

# Dietetics Program

Oklahoma State University

Master of Science in Nutritional Science

Concentration in Dietetics | Requirements | Course Description | Tentative Course Rotation |

This online 36 credit hour Master of Science option in Dietetics program prepares Registered Dietitians to practice dietetics at an advanced level and/or to pursue doctoral study. The program seeks to develop research skills, stimulate independent thought, and provide up-to-date knowledge in foods, nutrition, and food service/business management. This program prepares individuals to integrate and apply the principles from the biomedical sciences, human behavior and management to design and lead effective food and nutrition programs in a variety of settings. The Dietetics Program will be a degree tailored for credentialed, practicing dietitians who seek to enhance their knowledge in a specific area of dietetics practice or retool for new career opportunities in dietetics practice.

While engaging in the Dietetics online program you will:

- Complete a master's degree from a top tier university, taught by some of the best Nutritional Sciences Graduate Faculty in the nation
- Have flexible schedules to meet your busy lifestyle

The Dietetics Program consists of 36 credit hours, including 15 core credits\*, 18 elective credits and 3 Creative Component credits. A faculty advisor and the graduate committee from the Nutritional Sciences department must approve a student's schedule of courses.

- STAT 5013\* - Statistics for Experimenters I
- NSCI 5123\* - Research Methods in Nutritional Sciences
- NSCI 5023\* - Advanced Nutrition and Health Issues
- NSCI 6023 - Macronutrients in Human Nutrition
- NSCI 6123 - Micronutrients in Human Nutrition
- NSCI 5013 - Cost Control in Food Service Systems
- NSCI 5213 - Entrepreneurship in Food Service and Dietetics
- NSCI 5011 - Topics in Nutritional Sciences
- NSCI 5240 - Contemporary Issues in Nutrition: Professional Development
- NSCI 5870 - Problems in Nutritional Sciences: Grant writing
- NSCI 5643 - Advanced Medical Nutrition Therapy
- NSCI 5553 - International Nutrition and World Hunger
- NSCI 5240 - Contemporary Issues in Nutrition: Nutrition in Wellness
- NSCI 5713 - Advanced Community Nutrition
- NSCI 5223 - Advanced Nutrition Across the Life Span
- NSCI 5323 - Nutrition & Physical Activity in Aging
- NSCI 5613 - Nutrition Education
- NSCI 5333 - Human Nutrition and Metabolism
- NSCI 5133 - Advanced Nutrition for Exercise and Sport
- NSCI 6033 - Phytochemicals in Reduction of Chronic Disease
- NSCI 6123 - Micronutrients in Human Nutrition
- NSCI 5373 - Childhood Nutrition
- NSCI 5363 - Maternal & Infant Nutrition
- NSCI 5463 - Advanced Human Nutrition
- NSCI 5870 - Problems In NSCI
- NSCI 6223 - Nutrition And Immunology
- NSCI 6870 - Individual Study In Nutritional Sciences
- NSCI 6453 - Advanced Research Methods In Nutritional Sciences
- NSCI 5563 - Nutrition Assessment
- NSCI 5210 - Contemporary Issues in Food Service
- NSCI 5673 - Management of Human Resources in Health Care
- NSCI 5753 - Management in Health Care Systems
- NSCI 5783 - Food Technology
- NSCI 5863 - Sensory Evaluation of Food
- NSCI 6233 - Critical Analysis of Current Issues in Food Service Administration

Course Descriptions:

STAT 5013 Statistics for Experimenters I

Introductory statistics course for graduate students. Descriptive statistics, basic probability, probability distributions, fundamentals of statistical inference, hypothesis testing, regression, one-way classification, analysis of variance, comparative experiments, correlation and linear regression, introduction to categorical data analysis.

**NSCI 5123 Research Methods in Nutritional Sciences**

Basic components of the research process and the application of various research methods to nutritional sciences. in dietetics, including the use of various research designs for answering research questions, methods for conducting research, evaluation of research articles, development of research proposals, communication of research findings, and demonstration of understanding of ethical issues in research.

**NSCI 5023 Advanced Nutrition and Health Issues**

Analysis of the role of specific nutrients in health maintenance and in prevention of chronic disease. Communication of nutrition information to the public. Specialized Courses

**NSCI 5013 Cost Control in Food Service Systems**

An overview of accounting, cost controls, and financial management in food service. Special emphasis will be placed on understanding the topics and applying them to the theoretical and/or practical research for food service systems.

