

NUTRITION SCIENCE (NS)

NS105: Fundamentals of Nutrition

This foundational course introduces the core principles of nutrition, laying the groundwork for the nutrition degree program. You will delve into fundamental concepts, terminology, and historical perspectives, including the evolution of the concept of 'food as medicine.' The curriculum covers modern dietary guidelines, essential nutritional requirements, and the role of food in energy provision, nutrient intake, and overall wellness. Additionally, you will explore the basics of digestion, absorption, and energy metabolism, as well as emerging topics like functional nutrition. This course is designed to equip you with a solid understanding of nutrition fundamentals, preparing you for advanced studies and practical application in the field.

Quarter Credit Hours: 5 | Prerequisite: None

NS106: Nutrition Profession and Career Planning

This course introduces you to the diverse career paths within the nutrition field. Throughout the course, you will explore industry standards, scope of practice, key organizations, credentials, and employment prospects related to these career paths. You will also become familiar with Purdue Global's Center for Career Advancement and complete practical exercises to assess occupational skills, reflect on strengths and weaknesses, and set goals for your desired future career path. By the end of the course, you will have a comprehensive understanding of the nutrition profession and be well-prepared to pursue your career goals effectively.

Quarter Credit Hours: 5 | Prerequisite: None

NS230: Macronutrient Metabolism

This course focuses on the essential functions, sources, and health implications associated with each macronutrient: carbohydrates, proteins, and lipids. Through lectures, discussions, and practical applications, you will delve into the intricate processes of macronutrient metabolism. Topics include exploring biochemical pathways, regulatory mechanisms, and the physiological significance of macronutrient metabolism. Special emphasis will be placed on understanding how dietary intake influences energy production and metabolic balance. By the course's conclusion, you will acquire a thorough understanding of how macronutrients sustain life and contribute to overall health.

Quarter Credit Hours: 5 | Prerequisite: NS105

NS235: Micronutrient Metabolism

This course explores the vital roles of vitamins and minerals in health, covering their functions, sources, absorption, and impact on well-being. The course examines both water-soluble and fat-soluble vitamins, as well as major and trace minerals. You will investigate how deficiencies and excesses affect health and how micronutrients contribute to disease prevention and management. Emphasis is placed on personalized dietary guidelines and supplementation, with practical applications through clinical case studies and a micronutrient reference guide.

Quarter Credit Hours: 5 | Prerequisite: NS105

NS305: Food Safety

This course covers the major issues in food safety and sanitation. It includes the basic principles of foodborne illnesses, food allergens, and foodborne pathogens. Management's role in food safety and sanitation is discussed throughout the flow of food. The importance of food safety regulations and employee training is covered. This course prepares you for the ServSafe Food Protection Manager Certification Exam.

Quarter Credit Hours: 6 | Prerequisite: None

NS310: Nutritional Assessment

This course includes a comprehensive introduction to the foundational principles of nutritional assessment, focusing on the ABCDs: anthropometric, biochemical, clinical, and dietary analysis. You will develop skills to obtain anthropometric measurements, interpret conventional and functional laboratory data, analyze physical exam findings for nutrient imbalances, and evaluate dietary patterns.

Quarter Credit Hours: 6 | Prerequisite: None

NS313: Foodservice Management - Principles and Practices

This course provides a comprehensive overview of foodservice management principles and practices across a variety of foodservice settings. Topics include food safety and sanitation, menu planning, personnel management and communication, operational systems, and financial and marketing fundamentals. The course also addresses regulatory compliance, ethical decision-making, and industry standards relevant to professional foodservice management, including competencies aligned with Certified Dietary Manager (CDM) standards.

Quarter Credit Hours: 6 | Prerequisite: None

NS321: Nutrition Planning and Management

This course addresses nutritional planning for the maintenance of health and wellness. The studies include identification, assessment, and management of nutritional deficiencies occurring due to food choices and pharmacotherapy.

Quarter Credit Hours: 6 | Prerequisite: None

NS325: Nutrition Through the Life Cycle

This course examines the role of nutrition throughout the human lifespan, from preconception and pregnancy to lactation, childhood, adolescence, adulthood, and aging. Each stage is explored in the context of physiological changes and their impact on nutritional needs and considerations.

Quarter Credit Hours: 6 | Prerequisite: None

NS335: Nutrition for Special Populations

Studies in this course emphasize the nutrition and dietetic considerations for healthy individuals with special needs, such as geriatric and gender-specific needs. The coursework includes analyzing nutritional and dietetic needs, and designing appropriate protocols for clients with chronic, progressive, or degenerative diseases and metabolic disorders, as well as for special needs children and infants. The course addresses the underlying principles of total parenteral nutrition and nasogastric tube feeding.

Quarter Credit Hours: 6 | Prerequisite: None

NS410: Integrative Nutrition Planning and Management

This course offers a comprehensive exploration of nutrition planning and management through an integrative and evidence-based approach. You will develop a strong foundation in evidence-informed practice, practical skills, and holistic health management. The course emphasizes the application of effective nutritional and integrative health strategies to promote wellness across diverse populations and address various health conditions.

