

# NTD: NUTRITION AND DIETETICS

## Courses

### NTD 199. Nutrition and Dietetics Transfer Credit Electives. 1-15 Credits.

Transfer Electives  
Repeatable for credit.

### NTD 200. Nutrition and Culture. 3 Credits.

Students will increase awareness of the connection between health outcomes, diet and nutrition, and socio-cultural influences. Course studies will lay a foundation for understanding why people eat the foods that they do. A bio-cultural framework is applied to examine how individual dietary habits, choices, and nutritional health outcomes are influenced by social structure, historic patterns and events, and cultural beliefs and ideology. Students explore food ways, food scripts, health beliefs and practices, demographic characteristics, and population health across diverse communities within the United States. The course also employs a critical analysis of macro-structural inequalities, societal stresses, and cultural norms that alter access and availability to healthy foods and disparately undermine the nutritional health of some populations.

Gen Ed Attribute: Diverse Community(select both)  
Distance education offering may be available.

### NTD 203. The Dietetic Profession. 1 Credit.

This is an introductory course for nutrition and dietetics majors to orient them to the profession of dietetics and the nutrition and dietetics curriculum. Topics such as West Chester University academic policies, the dietetics curriculum, careers in dietetics, post-secondary options, professional ethics, designing a professional portfolio, career mentoring, and volunteer and paid experiences relevant to the profession will be covered.

### NTD 205. Principles of Food Selection and Preparation. 3 Credits.

A nutritionally based study of the basic principles of food selection and preparation with an emphasis on food safety. Course includes a comparative study and integration of convenience food and traditionally prepared food, enhanced by an experiential lab component.

Gen Ed Attribute: Community Engagement Pathway

### NTD 226. Farm to Table Food, Flavor, and Health. 3 Credits.

This course combines online lectures, in-class activities, and laboratory experiments to apply the principles of food preservation for increasing the value and shelf-life of local farm crops. Students will gain an understanding of sustainable food production, methods of recording the human responses to food flavor, and conventional food preservation techniques. They will learn how to apply these principles to safely preserve food by canning, pickling, dehydration, and other traditional techniques. Additionally, students will be trained to communicate the steps that are involved in making a healthy and sustainable food product/recipe for consumer acceptability and nutritional qualities.

Distance education offering may be available.

### NTD 277. Sustainable Food Systems. 3 Credits.

The primary objective of this course, team taught by an anthropologist and a registered dietitian, is to examine the interrelationship of nutrition ecology, anthropology and the political economic underpinnings of sustainable food systems.

Gen Ed Attribute: Interdisciplinary Requirement, Sustainability Pathway  
Equivalent courses: ANT 277

### NTD 300. Nutrition Pedagogy. 3 Credits.

This course provides the knowledge and skills necessary to develop and teach K-12 nutrition education lessons and curricula.

### NTD 301. Consumer Nutrition. 3 Credits.

This course explores the ever-changing frontier of nutrition science and confronts nutrition mysteries and emerging controversies. Practical tips and flexible guidelines to assist consumers in choosing nutritious, flavorful foods to match personal needs, preferences, and lifestyles are discussed. Emphasis is placed on methods of evaluating nutrition-related literature and claims, and interpretation of data and scientific studies relevant to nutrition. Distance education offering may be available.

### NTD 303. Introductory Principles Human Nutrition. 3 Credits.

This course introduces students to the biochemical, physiological, and microbiological basics of human nutrition. Topics include the scientific method; dietary guidelines; digestion, absorption, metabolism, and use of carbohydrates, lipids, and proteins; food sources and functions of vitamins and minerals; and the relationship between nutrition and health.

Gen Ed Attribute: Science Distributive  
Distance education offering may be available.

### NTD 304. Global Nutrition. 3 Credits.

This course is designed to examine the nature and scope of major nutritional issues and problems throughout the world, with an emphasis on developing countries. It includes consideration of specific nutrient deficiencies, as well as nutrition-related aspects of infectious and chronic disease. The role of food availability, food supply & distribution and world food production and drivers of nutrition and health will be discussed in the context of socioeconomic development and current economic policies and realities.

