

# DIETETICS AND NUTRITION (NFS)

## NFS 100 INTRODUCTION TO FOOD PREPARATION 3, 2/2

A study of the composition of food and scientific principles of food preparation and cookery. Students learn food selection, storage, and preparation skills. Lab included. Offered spring only.

## NFS 102 INTRODUCTORY NUTRITION 3, 3/3; NS23

A basic science in human nutrition focuses on knowledge of chemical structure, dietary sources, requirements, functions, digestion, absorption, transportation, utilization, and excretion of essential nutrients and other substances. Offered every semester.

## NFS 105 FOOD AND PEOPLE 3, 3/0

The use of technology and science for food production, preservation, processing, and safety profoundly influences nutritional, economic, social, ethical, legal, and personal issues. Concerns about the impact of technology on environment, health, culture, and hunger/malnutrition are addressed. Course prepares students to understand the concepts of food, nutrition, food culture, and food safety for optimal health. Offered every semester.

## NFS 108 FOOD CULTURE AND CIVILIZATION IN THE FAR EAST 3, 3/0; GA23

A study of food culture in context with civilizations of the Far East. Focuses on the relationship between the development of food habits/culture and civilization as influenced by political, socioeconomic and cultural factors, and international relations. Offered every semester.

## NFS 110 APPLIED PRINCIPLES OF MANAGEMENT IN DIETETICS/FOOD SERVICES 3, 3/0

Management principles and concepts explored through class assignments that simulate real-world situations and prepare students for advanced study and application in management. Offered every semester.

## NFS 189 TOPICS COURSE 1-3, 1/0

Current topics in dietetics and nutrition. Offered occasionally.

## NFS 200 APPLIED FOOD CHEMISTRY 1, 0/2

Prerequisites: NFS 100, NFS 102, CHE 112. This course will examine food and the ways it is modified based on food trends. Types of evaluation techniques such as recipe analysis, recipe adaptation and market surveys will be examined. Labwork will explore the application of sensory evaluations and chemical analyses to recipes. Offered spring only.

## NFS 210 FOOD SERVICE SYSTEMS MANAGEMENT IN HEALTH CARE 3, 3/0

Prerequisite: NFS 110. In-depth analysis of the procurement process, menu development, food production and delivery, quality standards, and financial management of food service systems and related subsystems. Offered fall only

## NFS 211 APPLIED MANAGEMENT IN DIETETICS I 3, 3/0

Prerequisites: Majors only. Second of a three course sequence. Focuses on concepts and practices consistent with the practice of human resource management, financial management, safety, and infection control as they apply to health care food service management. Assignments prepare students to become skilled in specific areas of dietetics practice and food service management. Offered spring only.

## NFS 230 INTRODUCTION TO DIETETICS 2, 0/0

Overview of the dietetics profession: career options, professional development, career portfolio development, professional organization, code of ethics, standards of practice, professional values, creativity, Academy of Nutrition and Dietetics position papers, introduction to legislative process, professional issues and trends, and professional references and resources. Offered fall only.

## NFS 280 INTRODUCTION TO COMPLEMENTARY AND ALTERNATIVE MEDICINE 3, 3/0

Prerequisite: NFS 102. Introduction to complementary and alternative medicine (CAM), integrative and functional medicine, CAM modalities that include mind-body medicine, naturopathy of herbs and dietary supplements, and physical medicine for prevention of chronic diseases. Review on the regulatory and legal policies on the use of CAM therapies and products. Offered occasionally.

## NFS 300 FOOD PROCESSING I 2, 2/0

Prerequisite: NFS 200. A study of the commercial food preservation and packing techniques, storage, food safety and food laws, and genetic engineering. Offered fall only.

## NFS 302 ADVANCED NUTRITION 3, 3/0

Prerequisites: NFS 102, CHE 112, CHE 201 CHE 203, BIO 308. Recommended co-requisite: CHE 322. Integrates the sciences of inorganic chemistry, organic chemistry, anatomy, physiology, genetics and human nutrition. Preparatory course for Medical Nutrition Therapy including the study of macronutrient and micronutrient metabolism, nutrient control of gene expression, energy metabolism and physiologic role of fiber. Offered spring semester only.