Quarter Credit Hours: 6 | Prerequisite: NS310 and NS325

NS415: Food Science With Lab

This course complements the student's knowledge of nutrition by presenting the scientific foundation of foods through weekly in-home kitchen preparation of specific recipes that demonstrate the scientific properties of foods. Students explore current food technology and develop a base for additional study in specific areas of food science.

Quarter Credit Hours: 6 | Prerequisite: None

NS420: Nutritional Counseling

This course covers the key stages of nutrition counseling, from maintaining accurate counseling notes to safeguarding client information. You'll learn how to build rapport, use motivational interviewing techniques, and guide clients through goal setting and progress tracking to help support their nutritional journey and long-term success.

Quarter Credit Hours: 6 | Prerequisite: NS310 and NS325

NS425: Sports Nutrition

This course explores the relationship between nutrition and athletic performance, focusing on evidence-based, nutrition strategies to improve training and recovery to maximize performance. You will learn about the physical demands of different sports and athletic activities and how nutrition can influence performance and health. Topics include energy metabolism, macronutrients, micronutrients, hydration, dietary supplements, nutrient timing, and nutrient needs for special populations.

Quarter Credit Hours: 6 | Prerequisite: None

NS430: Whole Foods Production

This course explores various aspects of whole foods, including their production, preservation, transport, storage, and costs. Studies will address geographic, climatic, and societal influences on whole foods production. You will learn strategies to inform and educate producers and consumers of the financial issues, governmental assistance, and alternative methods of whole foods production.

Quarter Credit Hours: 6 | Prerequisite: None

NS440: Legal and Regulatory Environment in Food Production

This course covers the legal and regulatory aspects of food production. Studies include major elements in and the rationale behind food labeling. This course further addresses the regulatory agencies and their role in enforcement, and the legal and ethical responsibilities of the food producers, suppliers, and retailers in maintaining a safe food supply. Special attention is given to regulatory aspects of food production relative to livestock handling, and the import and export of food.

Quarter Credit Hours: 6 | Prerequisite: None

NS455: Current Trends in Nutrition

This course provides an in-depth exploration of contemporary nutrition trends, offering you a comprehensive understanding of how nutrition practices and beliefs have evolved and how they continue to shape our health and environment. Through a blend of historical context, current research, and future directions, you will gain insight into the multifaceted world of nutrition trends.

Quarter Credit Hours: 6 | Prerequisite: None

NS460: Dietary Supplements and Nutraceuticals

This course provides a comprehensive exploration of dietary supplements and nutraceuticals, delving into their definitions, classifications, and regulatory frameworks. You will also gain in-depth knowledge of herbal supplements, including major classes and specific herbs with therapeutic uses. The course emphasizes evidence-based practice, safety considerations, and the unique needs of different populations. Through practical applications and case studies, you will develop the skills to assess, recommend, and integrate supplements into personalized dietary plans.

Quarter Credit Hours: 6 | Prerequisite: None

NS465: Functional Nutrition

This course will provide an overview of functional nutrition principles. It emphasizes a holistic approach to health that addresses the root causes of disease and dysfunction while considering the interconnectedness of body systems. Emphasizing personalized care, you will learn to conduct comprehensive assessments, understand the basics with functional testing, and develop customized nutrition plans that incorporate complementary therapies and evidence-based interventions.

Quarter Credit Hours: 6 | Prerequisite: None

NS480: Medical Nutrition Therapy I

This course focuses on the clinical application of the nutrition care process in managing metabolic, hormonal, and systemic conditions. You will develop and present individualized nutrition therapy plans using evidence-based practices and culturally responsive strategies. Emphasis is placed on interpreting clinical data, applying documentation skills, and justifying interventions for disease prevention and management. Through case-based learning, you will explore how to communicate recommendations effectively and ethically while considering the psychosocial context of care.

Quarter Credit Hours: 6 | Prerequisite: NS410 and NS420

NS490: Medical Nutrition Therapy II

This course builds on the foundational skills from Medical Nutrition Therapy I, focusing on the application of nutrition care for complex and specialized conditions. You will explore topics such as functional gastrointestinal disorders, neurological and neurodevelopmental disorders, chronic fatigue syndrome, autoimmune diseases, and emerging approaches in nutrigenomics. Emphasis is placed on integrating evidence-based nutrition strategies across systems, tailoring interventions to diverse populations, and critically evaluating therapy plans for ethical, cultural, and psychosocial appropriateness.

Quarter Credit Hours: 6 | Prerequisite: NS480

NS499: Bachelor's Capstone in Nutrition

This capstone course is the culminating experience for the Bachelor of Science in Nutrition. This course builds on the concepts of all the courses you have taken within the program of study. The capstone course provides you with the opportunity to integrate and synthesize the knowledge and skills acquired throughout your coursework in an original comprehensive project, and to assess your level of mastery of the stated outcomes of your degree program in nutrition.

Quarter Credit Hours: 6 | Prerequisite: Last term