**NSCI 6023 Macronutrients in Human Nutrition**

This course is designed to give students the opportunity to explore and integrate topics and ideas that are at the forefront of the field of nutritional science. The course will require students to examine topics that are new and/or controversial and have implications that range from the cellular/molecular /biochemical level up to clinical/educational level. The primary goal of this course will be to emphasize the integrative and complex nature of human nutrition research from basic science to clinical studies to population studies and dietary recommendations.

**NSCI 5213 Entrepreneurship in Food Service and Dietetics**

Development and management of small businesses or private practice within the dietetics industry. Business plan development, marketing, cost considerations. Overview of consulting to healthcare and hospitality operations and examination of skills required for success.

**NSCI 6123 Micronutrients in Human Nutrition**

Interrelationships of micronutrients in terms of biochemistry, physiology, genetics, and nutrition. Emphasis will be placed on developing an understanding of how the coordination of structure and function is related to the metabolic needs of the cell and its response to the environment. This integrated approach will form the basis for evaluating the micronutrient needs of humans in both normal and altered metabolic states. Elective Courses

**NSCI 5643 Advanced Medical Nutrition Therapy**

The course will discuss the role of diet in disease including diet as a factor related to prevention of disease or illness, diet as an etiologic agent in illness and diet as a treatment for disease. Medical nutrition therapy is the use of specific nutrition services to treat an illness, injury or condition and involves two phases: 1) assessment and 2) treatment, which includes diet therapy, counseling and/or the use of specialized nutrition supplements.

**Behavior Management Theory (3 credits)**

An in-depth analysis of the development of the behavioral bases of individual and group behavior in business, governmental, educational, and other organizations with emphasis on current research literature and applications.

**Food Production Management (3 credits)**

This course investigates the current state-of-the-art in food production and service systems utilized in a wide variety of food service settings. From the traditional institutional food service setting to fine dining to retail outlets, ever-evolving technology has changed the way we do business. However, we also must recognize that countless professionals work in aging facilities with less than optimal physical plant and equipment. Delivering the best food possible to meet the needs of the patient, client, customer is the mandate of the food service professional.

**Foundations of Leadership (3 credits)**

Study of the key issues in the theory, research, and application of leadership in organizations. This includes defining leadership, understanding situational characteristics that facilitate / hinder effective leadership, understanding effective / dysfunctional leadership, and gaining greater insight into one's own leadership style and functioning.

**Functional Foods for Chronic Disease Prevention (3 credits)**

Integrate and evaluate the regulatory principles, food science, nutrient science and nutritional metabolism for the development of functional foods, nutraceuticals, and dietary supplements for chronic disease prevention.

**NSCI 5870 Problems in Nutritional Sciences: Grant writing**

Grant writing, identifying external funding, managing grants, preparing manuscripts for peer reviewed publication, and preparing papers and poster for presentation at professional meetings.

**NSCI 5753 Management of Health Care Systems**

Comprehensive review of current health care institutions and their response to the economic, social/ethical,

political/legal, technological, and ecological environments. Current issues in today's healthcare environment and challenges, which must be met by healthcare administrators.

#### NSCI 5553 International Nutrition and World Hunger

Advanced study of the magnitude, causes, and nature of hunger and under nutrition in low-income countries; emphasis on programs, policies and planning directed toward alleviating hunger.

#### Leadership Practicum (3 credits)

Develops the connections between leadership theory and practice. By conducting a practicum project, students demonstrate the ability to apply concepts and ideas from the study of leadership to a practical leadership problem within an organization. Pr.: Foundations of Leadership.

#### Managerial Finance I (3 credits)

Introduction to the process of value creation. Development of an understanding of the environment in which firms operate, including a discussion of financial markets and institutions and valuation of financial assets. Provides a working knowledge of the financial system and analytical tools for decision-making. Pr.: Accounting Concepts and Analysis.

#### Marketing Concepts and Research (3 credits)

Presents marketing concepts and marketing research concepts at the graduate level. Emphasis is directed toward managerial strategy development using marketing theories and applied marketing research techniques. Pr.: Three hours of economics, three hours of statistics, and calculus.

#### NSCI 5363 Maternal and Child Nutrition

This course is a critical examination of behavioral, physiological, and public health issues impacting dietary and nutritional factors that support normal growth and development. The course content focuses on the early stages of the life cycle: gestation, lactation, infancy, preschool, school age and adolescence. Topics include the fetal programming hypothesis, growth and nutritional requirements, breast and formula feeding of infants, infant weaning, and eating behaviors that lead to normal growth, growth faltering, and pediatric obesity.

