**NUTR - Nutrition**

**NUTR 221CS. Basic Human Nutrition. 3 Credits. (3 Lec) ES,Su**  
Basic concepts of human nutrition which include carbohydrates, lipids, proteins, vitamins, minerals, absorption, digestion, metabolism, and energy utilization as they relate to health and food consumption at different stages of the life cycle.

**NUTR 226. Food Fundamentals. 3 Credits. (3 Lec) F**  
S PREREQUISITE: NUTR 221CS. Principles of food composition, preparation, selection, food safety and storage with special reference to physical and chemical changes which occur during normal food handling. Includes an introduction to meal planning, sensory evaluation, and cultural food perspectives.

**NUTR 227. Food Fundamentals Lab. 2 Credits. (1 Lec, 1 Lab) ES**  
PREREQUISITE: NUTR 221CS. Practical experiences which illustrate the principles of ingredient functionality, methods of preparation, preservation, food safety and sensory evaluation. Utilizes knowledge from NUTR 226.

**NUTR 292. Independent Study. 1-3 Credits. (1 Ind; 6 cr max) ES,Su**  
PREREQUISITE: Consent of instructor and approval of department head. Directed research and study on an individual basis.

**NUTR 301. Food and Culture. 3 Credits. (3 Lec) F**  
PREREQUISITES: NUTR 221CS, NUTR 226, and NUTR 227. Food is an essential component of life and livelihoods everywhere. However, food patterns vary across the globe. Students will build cultural competency by examining and experiencing the concurrent influences of food and culture over the course of history.

**NUTR 321. Nutrition in the Life Cycle. 3 Credits. (3 Lec) F**  
S PREREQUISITE: NUTR 221CS. Nutritional needs and health concerns during the different stages of life: pregnancy, lactation, infancy, preschool years, middle childhood, adolescence, adulthood, and later maturity. Major service-learning project with agencies offering nutrition services.

**NUTR 322. Food Service System Management. 3 Credits. (3 Lec) F**  
PREREQUISITE: NUTR 221CS, NUTR 226, and NUTR 227 or consent of instructor. Principles of quantity food procurement, production, and presentation. Emphasizes food safety and sanitation principles and organizational management for food and nutrition professionals.

**NUTR 351. Nutrition and Society. 3 Credits. (3 Lec) ES,Su**  
PREREQUISITE: NUTR 221CS. Social and cultural, economic, policy, and environmental factors in the community influencing nutritional status, and public health, techniques to assess community nutritional needs, and methodology for designing, implementing, and evaluating community nutrition programs, practices, and policies. Major service-learning project completed for a public or private agency.

**NUTR 395. Pract Quant Foods Prod & Mgmt. 3 Credits. (1 Lec, 2 Lab) S**  
PREREQUISITE: NUTR 221CS, NUTR 226, NUTR 227, and NUTR 322 or consent of instructor. Hands-on food lab experience in culinary purchasing, production, analysis, and presentation activities. Applied food safety and sanitation principles. Application of organizational management theories in culinary businesses.

**NUTR 401. Nutrition Assessment/Counsel. 3 Credits. (3 Lec) S**  
PREREQUISITE: NUTR 221CS, NUTR 321 junior standing or consent of instructor. Theory and application of the nutritional assessment process. Anthropometric, biochemical, clinical, dietary, and medical charting. Utilizes computer dietary analysis and other laboratory procedures. Principles and application of counseling skills.

**NUTR 411. Nutrition for Sports/Exercise. 3 Credits. (3 Lec) ES**  
PREREQUISITE: KIN 221 or BIOH 201, and NUTR 221CS and junior standing. Nutrition for physical activity, sport performance, health and fitness. Nutritional needs are discussed for endurance, strength, low-body weight, team sport athletes and other physically active people. Energy balance and weight management examined.