NTD 404 Prerequisite: Successful completion of NTD 309, with a minimum grade of D-. Distance education offering may be available.

### NTD 305. Plant-Based Nutrition. 3 Credits.

This course will apply basic human nutrition principles to plant-based dietary approaches, addressing both the health-promoting aspects of plant-based nutrition and concerns about nutritional adequacy at all stages of the life cycle. A variety of plant-based food preparation methods will be demonstrated and students will participate in meal planning and food preparation.

NTD 305 Prerequisite: Successful completion of NTD 303, with a minimum grade of D-. Distance education offering may be available.

### NTD 309. Nutrition Throughout the Lifecycle. 3 Credits.

This course examines nutrition across the life cycle from the physiological, genetic, environmental, and social perspectives. The impact of nutrition on preconception, pregnancy, lactation, infancy, childhood, adolescence, adulthood, and aging will be studied. For every phase of life, normal growth and development, nutrient needs, nutrition assessment, and the most common nutritional concerns will be addressed.

NTD 309 Prerequisite: Successful completion of NTD 303, with a minimum grade of D-. Distance education offering may be available.

### NTD 310. Nutrition Research. 3 Credits.

This course focuses on the process of research and statistical analysis and interpretation as it relates to nutrition and dietetics. Topics such as the foundation and ethics of research, research questions and hypotheses, research designs, statistical analysis and interpretation, evidence analysis, systematic reviews, and evidence based practice will be addressed. Practical projects will be assigned, such as article analysis, a small research project, and data analysis using SPSS. Competence in reading, understanding, and analyzing research articles is the main goal of the course.

NTD 310 Prerequisite: Successful completion of MAT 121 and NTD 303, with minimum grades of C.

### NTD 311. Current Topics in Dietetics. 2 Credits.

This course addresses timely and current topics in dietetics in an evidence-based way. Different topics are covered as they have current relevancy.

NTD 311 Prerequisite: Successful completion of NTD 303, with a minimum grade of D-. Repeatable for credit.

### NTD 315. Food - Mind - Spirit. 3 Credits.

A study of the role of food and nutritional status in mental health, mood and memory, and overall well-being throughout the life cycle. Additional topics include nutrients and neurotransmission, appetite regulation and disordered eating, the gut-brain axis, and herbal supplements. Mindful eating, traditional food belief systems, and dietary practices of major religions are also reviewed.

NTD 315 Prerequisite: Successful completion of PSY 100 and NTD 303, with minimum grades of D-.

Distance education offering may be available.

### NTD 320. Strategies in Dietetics Education. 3 Credits.

Students will experience the practical study of the theories of teaching and learning, health behavior change, lesson planning, and educational strategies as they relate to the field of dietetics. As nutrition educators, it is crucial to develop superb written and oral presentation skills, and to understand how to find and then delineate evidence-based nutrition information to the general public. As such, this course is designed to develop oral communication skills to be a most effective nutrition educator. Presentation preparation and delivery will be covered extensively in this course.

NTD 320 Prerequisite: Successful completion of NTD 309, with a minimum grade of D-. Gen Ed Attribute: Speaking Emphasis

Distance education offering may be available.

**NTD 325. The Food Chain. 3 Credits.**

Students use ecological and systems-based theory to increase understandings of contemporary food systems, food landscapes, and nutrition challenges using the framework of sustainability. The course examines the chain of food production (supply chain), distribution, and consumption in complex conventional food systems, targeting post-harvest aspects of the food system, historical, and socio-cultural factors that drive human nutrition and food behavior. Students explore multiple levels of local and global food systems, including globalization and labor markets with a focus on practices that promote health, food security, and environmental sustainability within community food systems. Students also investigate alternatives to conventional food systems such as food cooperatives, community supported agriculture, agroecology, artisan farms, and organic food in the context of food management. Students will reflect and deepen their understanding of the role of businesses, consumers, and food and nutrition professionals in contemporary food systems, and apply what they learn to food, nutrition, and environmental challenges.

