

# HUMAN NUTRITION AND FOODS

## HNF

### Department of Food Science and Human Nutrition College of Agriculture and Natural Resources

#### 101 Personal Nutrition and Health

Summer. 3(3-0)

Application of nutritional science to personal health and every-day life. Tools, strategies, and resources related to personal diet, nutrition, and wellness.

#### 150 Introduction to Human Nutrition

Fall, Spring, Summer. 3(3-0)

Nutrition needs in life stages from a human ecological perspective. Domestic and international factors affecting the availability of a safe, nutritious food supply. Relationships of food choices to health and disease.

#### 240 Epidemiological Investigations in Nutrition and Health

Summer. 3(3-0) Interdepartmental with Epidemiology. Administered by Epidemiology. P: (HNF 150 or concurrently) or (HNF 260 or concurrently) or approval of department

Integration of epidemiology with human nutrition concepts to understand the role of dietary intake and nutritional status as determinants of health-related issues in populations.

#### 260 Principles of Human Nutrition

Fall, Spring. 3(3-0) P: BS 161 or BS 181H or LB 145 or BMB 200 or PSL 250 SA: HNF 311

Identification, function and food sources of nutrients required by humans. Normal metabolism. Effects of deficiencies or excesses of specific nutrients and food components on metabolism and health.

#### 300 Experimental Approaches to Foods

Fall, Spring. 4(2-4) P: Completion of Tier I Writing Requirement RB: CEM 143 R: Open to juniors or seniors in the Department of Food Science and Human Nutrition.

Effects of preparation methods and ingredient substitutions on chemical and physical properties of food constituents. Effects of changes in chemical and physical properties on functional and sensory attributes of foods.

#### 320 Professional Practice of Dietetics and Nutrition

Spring. 3(4-0) P: HNF 150 or HNF 260 R: Open to sophomores or juniors or seniors in the Dietetics major. SA: HNF 220

Scope of the profession of dietetics. Foundation knowledge and skills for dietetics. Food patterns for health and disease management.

#### 375 Community Nutrition

Fall, Summer. 3(3-0) P: HNF 150 or HNF 260 R: Open to sophomores or juniors or seniors.

Guidelines for dietary and anthropometric components of nutritional status, including health surveys. Agencies and programs that address food and nutritional needs of target populations throughout the life cycle.

#### 377 Applied Community Nutrition

Fall. 4(3-2) P: HNF 320 R: Open to juniors or seniors in the Dietetics major.

Skill development in dietary and anthropometric assessment. Nutrition care process. Evaluation of dietary behavior change. Health policy. Assessment, intervention and evaluation of food and nutrition programs.

#### 400 Art and Science of Food Preparation

Spring. 2(3-2) P: HNF 300 R: Open to seniors in the Dietetics major.

Art and science of food preparation in relation to cost, health, dietary modification, and historical, regional, ethnic, and religious customs. Product evaluation using sensory techniques. Offered half of semester.

#### 406 Global Foods and Culture

Spring. 3(3-0) P: (HNF 150 or concurrently) or (HNF 260 or concurrently) RB: ISS course or concurrently. R: Open to juniors or seniors.

Factors impacting food consumption from a human ecological perspective. International and national food consumption patterns. Geographic, political, and economic aspects of food consumption. Food availability and distribution. Family structure, taboos, religion, and food-related health problems.

#### 440 Foodservice Operations

Fall. 3(3-0) P: (HNF 150 or HNF 260) and (FSC 342 or concurrently) R: Open to juniors or seniors in the Dietetics major.

Principles, processes and control strategies in food-service operations. Menu planning, procurement, and on-premise storage and issuance. Purchasing, ethics, production, safety and sanitation.

#### 444 The Business of Nutrition Services

Fall, Spring. 3(2-2) P: HNF 440 or concurrently RB: CSE 101 R: Open to juniors or seniors in the Dietetics major.

Human resources, budget and financial resources. Technology and marketing in food and nutrition services management. Utilizing prototype computer software for procurement, receiving, inventory management, recipe adjustment, nutrient analysis, budgets and accounting.

#### 445 Foodservice Management Practicum

Fall, Spring. 2 credits. P: HNF 440 or concurrently R: Open to seniors in the Dietetics major and open to graduate students in the Human Nutrition major. Approval of department.

Receipt, storage, preparation and service of foods. Safety and sanitation. Design, layout, and care of equipment. Costing of food services. Students must purchase meal ticket. Offered half of semester.