### NFS 310 PERSONNEL MANAGEMENT IN DIETETICS/ FOOD SERVICES

3, 3/0

Prerequisite: NFS 210. Management concepts and practices consistent with the management of human resources in a health care organizational setting. The application of operational strategy in terms of fulfilling the mission of an organization competing in today's market. Offered spring only.

### NFS 311 APPLIED MANAGEMENT IN DIETETICS II

3, 3/0

Prerequisites: NFS 211. Majors only. Third of a three course sequence. Focuses on food service systems and related subsystems involving an in-depth analysis of menu development and modification for disease states. Procurement, food production, distribution and service, food safety, and facility design.

### NFS 315 LIFE CYCLE AND COMMUNITY NUTRITION I

3, 3/0

Prerequisites: NFS 102. A study of the physiological changes during pregnancy, lactation, and older adult aging; growth and development during infancy, preschool, school age and adolescence; the food and nutrition needs, specific nutritional concerns and nutritional services and nutritional programs available. Offered spring only.

### NFS 316 LIFE CYCLE AND COMMUNITY NUTRITION II

3, 3/0

Prerequisites: NFS 315. A study of the nutritional issues and chronic disease prevention in adult life; community nutrition services available to adults and identifying and developing community nutrition programs. Offered fall only.

### NFS 330 INTEGRATIVE AND FUNCTIONAL NUTRITION

1, 1/0

Prerequisites: NFS 102 or equivalent and NFS 401 or permission of instructor. A one-credit course provides an introduction to integrative and functional nutrition (IFN) and complementary and alternative medicine (CAM). The course focuses on dietary supplements that include vitamins, minerals, functional foods, phytochemicals, nutraceuticals for disease prevention and treatment. An emphasis will be given to the regulatory (legal, ethical and moral) issues of dietary supplements. The goal of the course is to prepare students to have competency in IFN as a part of medical nutrition therapy. Offered spring only.

### NFS 334 CONTEMPORARY NUTRITION

3, 3/0

Explanation of nutrition. The functions, requirements, food sources, and results of deficiency and excess for each nutrient. Topics of current interest, such as weight control. Food fads and government nutrition policies. Not open to dietetics majors.

### NFS 389 TOPICS COURSE

1-3, 1/0

Current advanced topics in nutrition and dietetics. Offered occasionally.

### NFS 401 MEDICAL NUTRITIONAL THERAPY I

4, 4/0

Prerequisites: NFS 302, CHE 322, BIO 308, BIO 309. First of four course sequence examining interrelationships of pathophysiology, biochemistry, genetics and nutrition as related to medical nutritional therapy. Emphasis will be given to the nutrition care process, nutritional assessment and role of nutrition in preventing and treating diseases/disorders: obesity/weight management, cardiovascular disease, drug-nutrient interactions, and disordered eating. Offered fall only.

### NFS 402 MEDICAL NUTRITIONAL THERAPY II

3, 2/2

Prerequisites: NFS 401 and for DEP co-requisite NFS 446. Second of a three course sequence examining the interrelationships of pathophysiology, biochemistry, genetics and nutrition as related to medical nutritional therapy. Emphasis on role of nutrition in preventing and treating disease/disorders: diabetes mellitus, hypoglycemia, renal, dysphagia, chronic obstructive pulmonary disease, and cystic fibrosis. Offered spring only.

### NFS 403 MEDICAL NUTRITIONAL THERAPY III

3, 2/2

Prerequisites: NFS402 and for DEP co-requisite NFS 447. Third of a three-course sequence examining the interrelationships of pathophysiology, biochemistry, genetics, and nutrition as related to medical nutritional therapy (MNT). Addresses MNT for cancer, upper and lower gastrointestinal (GI) disorders, exocrine pancreas, hepatobiliary, and pulmonary disease, metabolic stress (including sepsis, SIRS, head trauma, and burns), acid/base disorders, acquired immune deficiency syndrome (AIDS), parenteral and enteral nutrition. Offered fall only.

### NFS 405 PRINCIPLES OF NUTRITION EDUCATION

2, 1/2

Prerequisites: NFS 316 and NFS 401. Theories and methods of learning communication, and counseling as they apply to nutrition education and counseling settings; development, implementation, and assessment of instructional unit utilizing various forms of multimedia. Offered spring only.

