Mizzou
University of Missouri

Nutrition and Exercise Physiology (NEP)

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

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 1111: Personal Health and Wellness
Provides students with practical information about the interaction of diet and physical activity on health/wellness. After taking this class, students will be able to understand how positive and negative health behaviors impact on their personal health/wellness and know how to live a healthy way of life. As part of the course, students will reflect on their current lifestyle and develop strategies to incorporate healthier behaviors into their every day. Topics will be related to healthy living and prevention of health-related complications.

Credit Hours: 3

NEP 1210: The Ethics of Eating
This introductory course for non-majors provides a general overview of the scope of ethical issues we should consider surrounding the food we eat. We explore the intersection of the science and societal issues regarding what we eat. We will discuss what we choose to eat, how related issues such as agricultural practices and food transportation impact those choices with an emphasis on the intersection of the science and current societal considerations.

Credit Hours: 3

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 1330: Introduction to Exercise and Fitness Laboratory
The main purpose of this course is to introduce students to a variety of exercises used for improving health, wellness, and fitness, especially musculoskeletal fitness. A secondary goal is to discuss with students the functional anatomy behind different body movements, as well as various theories of exercise training and programming. Graded on A-F basis only.

Credit Hours: 2
Prerequisites or Corequisites: NEP 1340
Prerequisites: Open to NEP majors only

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
Prerequisites: Some sections may be restricted to NEP students only

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NEP 1475: Career Exploration in Dietetics
In this course, we will define the professional roles and responsibilities of practitioners in nutrition, dietetics, and wellness. We will also explore career pathways, professional development, and conduct. Finally, we will identify strategies to achieve a career in the field of nutrition and dietetics. Graded on A-F basis only.

Credit Hour: 1

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 2010: Everyday Nutrition: Principles of Fresh, Healthy, and Sustainable Cooking
This course includes basic nutrition principles focused on dietary needs for optimal human health. This course provides an application of those nutrition fundamentals into meal planning and preparation, with a focus on basic cooking principles necessary to create healthy, flavorful, and affordable meals. Successful completion of this course will involve the preparation of low-cost and sustainably-focused recipes, and thus requires an additional expense of purchasing ingredients. Graded on A-F basis only.

Credit Hours: 3
Recommended: NEP 1034 or NEP 2380

NEP 2085: Problems in Nutritional Sciences
Supervised study in a specialized phase of nutritional sciences.

Credit Hour: 1-99
Prerequisites: consent required

NEP 2140: Exercise Practicum I
(same as FPM 2140). This course provides an overview of the necessary skills and techniques for successful implementation of exercise programing. This course will help prepare the student for completion of the PANHP degree and prepare for completion of the ACSM EP-C certification.

Credit Hours: 3
Prerequisites or Corequisites: NEP 1340 and NEP 1485

NEP 2222: Socio-Cultural Perspectives on Obesity
This course focuses on the complex, multi-faceted, "landscape of obesity". Throughout the semester, students will learn about the financial and human capital costs of being overweight, the underlying causes of its rapid development, and promising approaches to treatment and prevention. The course is organized around these three broad themes: 1) The complex interaction of behavioral, environmental and biological factors in in the development of obesity; 2) the role of lifestyle behaviors, including diet, physical activity, sleep, and time spent outdoors, in achieving and maintaining health; and 3) socio-cultural approaches in the prevention of obesity. All combined, the course includes a comprehensive exploration of the behavioral and social components of one of the leading public health challenges of our time. 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. Graded on A-F basis only.

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

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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. Graded on A-F basis only.

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

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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: 3

Recommended: NEP 1034 or NEP 2380

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 3290: Food Service I: Field Work/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. I lecture class and 4 hours of supervised practice per week. Graded on A-F basis only.

Credit Hour: 1
Prerequisites: Some sections may be restricted to either Nutrition and Exercise Physiology or Hospitality Management majors

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NEP 3360: Nutritional Assessment Lab
Lab 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 and Human Physiology and Translational Sciences.