#### 453 Nutrition and Human Development

Spring. 3(3-0) P: (HNF 375 or HNF 377) and ((PSL 250 or concurrently) or PSL 310 or PSL 431) R: Open to juniors or seniors in the Dietetics major or in the Nutritional Sciences major or in the Nutritional Sciences minor. SA: HNF 376

Role of nutrients in anatomical, physiological, and biochemical processes as related to human growth and development. Nutrition throughout the life cycle. Nutritional assessment integrating the nutrition care process and age specific programs.

#### 456 Eating Disorders

Summer. 3(3-0) P: HNF 150 or HNF 260

Treatment and prevention of anorexia nervosa, bulimia nervosa, and other eating disorders.

#### 457 Sports and Cardiovascular Nutrition

Spring. 3(3-0) Interdepartmental with Kinesiology. Administered by Human Nutrition and Foods. P: (HNF 150 or HNF 260) and (PSL 250 or PSL 310 or PSL 431) and (BMB 200 or BMB 401 or BMB 461 or KIN 310)

Nutrition for optimizing sport training, recovery, and performance; power, intermittent, and endurance sports. Role of nutrition, physical activity and exercise on cardiovascular and overall health.

#### 461 Advanced Human Nutrition: Carbohydrates, Lipids and Proteins

Fall. 3(3-0) P: (BMB 200 or BMB 401 or BMB 461) and (PSL 250 or PSL 310 or PSL 432) SA: HNF 460

Energetics and metabolism of carbohydrates, lipids, and proteins as related to dietary requirements and disease processes in humans. Recommended dietary allowances. Food sources of nutrients.

#### 462 Advanced Human Nutrition: Vitamins and Minerals

Fall. 3(3-0) P: HNF 461 or concurrently SA: HNF 460

Metabolism of vitamins and minerals in relation to dietary requirements and disease processes in humans. Food sources of nutrients. Nutrient interrelationships. Factors affecting bioavailability and stability of nutrients.

#### 463 Nutritional Sciences Laboratory

Fall. 3(1-4) P: (CEM 255 and (HNF 461 or concurrently) and (HNF 462 or concurrently)) and completion of Tier I writing requirement

Principles and methods used in nutrient analyses and nutritional assessment.

#### 464 Nutrition in the Prevention and Treatment of Disease

Spring. 4(4-0) P: (HNF 461 and HNF 462) and (BMB 401 or BMB 461) and Completion of Tier I Writing Requirement

Nutrition and relationship to health and disease using a basic research approach.

#### 471 Medical Nutrition Therapy I

Fall. 4(3-2) P: ((HNF 461 or concurrently) and (HNF 462 or concurrently)) and completion of Tier I writing requirement) and (PSL 250 or PSL 310 or PSL 431) and (PSL 432 or ANTR 350) R: Open to juniors or seniors. SA: HNF 470

Anatomical, physiological and biochemical changes associated with diabetes, gastrointestinal, cardiovascular and bariatric conditions. Nutrition assessment, nutrition diagnoses, interventions, monitoring and evaluation, documentation and quality improvement as guided by American Dietetic Association's Nutrition Care Process. Interactions of diet therapies with other therapies including pharmacologic and complementary and alternative medicine.

#### 472 Medical Nutrition Therapy II

Spring. 4(3-2) P: HNF 471 R: Open to juniors or seniors. SA: HNF 470

Anatomical, physiological and biochemical changes associated with hematologic, musculoskeletal, renal, respiratory, hepatobiliary, cancer, HIV/AIDS, metabolic stress and multiple organ failure. Nutrition assessment, nutrition diagnoses, interventions, monitoring and evaluation, documentation and quality improvement as guided by American Dietetic Association's Nutrition Care Process. Interactions of diet therapies with other therapies including pharmacologic and complementary and alternative medicine.