### NFS 411 APPLIED MANAGEMENT IN DIETETICS

2, 1/2

Prerequisites: NFS 311. Majors only. Focuses on the principles of health care quantity recipe development, therapeutic modification of recipes and food production, with hands on food preparation opportunities. Students will learn the importance of facility equipment and design. Students will be taught principles of food safety and become ServSafe® certified.

### NFS 419 INTRODUCTION TO CLINICAL PRACTICE

2, 2/0

Introduction to medical terminology and abbreviations, use of medical records, medical- record documentation, applying principles of interviewing and counseling to clinical practice, usual hospital diets, and reimbursement for nutritional therapy. Offered fall only.

### NFS 420 DIETETIC EXPERIENCE

3, 1/0

Prerequisites: NFS 403. Formalized observation/experience in a variety of health care settings such as clinical, community, food service, regulatory agencies, etc.; research paper and consumer education. Offered spring only.

**NFS 430 INTRODUCTION TO NUTRITION RESEARCH**  
3, 3/0; IN23, RE23

Prerequisites: NFS 402, MAT 311 or ECO 305. An introduction to nutrition research. Students explore various research designs and characteristics of quantitative nutrition studies. Places emphasis on the evidence analysis process with regard to clinical trials and use of information technologies to locate and apply evidence-based guidelines. Offered fall only.

**NFS 435 SENIOR RESEARCH SEMINAR**  
2, 2/0

Prerequisites: NFS 403 and NFS 430. This course explores scientific literature in nutrition including an analysis of the creation of evidence-based guidelines and research presentation formats. Focuses on using literature reviews to apply critical thinking in clinical practice. Offered every spring.

**NFS 445 NUTRITION CARE A**  
3, 0/2

Prerequisites: NFS 302, NFS 315. Corequisites: NFS 316, NFS 401. First in a series of nutritional care courses promoting professional development for dietetic practice. Emphasis on basic skills for a professional role and application of normal nutrition knowledge. Interviewing skills, use of dietary tools and techniques, and planning and teaching nutrition education classes are fostered through observation and practice. Clinical experiences with well individuals throughout the life span provide opportunities for learning and self-evaluation. Clinical dress code required. Offered fall only.

**NFS 446 NUTRITION CARE B**  
3, 0/0

Prerequisite: NFS 445. Corequisite: NFS 402. Second in a series of supervised experiential learning clinical courses organized into three rotations. Students implement the nutrition care process with beginning skills in pediatric acute care, adult tertiary care, and community nutrition counseling settings. Students practice communication appropriate for health care settings. Clinical dress required. Offered every spring.

**NFS 447 NUTRITION CARE C**  
4, 0/0

Prerequisite: NFS 446. Corequisite: NFS 403. Third in a series of experiential learning clinical courses focusing on medical nutrition therapy. Implementation of the nutrition care process with intermediate level skills. Organized in three health care settings. Application of medical nutrition therapy, interprofessional communication, nutrition counseling strategies, and beginning skills in parenteral/enteral nutrition. Clinical dress required. Offered every fall.

**NFS 448 NUTRITION CARE D**  
5, 1/0

Prerequisites: NFS 403 and NFS 447. The fourth in a series of supervised experiential learning clinical nutrition care courses. Emphasis on independence in applying evidence-based medical nutrition therapy including nutrition education to patients in an acute care setting. Clinical experiences include parenteral and enteral nutrition. Clinical dress required. Offered every spring.

**NFS 449 NUTRITION CARE E**  
3, 0/0

Prerequisites: NFS 447. Students provide nutritional care to chronically ill residents in a long-term-care facility, conduct quality improvement evaluations, collaborate with the health - care team, present a group nutrition education class, and attend seminar sessions. For students in the Dietetics Combined Pathway B.S. and M.S. only. Offered every spring.

**NFS 450 SENIOR PRACTICUM IN DIETETICS**  
4, 0/0

Prerequisites: NFS 447 and clinical faculty permission. Co-requisites: NFS 448, NFS 449, and NFS 451. Supervised planning, implementation, and evaluation of professional practice goals in a selected area of dietetic practice, such as acute care, long-term care, nutrition education, or community-service programs; minimal supervision. Clinical dress code required. Offered spring only.

**NFS 451 SPECIALTY PRACTICE**  
1, 0/3

Prerequisites: NFS 447 and co-requisites NFS 448, NFS 449, and NFS 450. Participation in dietetic practice for a selected area. Clinical dress code required. Offered spring only.