Credit Hours: 3
Prerequisites or Corequisites: NEP 4360
Prerequisites: Open only to students accepted into the Coordinated Program in Nutrition and Foods/Dietetics and Human Physiology and Translational Science. Departmental consent required

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NEP 3370: Medical 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. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: Open to students accepted into the Coordinated Program in Nutrition and Foods/Dietetics only. Department consent required

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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. Graded on A-F basis only.

Credit Hours: 2
Prerequisites: C or better in 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. Graded on A-F basis only.

Credit Hour: 1
Prerequisites: Open only to students accepted into the Coordinated Program in Nutrition and Foods/Dietetics. Department consent required

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NEP 3420: Role of Inactivity in Chronic Diseases
This course is designed to provide an understanding of selected topics related to physical inactivity and chronic diseases and conditions including obesity, type 2 diabetes, hypertension, vascular dysfunction, atherosclerosis, heart failure, and dementia. Specifically, this course will focus on examining the scientific evidence supporting the role of sedentarism as a causal factor in the development of chronic diseases and the role of physical activity as a mitigating factor. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: NEP 1340 and MPP 3202 or BIO_SC 3700 - NEP majors must receive a C or better in the pre-reqs

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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 - NEP majors must have a C or higher; May be restricted to Nutrition and Fitness/ Physical Activity, Nutrition and Human Performance majors only during early registration

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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. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: NEP 1340 and NEP 2340 or NEP 2380. NEP majors must have a C or better in these courses to enroll

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

Credit Hour: 1
Prerequisites or Corequisites: NEP 4590
Prerequisites: Open to Nutrition and Foods students - those accepted into the Coordinated Program in Dietetics and others in the program. Departmental consent required

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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

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NEP 3820: Kinesiology
Study of the relationships of physical laws, mechanical principles, and structural parameters to the analysis of human motion, with emphasis on application to daily activities, sport/athletic performance, and developmental exercise.

Credit Hours: 3
Prerequisites: PTH_AS 2201

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

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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. C- or better in ENGLSH 1000

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 4020: Monogastric Nutrition
(same as AN_SCI 4312; cross-leveled with AN_SCI 7312, NEP 7020). This course delves into the fundamentals and applications of monogastric animal nutrition, emphasizing applied and technical information for nutrition sciences. We will discuss specific nutrition considerations for pigs, poultry, equine, and other monogastric animals. Students will examine the nutrient and energy requirements of monogastric species, the feedstuffs used in their nutrition, and the integration of these principles with feed formulation strategies and technical application. Students will participate in a research-intensive team-based learning community. This is a critical thinking based course. Graded on A-F basis only.

Credit Hours: 4
Prerequisites: AN_SCI 3242 or instructor's consent required

NEP 4088: Advanced Seminar in Dietetics
Examines current applications in nutrition and dietetics, using journal articles and position and practice papers. Graded on A-F basis only.

Credit Hour: 1-5
Prerequisites: Department consent required. Must be enrolled in Coordinated Program in Dietetics

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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: PTH_AS 2201, MPP 3202 or BIO_SC 3700 - NEP majors must have a C or better in these courses. Junior or senior standing required

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

Credit Hours: 3
Corequisites: 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. Graded on A-F basis only.

Credit Hours: 2
Prerequisites: Open to students accepted into the Coordinated Program in Dietetics only. Departmental consent required

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NEP 4330: Human Nutrition II Laboratory
(cross-leveled with NEP 7330). A techniques course in nutrition, usually taken concurrently with NEP 4340.

