

# Human Nutrition (HN)

## Courses

### HN 100. Introduction to Nutrition: New Student Seminar. 2 hours.

Overview of nutrition emphasizing the key concepts of the discipline and the diverse range of careers in the field. Focuses on professional preparation.

### HN 110. Foods. 3 hours.

The principles of food components, component interactions, food selection, preparation and service. Course Information: Field trip required at a nominal fee. Class Schedule Information: To be properly registered, students must enroll in one Laboratory-Discussion and one Lecture.

### HN 190. Introduction to Dietetics. 1 hour.

Overview of the dietetics profession: career options, professional development (dietetics portfolio), code of ethics, standards of practice, Academy of Nutrition and Dietetics position papers, the legislative process, and professional resources. Course Information: Prerequisite(s): Junior standing or above.

### HN 196. Nutrition. 3 hours.

Covers fundamental principles of nutrition as a science through examination of the relationship between diet and health. *Natural World - No Lab course.*

### HN 201. Essentials of Nutrition, Physical Activity and Health Assessment. 3 hours.

Evidence-based tools and resources for using food and physical activity to maintain health and prevent chronic disease. Course Information: Credit is not given for HN 201 if the student has credit in HN 302. Prerequisite(s): HN 196; and approval of the department.

### HN 202. Culture and Food. 2 hours.

Provides a perspective on factors that affect the development of food habits, similarities and differences across cultures, and how the use of foods provides a window to multiculturalism. Course Information: Previously listed as HN 302. *World Cultures course.*

### HN 203. Culture and Food Lab. 2 hours.

Practical application of accurately preparing, presenting, and modifying cultural specific foods. Course Information: Field trip required at a nominal fee. Recommended background: Credit or concurrent registration in HN 202.

### HN 296. Nutrition and Physical Activity. 3 hours.

Integrates the fundamental principles of nutrition and physical activity to provide students with knowledge of proper nutrition for improving health, fitness and performance. Course Information: Prerequisite(s): HN 196 or consent of the instructor.

### HN 300. Science of Foods. 3 hours.

Scientific aspects of food and its preparation with emphasis on clinical applications. Course Information: Prerequisite(s): HN 110 or the equivalent or consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Laboratory-Discussion and one Lecture.

### HN 302. Nutritional Assessment. 3 hours.

In-depth training of nutrition assessment tools that Registered Dietitians will use for measuring dietary intake and anthropometric measurements in different populations and in different settings. Course Information: Previously listed as HN 200. Credit is not given for HN 302 if the student has credit in HN 200. Prerequisite(s): HN 196.

### HN 306. Nutrition Education. 3 hours.

Study of theoretical and applied strategies for instructional planning and assessment that are applied to both group and individual nutrition education. Prerequisite(s): HN 302 or HN 201; or approval of the department.

### HN 307. Human Nutrition and Metabolism. 3 hours.

Human nutrient requirements and metabolism of carbohydrates, lipids, proteins, vitamins, minerals and non-nutritive substances found in foods. Course Information: Prerequisite(s): HN 196 and one semester of college level general chemistry; or consent of the instructor.

### HN 308. Nutrition Science I. 3 hours.

Metabolism, dietary regulation and requirements for energy, protein, fat and carbohydrates, including issues of under/over nutrition and regulation of food intake. Course Information: Prerequisite(s): HN 196 and Credit or concurrent registration in CHEM 352 and Credit or concurrent registration in KN 230 and KN 231; and approval of the department.

### HN 309. Nutrition Science II. 3 hours.

Continuation of HN 308. Metabolism, dietary regulation and requirements for micronutrients such as vitamins and minerals, including issues of under/over nutrition and regulation of food intake. Course Information: Prerequisite(s): HN 308.

### HN 311. Nutrition During the Life Cycle. 3 hours.

Principles of nutrition through the life cycle, including weight management. Course Information: Prerequisite(s): HN 307; or HN 308 and HN 309.

### HN 313. Introduction to Community Nutrition. 3 hours.

Assessment, planning and evaluation of community nutrition programs using a systems approach. Course Information: Previously listed as HN 413.

### HN 318. Genetic, Molecular and Cellular Mechanisms of Chronic Diseases. 3 hours.

Addresses the most important mechanisms of pathogenesis, with an emphasis on chronic conditions. The role of inflammation and of genetic variability in modulating disease susceptibility will be addressed in detail. Course Information: Prerequisite(s): Grade of C or better in KN 230; and approval of the department.