Gen Ed Attribute: Behavioral & Social Science  
Distance education offering may be available.

**NTD 333. Nutrition: East Meets West. 3 Credits.**

This course explores the relationships among nutrition, body types, and well-being. Because each individual's journey toward optimum health is unique, the course takes a personalized and integrated food-is-medicine approach to wellness. Ancient eastern and modern western sciences, health promotion, and therapies are blended. Foods, herbs, spices, and affirmative ways of living to restore balance and harmony to the body are emphasized.

**NTD 370. Nutrient Metabolism. 3 Credits.**

This course covers the essential aspects of organic and biochemistry as they relate to nutrient metabolism. Most of the course addresses the biochemical basis of nutrient metabolism including carbohydrates, lipids, proteins, vitamins, and minerals. Chemical structure, nutrient anabolic and catabolic processes, enzyme and hormonal regulation, and gene-nutrient and protein interaction are surveyed. Normal and clinical nutrition applications biochemical principles are highlighted, and nutrition research article literacy is addressed.

NTD 370 Prerequisite: Successful completion of CHE 107 and NTD 303, with minimum grades of C.

Distance education offering may be available.

**NTD 381. Micronutrients. 3 Credits.**

In-depth examination of the digestion, transport, and metabolism of vitamins, minerals, and water. Special emphasis is placed on digestive and metabolic interrelationships and hormonal control.

NTD 381 Prerequisite: Successful completion of BIO 269, CHE 107 and NTD 309, with minimum grades of C.

Distance education offering may be available.

**NTD 400. Clinical Nutrition Assessment. 3 Credits.**

The goal of this class is for the student to understand the profession and practice of nutrition and dietetics, nutrition and physical assessment and the nutrition care process. Classroom and simulated experiences in clinical issues, nutritional assessment, planning, implementing nutritional care, and documenting in medical records will be completed. Students will also be introduced to medical terminology and abbreviations. Nutritional assessment methods will be applied to evaluating nutritional status in the individual.

NTD 400 Prerequisite: Successful completion of BIO 269, CHE 107 and NTD 309, with minimum grades of C.

**NTD 404. Nutrition and Disease Prevention. 3 Credits.**

It examines nutrition screening and assessment techniques to understand the use of dietary, biochemical and anthropometric data related to health and disease prevention.

The pathophysiology, etiology and prevention of certain medical conditions such as obesity, diabetes, gastrointestinal problems, cardiovascular disease, bone disease and cancer will be examined. Other topics examined include nutrients and medication interactions and dietary supplements.

NTD 404 Prerequisite: Successful completion of NTD 309, with minimum grade of D-.

Distance education offering may be available.

**NTD 408. Food Science. 3 Credits.**

A study of the chemical, physical, and biological characteristics of food and the effects of processing, storage, and preservation on the structure, composition, palatability, and nutritive value of food. Sensory evaluation techniques and application of the scientific method are integral to this course.

NTD 408 Prerequisite: Successful completion of NTD 205 and NTD 370, with minimum grades of C.

Distance education offering may be available.

**NTD 409. Professional Skills in Dietetics. 3 Credits.**

This course will focus on the development of nutrition counseling, oral and written communication, and media and skills. A familiarization with dietetics-related professional organizations, graduate school opportunities, and dietetic internships will be provided. Assistance with the dietetic internship and graduate school application process will be given. This course aims to provide students with the oral, written and technical skills necessary for effective client and public education. Specifically, practical experience in the classroom and in the field will help the student focus on improving skills in client interviewing and counseling, writing, and in designing and delivering a presentation.

NTD 409 Prerequisite: Successful completion of NTD 309, with a minimum grade of D-.

Gen Ed Attribute: Speaking Emphasis, Writing Emphasis (select both)

Distance education offering may be available.

**NTD 410. Quantity Food Production. 3 Credits.**

A basic course in quantity food production. Emphasis is placed on the essentials of operating a foodservice facility - menu planning, purchasing, storage, issuing, food production, service, distribution, quality control, and food safety.