Credit Hours: 2
Prerequisites: NEP 2340, Biochemistry and instructor's consent

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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. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: NEP 2340 - NEP majors must have a C or better to enroll and either BIOCHM 3630, BIOCHM 4270 or BIOCHM 4272

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. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: C or better in NEP 2340

NEP 4370: Medical 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. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: C or better in NEP 4360

NEP 4380: Medical 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: C or better in NEP 4370

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 4400: Pathophysiology of Diseases Affecting Metabolic Health
(cross-leveled with NEP 7400). There is not a universally-accepted definition of "metabolic health", however, a similar combination of assessment criteria including measurements of body weight/composition, blood pressure, lipid profile, insulin sensitivity/resistance, and systemic inflammation are frequently used for clinical and research purposes. This course will explore the disordered physiological processes in diseases affecting these metabolic health parameters. Focus will be on the leading causes of death in the US, cardiovascular disease, stroke and cancer, as well as the related diseases of diabetes and osteoporosis, all of which are diseases of enormous burden to the US healthcare system. The common theme of modifiable factors (diet, exercise, sleep) to prevent and manage these chronic conditions will be woven throughout the course.

This course may be particularly useful for students seeking careers in health care and prevention. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: MPP 3202 or BIO_SC 3700 and BIOCHM 3630 or BIOCHM 4270
Recommended: NEP 2340 and PTH_AS 2201

NEP 4400H: Pathophysiology of Diseases Affecting Metabolic Health - Honors
(cross-leveled with NEP 7400). There is not a universally-accepted definition of "metabolic health", however, a similar combination of assessment criteria including measurements of body weight/composition, blood pressure, lipid profile, insulin sensitivity/resistance, and systemic inflammation are frequently used for clinical and research purposes. This course will explore the disordered physiological processes in diseases affecting these metabolic health parameters. Focus will be on the leading causes of death in the US, cardiovascular disease, stroke and cancer, as well as the related diseases of diabetes and osteoporosis, all of which are diseases of enormous burden to the US healthcare system. The common theme of modifiable factors (diet, exercise, sleep) to prevent and manage these chronic conditions will be woven throughout the course. This course may be particularly useful for students seeking careers in health care and prevention. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: MPP 3202 or BIO_SC 3700 and BIOCHM 3630 or BIOCHM 4270; Honors eligibility required
Recommended: NEP 2340 and PTH_AS 2201

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 and NEP 3850W - NEP majors must have a C or better in these courses

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NEP 4550: Exercise is Medicine
Provide an overview of Exercise Is Medicine On Campus. As the designated Exercise is Medicine program on campus we will explore ways to promote the program across the MU Campus, develop student engagement, and implement the program through event planning and collaboration with key services on the MU Campus. Graded on A-F basis only.

Credit Hours: 2
Prerequisites: NEP 3450, NEP 3850, majors only

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

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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 3450 and NEP 3850W. NEP majors must earn a C or better in these courses to enroll

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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 or Corequisites: NEP 3850W. All NEP majors must have a C- or better in this class to enroll
Prerequisites: MPP 3202 or BIO_SC 3700 and, PTH_AS 2201. All NEP majors must have a C or better in these courses to enroll

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NEP 4870: Exercise for Special Populations
The purpose of this course is to provide a detailed review of key physiological considerations for an exercise prescription in populations such as older adults, pregnant women, children, and those with physical/mental disabilities, in addition to those with pathological conditions including diabetes, heart disease, cancer, arthritis, obesity, and others. Graded on A-F basis only.

Credit Hours: 3
Prerequisites or Corequisites: NEP 3850W
Prerequisites: NEP 1340, NEP 3450

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 4945: Experiential Learning in Industry Internship in Nutrition and Exercise Physiology
Learning experience combining observation, application, and reflection in a discipline-based industry internship. Course appears on transcript for zero credit and does not count toward full-time enrollment. No tuition or fees are charged. Graded on S/U basis only.