### HN 320. Clinical Nutrition I. 3 hours.

Principles of nutrition, biochemistry, physiology, and pathology related to the management of starvation, obesity and gastrointestinal diseases, cardiovascular disease, and diabetes. Course Information: Prerequisite(s): HN 308; and approval of the department.

### HN 330. Quantity Food Production. 3 hours.

Lecture/discussion on kitchen layout and design, menu planning, food procurement, storage, production and service. Course Information: Field trips required at a nominal fee. Prerequisite(s): HN 110; or approval of the department.

### HN 332. Food Service Management. 2 hours.

Application of management principles to food service system functions. Course Information: Prerequisite(s): HN 110.

### HN 355. Supervised Practice I. 1-4 hours.

A supervised practicum in a professional setting to prepare for entry-level dietetics practice. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated to a maximum of 8 hours. Prerequisite(s): Grade of C or better in HN 320 and senior standing; and approval of the department.

**HN 394. Special Topics in Human Nutrition. 1-4 hours.**

Selected nutrition topics. Topics vary from year to year and may include nutrition and physical activity, nutrition assessment, nutrition and behavior, nutrition education, food sustainability, or community engagement. Course Information: May be repeated. Students may register in more than one section per term.

**HN 396. Independent Undergraduate Study in Human Nutrition. 1-4 hours.**

Study in selected areas of human nutrition carried out under the direction of a faculty member. Exact nature of the project is determined by the selected area of interest. Course Information: Prerequisite(s): Consent of the instructor.

**HN 405. Food as Medicine I: Cooking for Healing and Wellness. 2 hours.**

A new disease state or medical diet will be covered each week and students will learn how to plan menus and prepare foods that are appropriate for each diet. Course Information: Prerequisite(s): HN 110.

**HN 406. Food as Medicine II. 2 hours.**

A wellness related diet, a disease state, or a medical topic will be covered each week. Students will learn how to plan menus and prepare foods that are appropriate to each diet. Course Information: Prerequisite(s): HN 110; and approval of the department This course is designed for undergraduate and graduate students majoring in nutrition.

**HN 407. Writing Process in Nutrition. 2 hours.**

Approaches writing as an instrument of thought and a tool of persuasion. Students will learn to effectively communicate nutrition information through writing. Course Information: May be repeated for credit. Prerequisite(s): ENGL 160 and ENGL 161; and junior standing or above; and approval of the department. Recommended Background: HN 196 and HN 110.

**HN 410. Food Microbiology. 4 hours.**

Discusses food-borne pathogens, toxins, and contaminants. Covers spoilage, pathogenic and beneficial microorganisms in the food industry and microbiological techniques for isolating and quantifying microorganisms of public health concern. Course Information: Prerequisite(s): BIOS 350 and BIOS 351; and approval of the department. Class Schedule Information: To be properly registered, students must enroll in one Lecture and one Laboratory.

**HN 411. Food Analysis. 4 hours.**

Principles and application of the chemical, physical and instrumental methods used to determine the constituents of foods. Course Information: Prerequisite(s): CHEM 222 and HN 300; and approval of the department. Class Schedule Information: To be properly registered, students must enroll in one Lecture and one Laboratory.

**HN 412. Sensory Evaluation for Foods and Beverages. 2 hours.**

Teaches the physiological and psychological basis of human subjects, chemistry of aroma and taste, basic sensory methodologies in food evaluation and analysis and interpretation of sensory data. Course Information: Prerequisite(s): Approval of the Department.

**HN 413. Food Product Development. 3 hours.**

Principles of food product development: target market evaluation, concept development and presentation, formulation, manufacturing, packaging, product costs, pricing, safety and marketing. Course Information: Prerequisite(s): HN 300; and approval of the department.

**HN 414. Fermented Foods and Beverages. 2 hours.**

Covers the health benefits and the chemistry and microbiology in making fermented foods and beverages. Course Information: Prerequisite(s): Approval of the Department.

**HN 420. Clinical Nutrition II. 3 hours.**

Principles of nutrition, biochemistry, physiology, pathology, education, and psychology related to management of selected diseases (diabetes, cancer, HIV/AIDS, renal diseases, and metabolic stress). Course Information: Prerequisite(s): HN 308; or approval of the department.