**NUTR 421. Macronutrient Metabolism. 3 Credits. (3 Lec) F**  
PREREQUISITE: NUTR 221CS, BCH 380, BIOH 211. Digestion, absorption, and metabolism of macronutrients, metabolic pathways utilizing carbohydrates, fats, and proteins, and changes that occur in metabolism under different physiological conditions.

**NUTR 422. Micronutrient Metabolism. 3 Credits. (3 Lec) S**  
PREREQUISITE: BCH 380, BIOH 211, NUTR 221CS. Digestion, absorption, and metabolism of micronutrients, metabolic roles of vitamins and minerals, and changes that occur in metabolism under different physiological conditions.

**NUTR 425. Medical Nutrition Therapy I. 3 Credits. (3 Lec) F**  
PREREQUISITE: NUTR 401 or consent of instructor. Examination of metabolic and physiological changes in selected conditions and implications for medical nutrition therapy. Extensive case studies utilized to facilitate critical thinking for appropriate nutritional care.

**NUTR 426. Medical Nutrition Therapy II. 3 Credits. (2 Lec) S**  
PREREQUISITE: NUTR 401, NUTR 425, or consent of instructor. Application of principles of clinical nutrition. Further development of critical thinking skills and application of medical nutrition therapy concepts in the nutrition care process format.

**NUTR 430. Food Processing. 3 Credits. (3 Lec) S**  
PREREQUISITE: NUTR 221CS, NUTR 226, NUTR 227, or consent of instructor. Food processing is critical to the safety, quality, and innovation of food products. From home-based food business to global food corporations, utilizing proper processing techniques for food production is crucial to the success of food enterprise. This course focuses on the impacts of thermal and non-thermal processing treatments on the microbiological, nutritional, and sensory qualities of food products. Required and recommended processing practices to meet the safety regulations and quality standards are discussed for the different food product categories. Students will be able to formulate a food processing plan to address the safety and quality goals of a chosen food product.

**NUTR 435. Experimental Foods. 3 Credits. (3 Lec) F**  
PREREQUISITES: NUTR 221, NUTR 226, NUTR 227, STAT 216Q OR BIOI 318, NUTR 430. This course introduces the principles and procedures of food experiments including sensory, shelf life, and proximate analyses following current food regulations and standards.

**NUTR 490R. Undergraduate Research. 1-6 Credits. (1 Ind; 12 cr max) ES,Su**  
PREREQUISITE: Consent of instructor. Directed undergraduate research/creative activity which may culminate in a research paper, journal article, or undergraduate thesis. Course will address responsible conduct of research. May be repeated.

**NUTR 491. Special Topics. 1-4 Credits. (1-4 Ind; 12 cr max) On Demand**  
PREREQUISITE: Course prerequisites as determined for each offering and consent of instructor. Courses not required in any curriculum for which there is a particular one-time need, or given on a trial basis to determine acceptability and demand before requesting a regular course number.

**NUTR 492. Independent Study. 1-3 Credits. (1-3 Ind; 6 cr max) On Demand**  
PREREQUISITE: Senior standing. Preparation of an application for a dietetic internship or graduate program. Emphasizes resume and portfolio development, ethics, professionalism, and interviewing.

**NUTR 496. Practicum Food Product Development. 1-3 Credits. (1 Lec, 2 Lab) S**  
PREREQUISITE: NUTR 325 or NUTR 435 or consent of instructor. Course discusses the principles and benchmarks of food product development, from ideation, formulation, cost analysis, sensory and texture testing, scaling-up technique, safety, and marketing planning, to processing, labeling, packaging, and launch.

**NUTR 498. Internship. 2-12 Credits. (2 Ind) On Demand**  
PREREQUISITE: Consent of internship director in academic area. An individualized professional assignment arranged for specific discipline. Some academic areas will offer specific sections in sequence for their students. All students must receive department permission prior to registration, and register for a senior seminar in their major area.

**NUTR 499. Capstone for Dietetics. 1 Credit. (1 Sem) S**  
PREREQUISITE: NUTR 425, COREQUISITE: NUTR 426 or consent of instructor. Emphasizes the use of evidence based research, professional communication skills, effective counseling and behavior change techniques in a wellness setting. Focuses on contemporary issues and future trends in the field of dietetics.