NTD 410 Prerequisite: Successful completion of NTD 309, with a minimum grade of D-.

Distance education offering may be available.

**NTD 411. Macronutrients. 3 Credits.**

In-depth examination of the digestion, transport, and metabolism of carbohydrates, lipids, and proteins. Special emphasis is placed on metabolic interrelationships and hormonal control of the three processes mentioned above.

NTD 411 Prerequisite: Successful completion of BIO 269 and NTD 370, with minimum grades of C.

**NTD 413. Medical Nutrition Therapy I. 3 Credits.**

The goal of this course is for the student to understand the nutrition care process as it applies to disease management, develop a variety of disease specific case studies, and the process for determining the appropriate disease or health condition specific nutrition intervention. Students are expected to integrate nutritional assessment information, drug-nutrient interaction data, disease pathophysiology, and Medical Nutrition Therapy principles to design nutrition care plans and apply disease specific medical terminology and abbreviations.

NTD 413 Prerequisite: Successful completion of NTD 381 and NTD 400, with minimum grades of C. Prerequisite or Corequisite: NTD 411, with a minimum grade of C.

**NTD 414. Medical Nutrition Therapy II. 3 Credits.**

The goal of this course is for the student to apply the nutrition care process and MNT principles to critical and acute disease management including fluid/electrolyte/acid-base balance, nutrition support, nutritional therapy in critical care, oncology, pulmonary diseases and muscular skeletal, immunological diseases. The student will develop a variety of disease specific case studies and nutrition interventions. Students are expected to integrate nutritional assessment information; drug-nutrient interaction data, disease pathophysiology, and Medical Nutrition Therapy principles to design nutrition care plan and apply medical terminology and abbreviations.

NTD 414 Prerequisite: Successful completion of NTD 413, with a minimum grade of D-.

Gen Ed Attribute: Writing Emphasis (select both)

**NTD 415. Community Nutrition. 3 Credits.**

A study of the community nutrition programs and services at all levels of development. Course covers nutrition program planning, implementation, and evaluation; socioeconomic and cultural context of programs and services; an examination of the political and legislative process as it relates to nutrition legislation; and the role of the community nutritionist.

NTD 415 Prerequisite: Successful completion of NTD 309, with a minimum grade of D-.

Distance education offering may be available.

**NTD 416. Food Service and Nutrition Systems Management. 3 Credits.**

A study of the organization and administration of foodservice and nutrition systems and the functions and responsibilities specific to management: decision-making, planning, organizing, staffing, directing, controlling operations, budgeting, and marketing. Management of human resources, food, materials, capital, facilities, and markets as related to various foodservice systems will also be examined.

NTD 416 Prerequisite: Successful completion of NTD 410, with a minimum grade of D-.

Distance education offering may be available.

**NTD 420. Perspectives on Obesity. 3 Credits.**

This course explores the prevalence, origins, assessment, treatments, policy issues, and preventive strategies relative to obesity. The issue disordered eating is introduced, with a special emphasis on Binge Eating Disorder.

NTD 420 Prerequisite: Successful completion of NTD 303, with a minimum grade of D-.

Distance education offering may be available.

**NTD 422. Nutrition for Health, Fitness & Sport. 3 Credits.**

This course encompasses nutrition and its effects on health and athletic performance, including sound nutrition guidelines for optimal health and physical performance; energy needs and energy pathways as keys to physical activity; macro and micronutrients relative to health and physical performance; ergogenic aids; hydration; and body composition and weight management.

NTD 422 Prerequisite: Successful completion of NTD 303, with a minimum grade of D-.