**HN 422. Clinical Nutrition III. 2 hours.**

Principles of nutrition, biochemistry, physiology, and pathology related to the management of critically ill patients. Course Information: Prerequisite(s): HN 309 and HN 420; or consent of the instructor.

**HN 423. Nutrition Counseling. 3 hours.**

Teaches theory and skill development for effective nutrition interviewing and counseling. Experiential opportunities to practice various counseling approaches are provided. Prerequisite(s): HN 302 or HN 201; or approval of the department.

**HN 425. Sports Nutrition. 3 hours.**

Designed to teach the foundations and application of sports nutrition, including how to assess, counsel and address the nutritional needs of athletes and active individuals. Course Information: Prerequisite(s): HN 302; and approval of the department.

**HN 440. The Research Process in Nutrition. 3 hours.**

Covers methods for reading and critiquing current scientific literature, overview of study designs used to address different types of research questions, basic overview of study design, data analysis and interpretation of results. Course Information: Prerequisite(s): HN 196; and approval of the department.

**HN 455. Supervised Practice II. 1-11 hours.**

An advanced supervised practicum in a professional setting to prepare for entry-level dietetics practice. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated to a maximum of 15 hours. Prerequisite(s): Grade of C or better in HN 420 and senior standing or above; and approval of the department.

**HN 480. Field Study. 2 hours.**

Provides practical experience to develop/strengthen the student's knowledge and skills in an area of nutrition practice. Course Information: Prerequisite(s): HN 410; or consent of the instructor. Class Schedule Information: To be properly registered, students must enroll in one Clinical Practice and one Conference.

**HN 494. Special Topics in Human Nutrition. 1-4 hours.**

Selected nutrition topics. Topics vary from year to year and may include nutrition and physical activity, nutrition assessment, nutrition and behavior, nutrition education, food sustainability, or community engagement. Course Information: May be repeated. Students may register in more than one section per term.

**HN 502. Cells to Community: Research in the Department of Kinesiology and Nutrition. 1 hour.**

Familiarize graduate students with the type and variety of research and scholarship performed by faculty affiliated with the Department of Kinesiology and Nutrition. Course Information: Prerequisite(s): approval of the department.

**HN 503. Advanced Pathophysiology of Chronic Diseases. 3 hours.**

Focuses on an in-depth evaluation of the most important mechanisms of pathogenesis, with an emphasis on chronic conditions with a nutritional component. Course Information: Prerequisite(s): KN 251 and KN 252. Recommended background: HN 318.

**HN 505. Advanced Topics in Diabetes Management. 3 hours.**

Designed to use current research in diabetes to learn how to effectively provide nutrition education and counseling to people with diabetes in different stages of life or with other chronic diseases. Course Information: Prerequisite(s): Grade of C or better in HN 320; and approval of the department.

**HN 506. Advanced Topics in Pediatric Nutrition. 1 hour.**

Students will learn the current clinical practices and guidelines of pediatric nutrition in critical care. Course Information: May be repeated. Meets in Summer Session 1 for 4 weeks. Prerequisite(s): Credit or concurrent registration in HN 311 and Credit or concurrent registration in HN 320 and HN 420; or consent of the instructor.

**HN 510. Nutrition - Physiological Aspects. 3 hours.**

Emphasizes the application of biochemistry and cellular/molecular physiology to understand advanced human metabolism and nutrition. Course Information: Prerequisite(s): May be repeated. HN 308 and HN 309; and graduate standing; or consent of the instructor.

**HN 511. Intervention Design and Evaluation in Kinesiology and Nutrition. 3 hours.**

Applying the scientific process to change physical activity and nutrition behavior. Best practices for design and evaluation of theory-, community-, and evidence-based physical activity and nutrition interventions are explored. Course Information: Same as KN 511. Prerequisite(s): Graduate standing; or consent of the instructor or BS in Kinesiology or related field. Recommended background: KN 237; and KN 438.

**HN 516. Advanced Vitamins and Minerals. 3 hours.**

A critical analysis of current research in the areas of vitamin and mineral requirements in human nutrition; nutrient interactions; and interrelationships of vitamins and minerals within various disease states. Course Information: Prerequisite(s): HN 309; and HN 440; or consent of the instructor.