#### NSCI 5223 Advanced Nutrition Across The Life Span

The influence of normal physiological stresses on nutritional needs throughout the life span will be explored. Evaluating dietary intake and identifying appropriate community nutrition services will be included in the on-line discussions. Specific considerations, such as the influence of age and cultural heritage, will be incorporated. An opportunity will be given to each student to plan, present, and evaluate a mini nutrition education lesson.

#### NSCI 5133 Advanced Nutrition For Exercise And Sport

This course is designed to develop an understanding of nutrition, based upon knowledge of the biochemical and physiological process and functions of specific nutrients in meeting nutritional requirements. Emphasis will be placed upon the relationship of optimal nutrition and physical efficiency and performance.

#### NSCI 5323 Nutrition and Physical Activity in Aging

This course identifies the basic physiological changes during aging and their impacts in health and disease. The focus will be on successful aging with special emphasis on physical activity and nutrition. Practical application to community settings is addressed.

#### NSCI 5613 Nutrition Education

Nutrition education for groups and individuals in clinical and community settings. Includes discussion and experience in applying learning theory, assessing educational needs, stating goals and objectives, selecting learning activities, implementing and evaluating instruction, and documenting care provided.

#### NSCI 5713 Advanced Community Nutrition

Principles and practices of teaching individuals and groups to translate nutrition knowledge into action. Emphasis on research in and evaluation of nutrition education.

#### NSCI 5240 Contemporary Issues In Nutrition: Nutrition in Wellness

Course will address wellness promotion through nutrition. Nutritional risk and protective factors will be examined as they relate to public health and individual nutrition.

#### Obesity across the Life span (3 credits)

Exploration of the affects that obesity has on public health, the healthcare system, and society in general. Overview of strategies to prevent obesity across the life span

#### Operations Management and Analysis (3 credits)

The study of the role of operations systems in the provision of value for the customer. Operations systems design;

capacity determination, resource requirements planning and control, theory of constraints, supply chain management, quality management and control and project management are discussed and analyzed. Pr.: Basic graduate statistics course

#### NSCI 5373 Pediatric Clinical Nutrition

This course examines the physiological, biochemical and nutritional aspects of disease processes relevant to infants and children up to 18 years of age. Medical nutrition therapy for a variety of medical conditions found in this population will be discussed including inborn errors of metabolism, food hypersensitivity, obesity, and diseases of the major organ systems.

#### NSCI 6033 Phytochemicals In Reduction Of Chronic Disease

The course is an overview on phytochemical(non-nutritive biologically active compounds) from fruits, vegetables, cereals and oilseeds. It will cover recent findings on chemistry, physiological functions, and potential health implications of phytochemicals.

#### NSCI 6123 Micronutrients in Human Nutrition

The study of the functional roles of vitamins and minerals in human nutrition. Course content will include: identification of essential functions for the vitamins and minerals; health implications of varying amounts vitamins and minerals in the diet; interactions between vitamins; interactions between minerals; vitamin and mineral interactions and the process of establishing nutrient requirements.

#### Tentative Course Rotation:

Fall 2008

NSCI 5323 Nutrition and Physical Activity in Aging  
STAT 5013 Statistics for Experimenters I

Spring 2009

NSCI 5123 Research Developments in Nutritional Sciences  
STAT 5013 Statistics for Experimenters I

Dietetics is one of the most dynamic and versatile of the health-related professions. Food, and the nutrition derived from it, is at the heart of dietetics practice. Registered dietitians work in a myriad of ways to meet the food and nutrition needs of individuals, organizations, and society as a whole.

Registered Dietitians may be found working in the public health arena, in the food service industry and as entrepreneurs in the private sector. The expertise of the Registered Dietitian as a food and nutrition expert serves as the foundation for building a career with endless possibilities.

Visit the website of the American Dietetic Association for further information about the profession of dietetics at: <http://eatright.org/cps/rde/xchg/ada/hs.xsl/career.html>. To learn more about the breadth of the profession, you can view the 29 Dietetics Practice Groups (DPG) within the American Dietetic Association by visiting: [http://eatright.org/cps/rde/xchg/ada/hs.xsl/career\\_481\\_ENU\\_HTML.htm](http://eatright.org/cps/rde/xchg/ada/hs.xsl/career_481_ENU_HTML.htm).