**NUTR 511. Exercise Metabolism and Health. 3 Credits. (3 Lec) S**  
Alternate years to be offered even years PREREQUISITE: Knowledge in areas of anatomy and physiology, upper division courses in one or combination of: exercise physiology, biochemistry, or nutrition. This course examines how cellular demands influence the need for carbohydrates, amino acids, lipids, vitamins, and minerals, how the availability of these nutrients influences adaptations, and the influence of these adaptations on exercise performance and disease risk.

**NUTR 520. Advanced Diet and Disease Systems. 3 Credits. (3 Lec) F**  
PREREQUISITES: Graduate standing in Dietetic Systems MS and Internship program. Community and population nutrition health theories as related to nutrition-based intervention, education and program planning toward a goal of disease prevention and health promotion.
NUTR 524. Adolescent Nutrition. 2 Credits. (2 Lec) S
This is an online course designed to provide teachers strategies for incorporating nutrition education into their curriculum. Course participants explore nutrition science relevant to adolescent health, gain exposure to quality education resources and investigate school wellness issues and strategies.

NUTR 526. Nutrition for Fitness/Perform. 3 Credits. (3 Lec) F
PREREQUISITE: NUTR 221CS, BIOH 211, CHMY 121, BCH 380. Examine energy metabolism and physical activity. Use nutrition strategies to meet the energy, power output, and nutrient demands of exercise, and athletic performance. Examine behavioral relationships that affect fitness and health, including disordered eating and the female athlete triad, evaluation of nutrition information and dietary supplements, with extensive use of internet resources.

NUTR 575. Research/Prof Paper/Project. 1-3 Credits. (1-3 Ind; 6 cr max) FS,Su
PREREQUISITE: Graduate standing. A research or professional paper or project dealing with a topic in the field. The topic must have been mutually agreed upon by the student and his or her major advisor and graduate committee.

NUTR 588. Professional Development. 1-3 Credits. (1-3 Lec; 3 cr max) On Demand
PREREQUISITE: Graduate standing, teaching experience and/or current employment in a school organization, and consent of instructor. Courses offered on a one-time basis to fulfill professional development needs of in-service educators. A specific focus is given to each course which is appropriately subtitled.

NUTR 589. Graduate Consultation. 1-3 Credits. (1-3 Ind; 3 cr max) FS,Su
PREREQUISITE: Graduate standing in nutrition major. This course may be used only by students who have completed all of their course work (and thesis if on a thesis plan) but who need additional faculty or staff time or help.

NUTR 590. Master’s Thesis. 1-10 Credits. (1-10 Ind; max unlimited) FS,Su
PREREQUISITE: Master’s standing. Directed graduate research/creative activity.

NUTR 591. Special Topics. 1-4 Credits. (1-4 Lec; 12 cr max) On Demand
PREREQUISITE: Upper division courses and others as determined for each offering. Courses not offered in any curriculum for which there is a particular one time need, or given on a trial basis to determine acceptability and demand before requesting a regular course number.

NUTR 592. Independent Study. 1-3 Credits. (1-3 Ind; 6 cr max) FS,Su
PREREQUISITE: Graduate standing, consent of instructor, approval of department head and Dean of The Graduate School. Directed research and study on an individual basis.

NUTR 594. Seminar. 1 Credit. (1 Sem; 4 cr max) On Demand
PREREQUISITE: Graduate standing or seniors by petition. Course prerequisites as determined for each offering. Topics offered at the graduate level that are not covered in regular courses. Students participate in preparing and presenting discussion material.

NUTR 598. Internship. 2-12 Credits. (2-12 Ind; 12 cr max) FS,Su
PREREQUISITE: Graduate standing, consent of instructor. Individualized supervised practice assignments arranged with agencies, businesses or other organizations to provide guided experience in the field.