**HN 525. Sports Nutrition and Athlete Consulting. 4 hours.**

Designed to teach both arms of nutritional counseling - current research on sports nutrition principles and athlete counseling/motivational interviewing techniques. Students will consult with athletes to apply the information learned. Course Information: Field work required. Prerequisite(s): Grade of C or better in HN 306 and Grade of C or better in KN 436; and consent of the instructor. Recommended background: Grade of C or better in KN 437. Restricted to students in the Master's in Nutrition program in dietetic track and registered and licensed dietitians. Class Schedule Information: To be properly registered, students must enroll in one Lecture-Discussion and one Clinical Practice.

**HN 532. Evaluation of Nutritional Status. 3 hours.**

Community and clinical considerations in nutrition status surveillance and monitoring systems; characterization in the collection, standards and reference population development. Course Information: Prerequisite(s): HN 410; or consent of the instructor.

**HN 541. Research on Clinical Nutrition Problems. 2 hours.**

Development and conduct of research on clinical nutrition problems, patient outcomes, or nutrition or food service delivery systems within a hospital or ambulatory care setting. Course Information: Prerequisite(s): Consent of the instructor.

**HN 555. Obesity. 3 hours.**

Examines the multifactorial aspects of obesity, maintenance of healthy weight, and the relationship of weight status and chronic disease risk. Popular diet and exercise trends to treat obesity will also be discussed. Course Information: Prerequisite(s): Grade of C or better in HN 309 and Grade of C or better in HN 440. Restricted to students in the MS in Nutrition program in dietetic track or already registered and licensed dietitians.

**HN 560. Advanced Topics in Public Health Nutrition: Development and Evaluation of Community-Based Nutrition. 3 hours.**

Focuses on understanding the role and application of both theory and empirical data in the development and evaluation of community-based nutrition interventions. Course Information: Field work required. Prerequisite(s): HN 413 or consent of the instructor.

**HN 570. Advances in Clinical Nutrition I. 2 hours.**

Selected topics in clinical nutrition, emphasizing current theory, research and practice in such areas as cardiovascular disease, obesity, diabetes and iatrogenic malnutrition. Course Information: Prerequisite(s): HN 422; or consent of the instructor.

**HN 580. Advanced Field Practicum. 2 hours.**

Advanced practical experience in a specialized area of human nutrition and dietetics. The practicum may be carried out in a clinical setting, business, industry or government agency. Course Information: Prerequisite(s): HN 410; or consent of the instructor.

**HN 581. Dietetics/Nutrition Instructional Practicum. 1 hour.**

Teaching practicum in clinical dietetics and/or nutrition. Course Information: Extensive computer use required. Meets eight weeks of the semester. Prerequisite(s): Grade of C or better or concurrent registration in HN 320 and Grade of C or better or concurrent registration in HN 420 or the equivalent, or consent of the instructor.

**HN 594. Special Topics in Human Nutrition. 1-4 hours.**

Advanced course dealing with selected topics. Topics vary from year to year and may include nutrigenomics, advanced critical care nutrition, bioenergetics of food, advanced nutrient metabolism, nutrition and behavior, nutrition and exercise. Course Information: May be repeated. Prerequisite(s): Consent of the instructor.

**HN 595. Seminar in Human Nutrition. 1 hour.**

Topics of current interest in human nutrition. Includes discussions of current journal articles and important new developments in the specific disciplines. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated with approval. Approval to repeat course granted by the department. Prerequisite(s): HN 410; or consent of the instructor.

**HN 596. Independent Study in Human Nutrition. 1-4 hours.**

Study in selected areas of human nutrition is carried out under the direction of a faculty member. Modes of investigation are determined by the nature of the problem selected. Course Information: May be repeated. Students may register in more than one section per term. Prerequisite(s): Admission to the human nutrition graduate program and consent of the instructor.

**HN 597. Master's Project Research. 0-8 hours.**

For nutrition graduate students who wish to pursue a project other than thesis research. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated. Students may register in more than one section per term. Prerequisite(s): Consent of the instructor.

**HN 598. Research in Human Nutrition. 0-16 hours.**

Independent research in one area of human nutrition. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated. Prerequisite(s): Consent of the instructor.

**HN 599. Ph.D. Thesis Research. 0-16 hours.**

Independent dissertation research by the student, under the guidance of the advisor. Course Information: Satisfactory/Unsatisfactory grading only. May be repeated. Prerequisite(s): Consent of the faculty adviser.