** 3

**Prerequisites:** NEP 4370

---

### NEP 7381: Nutrition Therapy II: Supervised Practice Experience
Practice in the nutrition care of complex health disorders with emphasis on nutrition support. 16 hours of supervised practice per week. Enrollment limited to students with concurrent enrollment in NEP 7380. Open to students admitted to Dietetics program only. Graded A-F only.

**Credit Hours:** 4

**Prerequisites:** NEP 4370 or NEP 7370

---

### NEP 7385: Professional Development I
(cross-leveled with NEP 4385). Course designed to provide career exploration and assessment and prepare students for the final rotations in the coordinated program in dietetics.

**Credit Hour:** 1

**Corequisites:** Concurrent enrollment in NEP 7380, NEP 7381

---

### NEP 7500: Research in Nutritional Sciences and Exercise Physiology
Original investigations, usually in connection with one of the research projects of Agricultural Experiment Station. Written report required.

**Credit Hour:** 1-99

---

### NEP 7590: Community Nutrition
(cross-leveled with NEP 4590). Public health nutrition and chronic disease prevention, food security, nutrition programs and food access, public policy, sustainable agriculture and food production systems, cultural food practices, needs assessment. Graded on A-F basis only.

**Credit Hours:** 3

**Prerequisites:** Nutrition course or instructor’s consent

---

### NEP 7970: Sports Nutrition
(cross-leveled with NEP 4970). Integration of research literature with knowledge from previous coursework, emphasis on sports nutrition research, nutrient requirements of athletes, critical evaluation of ergogenic aids. Graded on A-F basis only.

**Credit Hours:** 2

**Prerequisites:** Statistics, NEP 2340, Physiology; instructor’s consent. Not open to Pre-Nutrition and Fitness students
NEP 8001: Topics in Nutritional Sciences and Exercise Physiology
Instruction in specific subject matter areas in the field of nutrition science and exercise physiology. May be repeated for credit. Graded on A-F basis only.
Credit Hour: 1-3

NEP 8030: Etiology of Obesity
This course is designed to provide an understanding of the cause and implications of human obesity. General topic areas covered will include: methodologies of obesity research, physiology of obesity, behavioral and environmental factors influencing obesity, obesity and disease, therapeutic approaches to obesity, and emerging topics in obesity. The structure of this course will be mixture of lectures and interactive discussions/reviews of primary research articles in these areas. Students will be expected to present and critically evaluate research papers relevant to the field of obesity.
Credit Hours: 3
Prerequisites: NEP 7340

NEP 8085: Problems in Nutritional Sciences and Exercise Physiology
Individual studies include a minor research problems.
Credit Hour: 1-99

NEP 8087: Masters Seminar in Nutritional Sciences and Exercise Physiology
Seminar features expert presentations of current research and issue-based applications that represent the breadth of nutritional sciences and exercise physiology. Graded on S/U basis only.
Credit Hour: 1

NEP 8090: Masters Research in Nutritional Sciences and Exercise Physiology
Original investigation of advanced nature, leading to thesis. Graded on a S/U basis only.
Credit Hour: 1-99

NEP 8095: Internship in Exercise Physiology
The internship experience will take place in professionally supervised settings, and allow students to complement their academic work with employment-related experiences. Organizations, companies and business that offer internships can be selected to match with student interests. This experience will offer the student meaningful learning opportunities that will complement their career goals.
Credit Hours: 4
Prerequisites: must be accepted into the Exercise Physiology graduate program, 3.0 GPA or higher, completed 50% of the coursework at the masters level

NEP 8125: Preventive and Therapeutic Exercise Physiology
Graduate level course designed to prepare Masters Candidates for a career in Clinical Exercise Physiology. Students will be provided opportunities to develop knowledge, skills, and ability to work with individuals with diverse range of chronic diseases and disabilities. Graded on A-F basis only.
Credit Hour: 3

NEP 8310: Nutritional Biochemistry of Lipids
(same as AN_SCI 8431 and NUTRIT 8310). Current concepts in the nutritional regulation of lipid metabolism. Emphasis on integrating information and interpreting current research data.
Credit Hours: 3
Prerequisites: BIOCHM 4270 and BIOCHM 4272

NEP 8340: Nutrition in Human Health
(same as NUTRIT 8340). Nutritional aspects of maintaining human health with emphasis on micronutrients, basis for dietary recommendations, and nutrition public health initiatives. Graded on A-F basis only.
Credit Hours: 3
Prerequisites: BIOCHM 4270 and BIOCHM 4272; 4000-level nutrition course; graduate standing or current enrollment in the Masters in Dietetics Program

NEP 8850: Advanced Exercise Physiology
Lectures, laboratory experiences, and readings in current literature to provide reasonable depth in selected areas of physiology as applied to activity and health.
Credit Hours: 3
Prerequisites: NEP 4850 and Chemistry

NEP 8860: Exercise Endocrinology
The nervous system and the endocrine system integrate to regulate the functions of the body. These systems are tightly linked and frequently one system cannot be considered without consideration of the other system. This course integrates endocrine physiology and the impact that exercise has on the endocrine response. This class will focus on the glands producing hormones, the target organs, mechanisms and how both acute and chronic exercise impacts hormone action. This is an advanced exercise physiology course designed for graduate students in Exercise Physiology or the life sciences and will consist of lectures, readings and discussion. Graded on A-F basis only.
Credit Hours: 3
Prerequisites: NEP 8850, V_BSCI 8420 or graduate standing in the Life Sciences

NEP 8870: Exercise Metabolism
Review of major metabolic pathways and the effect of exercise upon them. Special topics include indirect calorimetry, EPOC, anaerobic threshold; weight control, ergogenic aids, and exercise nutrition.
Credit Hours: 3
Prerequisites: NEP 4850 and Chemistry

NEP 9087: Doctorate Seminar in Nutritional Sciences and Exercise Physiology
Seminar features expert presentations of current research and issue-based topics that represent the breadth of nutritional sciences and exercise physiology. Graded on S/U basis only.
Credit Hour: 1
NEP 9090: Doctorate Research in Nutritional Sciences and Exercise Physiology
Original investigation of advanced nature, leading to a dissertation.
Graded on a S/U basis only.

Credit Hour: 1-99