Credit Hours: 0
Prerequisites: instructor's consent

NEP 4950: Capstone: Research in Nutritional Sciences
(cross-leveled with NEP 7950). 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

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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 Hours: 3
Prerequisites: NEP 4950 or instructor's consent

NEP 4955: Experiential Learning in Research in Nutrition and Exercise Physiology
A supervised learning experience contributing to faculty research. Course appears on transcript for zero credit and does not count toward full-time enrollment. No tuition or fees are charged. Graded on S/U basis only.

Credit Hours: 0
Prerequisites: instructor's consent

NEP 4970: PANHP Capstone: Sports Nutrition
(cross-leveled with NEP 7970). 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. Prerequisites: C or better in all pre-reqs: NEP 2340, and either MPP 3202 or BIO_SC 3700, and either STAT 1200 or ESC_PS 4170; Senior standing. Restricted to Nutrition and Fitness or Physical Activity, Nutrition and Human Performance majors only.

Credit Hours: 3

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

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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 7020: Monogastric Nutrition
(same as AN_SCI 7312; cross-leveled with NEP 4020, AN_SCI 4312). This course delves into the fundamentals and applications of monogastric animal nutrition, emphasizing applied and technical information for nutrition sciences. We will discuss specific nutrition considerations for pigs, poultry, equine, and other monogastric animals. Students will examine the nutrient and energy requirements of monogastric species, the feedstuffs used in their nutrition, and the integration of these principles with feed formulation strategies and technical application. Students will participate in a research-intensive team-based learning community. This is a critical thinking based course. Graded on A-F basis only.

Credit Hours: 4
Prerequisites: AN_SCI 3242 or instructor's consent required

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: PTH_AS 2201, MPP 3202 or BIO_SC 3700 - NEP majors must have a C or better in these courses

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NEP 7330: Human Nutrition II Laboratory
(cross-leveled with NEP 4330). A techniques course in nutrition, usually taken concurrently with NEP 4340.

Credit Hours: 2
Prerequisites: NEP 2340, Biochemistry and instructor's consent

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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. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: NEP 2340 - NEP majors must have a C or better to enroll and either BIOCHM 3630, BIOCHM 4270 or BIOCHM 4272

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

Credit Hours: 3
Prerequisites: NEP 2340

NEP 7370: Medical Nutrition 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. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: C or better in NEP 4360

NEP 7380: Medical 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: C or better in NEP 4370

NEP 7381: Medical 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: 5
Prerequisites: Only students accepted into the Masters of Dietetics Coordinated Program may take this course. Consent required
Corequisites: NEP 7380

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 7390: Professional Development II
Lectures and discussions focus on issues and trends in dietetics. Discussions are used to encourage the development of skills and attitudes that foster life-long professional learning. Graded on A-F basis only.

Credit Hour: 1
Prerequisites: NEP 7385, and in the Coordinated Program for Dietetics

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NEP 7400: Pathophysiology of Diseases Affecting Metabolic Health
(cross-leveled with NEP 4400). There is not a universally-accepted definition of "metabolic health", however, a similar combination of assessment criteria including measurements of body weight/composition, blood pressure, lipid profile, insulin sensitivity/resistance, and systemic inflammation are frequently used for clinical and research purposes. This course will explore the disordered physiological processes in diseases affecting these metabolic health parameters. Focus will be on the leading causes of death in the US, including cardiovascular disease and stroke, as well as the related diseases of diabetes and osteoporosis, all of which are diseases of enormous burden to the US healthcare system. The common theme of modifiable factors (diet, exercise) to prevent and manage these chronic conditions will be woven throughout the course. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: MPP 3202 or BIO_SC 3700 or MPP 4202 and BIOCHM 3630 or BIOCHM 4270
Recommended: PTH_AS 2201 and NEP 3850W

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 7950: Research in Dietetics
(cross-leveled with NEP 4950). Introduction to research, including the relationship of basic, clinical, and outcomes-based research to dietetics practice. Defining research problems in a dietetics practice setting, developing hypotheses, reviewing scientific literature, writing research protocols, analyzing data. Lecture course.