**NTD 425. Entrepreneurial Nutrition Management. 3 Credits.**

The course applies entrepreneurial thinking to different foodservice and nutrition business models and how they innovate and take risks to introduce new products and services. With the triple bottom-line in mind, the course examines perspectives through social, environmental, and financial frameworks. Students will analyze the main characteristics of entrepreneurs, notably their ability to imagine changes that will impact the foodservice industry. This course will engage students through lectures, experiential learning opportunities, guest speakers, case studies, readings, individual, and group collaboration. Topics explored will include current trends in the marketplace, analyzing the industry employing the Gaps Model, creating business models, and products and service development. Students will also learn about and utilize social media as future entrepreneurs and managing sustainability.

NTD 425 Prerequisite: Successful completion of NTD 416, with a minimum grade of D-.

Gen Ed Attribute: Speaking Emphasis, Writing Emphasis (select both)

Distance education offering may be available.

**NTD 435. Nutrition Workshops. 3 Credits.**

Special workshops on contemporary nutrition and food service related problems and issues.

Topics announced at times of offering.

Distance education offering may be available.

Repeatable for credit.

**NTD 444. Lifestyle Nutrition Practicum. 3 Credits.**

This course is a required course in the "Lifestyle Nutrition" concentration. It is a capstone course and should be taken senior year. This course aims to provide students with the oral, written and technical skills necessary for effective client and public education. Specifically, practical experience in the classroom and in the field will help the student focus on improving skills in client interviewing and counseling, writing for the lay public, and in designing and delivering a presentation to an audience.

NTD 444 Prerequisite: Successful completion of NTD 309 and NTD 404, with minimum grades of D-.

Gen Ed Attribute: Speaking Emphasis, Writing Emphasis (select both)

Distance education offering may be available.

**NTD 450. Field to Fork Events. 3 Credits.**

In this capstone course, students learn about food system issues with a focus on local food systems. Students engage with industry experts in sustainability, event planning, fundraising, urban farming, and marketing and advertising. The class works with two local organizations to plan a fundraising event: one that is a nonprofit organization that targets food system issues such as hunger and food insecurity; and another organization that is a local food producer (e.g., artisan farm in the Brandywine region). The event raises funds to address local food system issues while marketing and promoting local food products and local food distribution systems. Students learn elements of event planning, budgeting, organizing, human resource management, production management, and marketing. These food management skills are learned in the context of promoting values for local economies, community, fair food systems, sustainability, and the environment. Through experiential learning, students gain knowledge of planning, organizing, and executing a sustainable foods event.

NTD 450 Prerequisite: Successful completion of MGT 200, NTD 325, and NTD 416, with minimum grades of D-.

Gen Ed Attribute: Writing Emphasis (select both)

**NTD 455. Nutrition Assessment, Education and Service in Honduras. 3 Credits.**

This course offers an interprofessional service-learning approach to clinical screenings and assessments, client/community education, and health related service in communities in underdeveloped or developing countries. Students gain exposure to the cultures of communities in underdeveloped or developing countries, thus enhancing the students' cultural competence.

NTD 455 Prerequisite: Successful completion of NTD 303, with a minimum grade of D-.

**NTD 456. Interprofessional Simulation. 3 Credits.**

The primary objective of this course is to examine the interrelationship of various healthcare professions through simulation activities. In this course, students will examine the knowledge, skills, and attitudes needed to establish effective teamwork across healthcare disciplines. Teamwork has been found to be one of the key initiatives within patient safety that can transform the culture of healthcare delivery. Patient safety requires effective communication and other teamwork skills to deliver quality healthcare and to prevent medical errors, patient injury, and harm. To address this, health sciences students will explore a team-based, interdisciplinary, integrative approach to healthcare delivery through online self-study, simulation, debriefing, and self-reflection. Speaking emphasis skills will be assessed during performance of case presentations in simulations and analytical oral interpretations of the performance in debriefing. Students will examine strategies that enhance collaboration, communication, and patient safety, leading to integration of various perspectives into a unified framework of healthcare delivery.

NTD 456 Prerequisite: Successful completion of 60 credits in the Communication Sciences and Disorders, Nursing, or Nutrition majors.

Gen Ed Attribute: Interdisciplinary Requirement, Speaking Emphasis

Distance education offering may be available.

Equivalent courses: NSG 456