**NFS 471 EXPERIENCES IN HEALTH CARE FOOD SERVICE SYSTEMS**  
3, 3/0

Prerequisite: NFS 311. Permission of instructor. Application of knowledge and principles of food systems management in a health care facility. Emphasis on functions of a food service system, human resource management, quality assurance program, and cost analysis activities. Clinical dress code required. Offered summer only.

**NFS 495 SPECIAL PROJECT**  
1-3, 0/0

Special project in Dietetics and Nutrition.

**NFS 497 MICRO-COURSE: "PANACHE"--THE FOOD SERVICE PROFESSION**  
2, 0/0

Special workshop in Dietetics and Nutrition.

**NFS 499 INDEPENDENT STUDY**  
3-12, 0/0

Offered occasionally.

**NFS 500 MACRONUTRIENTS**  
3, 2/0

Prerequisites: Undergraduate coursework in nutrition, biochemistry, and physiology or instructor permission. Proteins, carbohydrates, and lipids, with an emphasis on metabolism and interrelationships with other nutrients.

**NFS 501 MICRONUTRIENTS**  
3, 0/0

Prerequisites: Undergraduate coursework in nutrition, biochemistry, and physiology or instructor permission. Vitamins and minerals with emphasis on functional roles in metabolism, interrelations, and nutritional significance.

### **NFS 503 NUTRITIONAL INTERVENTION IN DISEASE STATES**

3, 0/0

Multisystemic view of the physiologic and biochemical alterations in disease states requiring dietary modifications; current theories of dietary treatment in light of epidemiologic data, current scientific research, and factors affecting an individual's ability to carry out the necessary modifications; altered regulatory mechanisms, including interrelations of medications and other treatments with nutritional status and dietary intake.

### **NFS 506 PRINCIPLES OF HUMAN NUTRITION**

3, 3/0

Prerequisites: Graduate standing. Principles of human nutrition with emphasis on the functions of macronutrients and micronutrients and dietary sources, as well as their digestion, absorption, and metabolic processes. Biological determinants of nutrient requirements and the assessment of nutrient status in individuals and populations. Role of diet in health and prevention of chronic disease; applications for students contemplating careers in the health professions. Offered every semester.

### **NFS 510 NUTRITION EDUCATION**

2, 2/0

Prerequisites: Undergraduate or graduate coursework in nutrition or instructor permission. Apply principles of nutrition by designing effective nutrition education programs. Utilize learning and behavior change theories to affect nutrition education that promotes adoption of lifelong healthy behaviors. Design effective nutrition-based health promotion materials. This course is two hours to provide health professionals with instruction on designing effective nutrition education programs while working in the field and meeting the curriculum roadmap of the program. Offered every semester.

### **NFS 550 GRADUATE PRACTICUM IN DIETETICS**

3, 0/0

Prerequisites: NFS 448 and clinical faculty permission; graduate status. Plan, implement, and develop a dietetics practicum and evaluation tool for student performance in a selected area of dietetic practice such as acute care, long-term care, nutrition education, or community service programs. Ability to practice independently with minimal supervision required. Offered every spring.

### **NFS 571 EXPERIENTIAL LEARNING IN FOOD SERVICE SYSTEMS IN HEALTH CARE**

3, 0/0

Prerequisite: NFS 311 and graduate status, or instructor permission. Food systems management in healthcare facilities. Emphasis on sustainable production and distribution of quantity food products; purchasing, receipt, and storage of products used in food production and related understanding of agricultural practices; and application of principles of food safety and related risk management. Offered every summer.

### **NFS 590 INDEPENDENT STUDY**

1-3, 0/0

### **NFS 594 GRADUATE WORKSHOP**

1-3, 0/0

Graduate workshop in Dietetics and Nutrition.

### **NFS 598 MICRO-COURSE**

3, 0/0

Graduate-level micro-course in Dietetics and Nutrition.

### **NFS 601 LEADERSHIP AND PROJECT MANAGEMENT IN DIETETICS**

3, 3/0

Prerequisite: Instructor permission. Leadership and project management applied in clinical nutrition, private practice, community nutrition and food service management. Competency-based learning using skills, tools, and techniques required in the life cycle of a nutrition project, including project selection, planning, staffing, task scheduling, budgeting, risk management, and quality improvement. Exploration of nutrition informatics in executing nutrition projects. Offered every summer.