Credit Hours: 2
Prerequisites: statistics course

NEP 7970: PANHP Capstone: Sports Nutrition
(cross-leveled with NEP 4970). IIntegration 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. Prerequisites: C or better in all pre-reqs: NEP 2340, and either MPP 3202 or BIO_SC 3700, and either STAT 1200 or ESC_PS 4170; Senior standing. Restricted to Nutrition and Fitness or Physical Activity, Nutrition and Human Performance majors only.

Credit Hours: 3

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/or 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

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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 Hours: 3

NEP 8127: Advanced Physiological Assessment and Exercise Prescription
Graduate Level course designed to enhance the Exercise Science student's knowledge and skills in the administration of appropriate physiological assessments and the interpretation of the results from those tests.Course Objectives: 1) Understand the nature and importance of physiological assessments. 2) Understand the measurable components of physical fitness and how each of them relates to overall health. 3) Become familiar with and conduct various tests of physical and performance related parameters Body Composition - Girth measurements, skin folds, bioelectrical impedance; BODPOD, DEXA; Cardiorespiratory Fitness - Resting measurements, submaximal protocols; VO2max testing; Musculoskeletal Fitness - Muscular strength and endurance testing; flexibility testing. 4) Interpret results of various test batteries conducted in class. 5) Understand limitations of tests conducted in class. 6) Develop research thesis ideas for comparison of techniques. Graded on A-F basis only.

Credit Hours: 3

NEP 8220: Cardiovascular Disease and Exercise
Advanced study through readings and discussion of selected topics related to cardiovascular risk and disease development, including hypertension, endothelial dysfunction, vascular insulin resistance, arterial stiffness, atherosclerosis and heart failure, with a particular emphasis on the effects of physical activity and exercise. Special focus will also be placed on understanding the links between lack of physical activity, metabolic disorders, and increased cardiovascular risk. Graded on A-F basis only.

Credit Hours: 3
Recommended: Undergraduate level exercise physiology is highly recommended

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NEP 8310: Nutritional Biochemistry of Lipids
(same as AN_SCI 8431, 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

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NEP 8360: Nutritional Biochemistry I
(same as NUTRIT 8360, BIOCHM 8360). Provides a critical understanding of current developments in lipid metabolism in animals and humans, particularly as it relates to nutrition and health.

Credit Hours: 3
Prerequisites: BIOCHM 4270 and BIOCHM 4272; at least one 4000 level nutrition course

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NEP 8380: Medical Nutrition Therapy III
In-depth study of physiological/biochemical changes in advanced selected disease states focusing on special complex clinical issues of infants, children, and the geriatric population, as well as investigation into cutting edge treatments for these special populations. Graded on A-F basis only.

Credit Hours: 3
Prerequisites: NEP 7380; Coordinated Program students in Masters in Dietetics only

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NEP 8501: Hot Topics in Nutrition, Exercise and Disease
This course addresses various topics and examine the interaction of nutrition and exercise/physical activity on these topics. The topics and assignments will focus on a specific physiological topic and how nutrition and exercise can either prevent disease and/or possibly minimize disease progression. The topics in this course will focus on current hot topics in the literature and the format will vary by instructor, but may include didactic, seminar, journal club style, presentations, etc. Graded on A-F basis only.

Credit Hour: 1

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 3850 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

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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 3850 and Chemistry

NEP 8975: Dietetics Supervised Practice Experience
This course provides supervised practice for students in their final semester in the Coordinated Program in Dietetics at the University of Missouri. Supervised practice is designed to provide quality nutrition experiences in clinical, community and management settings. Students are in their field sites for 40 hours/week for supervised practice for approximately 13 weeks. In addition, classblocks are held in Columbia three times throughout the semester for a total of approximately three weeks (may also include supervised practice activities). Graded on A-F basis only.

Credit Hours: 10
Prerequisites: For dietetic students in their final semester in the Coordinated Program (CP) only. Consent required

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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