## Human Nutrition and Foods—HNF

- 480 Human Nutrition Research Methods**  
Spring. 3(1-6) P: (HNF 461 and HNF 462 and HNF 463) and completion of Tier I writing requirement  
Issues and techniques involved in nutrition research with humans and animals. Independent research and public presentation of projects.
- 490 Independent Study**  
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open to seniors. Approval of department.  
Individual study of selected topics in foods, foodservice management or nutrition.
- 490H Honors Independent Study**  
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open to juniors or seniors. Approval of department.  
Individual study of selected topics in foods, foodservice management or nutrition.
- 491 Topics in Human Nutrition**  
Fall, Spring, Summer. 1 to 4 credits. A student may earn a maximum of 10 credits in all enrollments for this course. P: HNF 150 or HNF 260  
Selected topics of current interest in human nutrition
- 494 Practicum**  
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 10 credits in all enrollments for this course. R: Open to undergraduate students in the Department of Food Science and Human Nutrition. Approval of department.  
Professional experience in selected settings and organizations under faculty supervision.
- 820 Advanced Biochemical Nutrition**  
Fall. 3(3-0) RB: Undergraduate biochemistry and upper-level undergraduate nutrition  
Biochemical aspects of advanced human nutrition
- 821 Advanced Vitamins and Minerals**  
Spring. 2(2-0) P: HNF 820 or approval of department  
The function of vitamins and minerals in human nutrition
- 823 Research Methods in Human Nutrition**  
Spring. 1(2-0) RB: Statistics course  
Survey of research methods used in human nutrition.
- 824 Nutrition Policies and Programs**  
Fall. 1(2-0) P: HNF 150 or HNF 260 or approval of department  
Overview of U.S. nutrition policies and programs, including case studies, development and methods of evaluation.
- 825 Nutritional Immunology**  
Fall. 1(2-0) RB: Undergraduate physiology, biochemistry, cell biology, epidemiology  
Role of nutritional status on immune function and infectious disease.
- 826 Obesity and Chronic Disease**  
Spring. 1(2-0) P: HNF 820 RB: Undergraduate physiology, biochemistry, cell biology, epidemiology  
Adipose biology and the role of obesity in chronic disease including diabetes, heart disease and cancer.
- 830 International Nutrition**  
Summer. 1(1-0)  
Major issues in international nutrition that influence health, survival, and development capacity of people living in developed and developing societies. Approaches to improving nutritional well-being of populations.
- 840 Human Nutrition and Chronic Diseases**  
Fall of odd years. 3(3-0)  
Dietary intervention and treatment of chronic diseases: obesity, cardiovascular disease, diabetes, gastrointestinal disorders and cancer.
- 843 Community Nutritional Assessment**  
Spring of odd years. 3(2-2)  
Nutritional assessment of population groups in community settings. Interpretation of national and international health data.
- 890 Supervised Individual Study**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 6 credits in all enrollments for this course. A student may earn a maximum of 10 credits Students are limited to a combined total of 10 credits in HNF 890 and HNF 894. R: Open only to graduate students in the Department of Food Science and Human Nutrition.  
Faculty supervised study of nutrition areas of individual interest.
- 891 Topics in Human Nutrition**  
Fall, Spring, Summer. 1 to 3 credits. A student may earn a maximum of 12 credits in all enrollments for this course. R: Open only to graduate students.  
Current topics in applied and basic human nutrition.
- 892 Nutrition Seminar**  
Fall, Spring. 1(1-0) A student may earn a maximum of 6 credits in all enrollments for this course.  
Presentations by students on current topics in nutrition.
- 894 Human Nutrition Practicum**  
Fall, Spring, Summer. 1 to 6 credits. A student may earn a maximum of 6 credits in all enrollments for this course. A student may earn a maximum of 10 credits Students are limited to a combined total of 10 credits in HNF 890 and HNF 894. Approval of department. R: Open only to graduate students in the Department of Food Science and Human Nutrition.  
Experience in agencies or offices related to Human Nutrition. Field experience required.
- 898 Master's Project**  
Fall, Spring, Summer. 1 to 5 credits. A student may earn a maximum of 5 credits in all enrollments for this course. R: Open to masters students in the Human Nutrition major.  
Directed scholarly participation in support of Plan B master's degree requirements in human nutrition.
- 899 Master's Thesis Research**  
Fall, Spring, Summer. 1 to 10 credits. A student may earn a maximum of 20 credits in all enrollments for this course. R: Open only to masters students in Human Nutrition and Foods.  
Master's thesis research.
- 936 Protein Nutrition and Metabolism**  
Spring of odd years. 3(3-0) Interdepartmental with Animal Science. Administered by Animal Science.  
Nutritional and endocrine regulation of protein synthesis and degradation, protein quality assessment, protein status, and protein-energy malnutrition. Protein metabolism during exercise. Metabolism, digestion, and absorption of amino acids and proteins.
- 999 Doctoral Dissertation Research**  
Fall, Spring, Summer. 1 to 24 credits. A student may earn a maximum of 36 credits in all enrollments for this course. R: Open to doctoral students in the Human Nutrition major.  
Doctoral dissertation research.