### **NFS 604 ADVANCES IN FOOD RESEARCH**

2, 2/0

Prerequisite: Undergraduate coursework in food, food preparation, or food science or instructor permission. Current methods of foods preservation, processing, packaging, and storage; new food products; processing trends in the food industry.

### **NFS 605 CURRENT TRENDS IN NUTRITION**

3, 3/0

Prerequisites: Undergraduate (NFS 102 or equivalent) or graduate level nutrition course (NFS 506 or equivalent). Current trends in nutrition, including dietary guidelines, fad diets, and public health nutrition policies and initiatives. Evidence-based nutrition education programs for communities. Offered every semester.

### **NFS 607 EXPERIENTIAL LEARNING IN WEIGHT MANAGEMENT AND DIABETES PREVENTION AND TREATMENT**

3, 3/0

Prerequisites: Undergraduate coursework medical nutrition therapy and instructor permission. Pathophysiology, prevention, and treatment of obesity and diabetes. Techniques for measuring body composition and energy expenditure examined. Includes selected content for the interdisciplinary obesity and weight management certification and for the certified diabetes educator credential. Employs competency-based education (CBE). Offered every fall.

### **NFS 609 EXPERIENTIAL LEARNING IN ADVANCED MEDICAL NUTRITION THERAPY**

3, 3/0

Prerequisites: NFS403 and NFS430. Applies evidence analysis process in evaluating medical nutrition therapies (MNT). Explores MNT outcomes for malnutrition MNT in acute and long term care, and community settings. Includes selected content for the certified nutrition support clinician credential: e.g., parenteral electrolytes and glucose management. Employs competency-based education (CBE). Offered every Fall semester.

### **NFS 612 NUTRITION COUNSELING**

3, 3/0

Prerequisite: Undergraduate coursework in nutrition counseling and medical nutrition therapy and instructor permission. Evidence-based practice in nutrition consultation related to models of cultural competence, nutrition counseling strategies, models of emotional intelligence, processes for coding and billing for nutrition services, and utilization of nutrition informatics. Employs competency-based education. Offered every spring.



### NFS 615 NUTRITION EDUCATION PRACTICUM

1, 0/3

Prerequisites: NFS 510 and instructor permission. Application of the principles of nutrition education learned in NFS 510 by designing, presenting, and evaluating a nutrition education project.

### NFS 620 EXPERIENTIAL LEARNING IN NUTRITION

1-3, 1/0

Prerequisites: NFS 510 or instructor permission. Applying knowledge and skills of nutrition in community health settings. Emphasis on planning, implementing, and evaluating community nutrition programs. Application of nutrition and health principles to create changes in knowledge, attitudes, behavior and health outcomes among individuals, families or target groups in community settings. Offered every semester.

### NFS 634 NUTRITION AND GERONTOLOGY

3, 3/0

Prerequisite: Undergraduate coursework in medical nutrition therapy, nutrition in the lifecycle, or instructor permission. Examination of the nutritional needs of aging and individuals in later maturity and palliative care. Examine the nutritional needs and complications of nutritional deficiency and disease in later life. Specific nutritional concerns in aging populations and community nutrition services available. Offered annually.

### NFS 689 METHODS OF NUTRITIONAL RESEARCH

3, 3/0

Prerequisites: Graduate status, undergraduate coursework in nutrition research and medicine therapy, instructor permission. Advanced knowledge of nutrition research design; planning, collection, treatment, and interpretation of research data; application of nutrition research methods and statistical analysis as related to the development of a nutrition research proposal. Students develop a proposal for individual research projects. Offered every spring.

### NFS 690 MASTER'S PROJECT

3, 0/0

Prerequisite: Instructor permission. A project undertaken by one or more individuals on a problem of special interest, planned and carried out with consultation and guidance from the instructor.

### NFS 695 MASTER'S THESIS

1-3, 0/0

Individual investigation of an original problem submitted in acceptable form according to directions given by the Graduate School.

### NFS 721 THESIS/PROJECT CONTINUATION

0, 0/0

### NFS 722 THESIS/PROJECT EXTENDED

0, 0/0