

NUTR - NUTRITION (NUTR)

NUTR 202 Fundamentals of Human Nutrition

Credits 3. 3 Lecture Hours. (BIOL 1322, HECO 1322) Fundamentals of Human Nutrition. Principles of nutrition with application to the physiologic needs of individuals; food sources and selection of an adequate diet; formulation of Recommended Dietary Allowances; nutritional surveillance; for non-nutrition majors only.

NUTR 203 Scientific Principles of Human Nutrition

Credits 3. 3 Lecture Hours. Chemistry and physiology of proteins, carbohydrates, lipids, vitamins and minerals; their ingestion, digestion, absorption, transport and metabolism. **Prerequisite:** CHEM 119; majors only.

NUTR 204/FSTC 204 Perspectives in Nutrition and Food Science

Credit 1. 1 Lecture Hour. Current trends in the fields of nutrition and food science; critical review relevant literature in these fields ranging from popular press to peer-reviewed research; study of original research and market trends in understanding food, food processing, nutrients, health and diseases. **Prerequisites:** NUTR and FSTC majors. **Cross Listing:** FSTC 204/NUTR 204.

NUTR 210/FSTC 210 Horizons in Nutrition and Food Science

Credits 2. 2 Lecture Hours. Introduction to nutrition and food science career opportunities through presentations by nutrition and food science researchers and industry professionals; addresses issues of professionalism including portfolio development, teamwork, and critical thinking skills. **Cross Listing:** FSTC 210/NUTR 210.

NUTR 211 Scientific Principles of Foods

Credits 4. 3 Lecture Hours. 3 Lab Hours. Basic principles underlying selection, preparation and preservation of food in relation to quality standards, acceptability and aesthetics. Introduction to composition, nutritive value, chemical and physical properties of foods; introduction to experimental study of foods. **Prerequisites:** CHEM 101, CHEM 111; NUTR 202 or NUTR 203; sophomore classification or above.

NUTR 222 Nutrition for Health and Health Care

Credits 3. 3 Lecture Hours. Analysis of nutrition with emphasis on providing a basic understanding of nutrition and its role in disease prevention and treatment.

NUTR 285 Directed Studies

Credits 0 to 4. 0 to 4 Other Hours. Directed study of selected problems in the area of nutrition. **Prerequisites:** Approval of instructor; 2.0 GPR in major and overall.

NUTR 289 Special Topics in...

Credits 1 to 4. 1 to 4 Other Hours. Selected topics in an identified area of nutrition. May be repeated for credit. **Prerequisite:** Approval of instructor.

NUTR 291 Research

Credits 0 to 4. 0 to 4 Other Hours. Research conducted under the direction of faculty member in nutrition. May be repeated 2 times for credit. **Prerequisites:** Freshman or sophomore classification and approval of department head.

NUTR 300 Religious and Ethnic Foods

Credits 3. 3 Lecture Hours. Understanding religious and ethnic foods with application to product development, production, and nutritional practices; emphasis on different food rules and priorities with attention given to different religious and ethnic groups within the US and around the world. **Prerequisites:** Junior or senior classification or approval of instructor; basic knowledge of food science and nutrition helpful.

NUTR 301 Nutrition Through Life

Credits 3. 3 Lecture Hours. Analysis of nutrition with emphasis on human biological needs through stages of the life cycle; biochemical, physiological and anthropometric aspects of nutrition. **Prerequisites:** NUTR 203; junior classification or approval of department head.

NUTR 303/ANSC 303 Principles of Animal Nutrition

Credits 3. 3 Lecture Hours. Scientific approach to nutritional roles of water, carbohydrates, proteins, lipids, minerals, vitamins, and other dietary components; emphasis on the comparative aspects of gastrointestinal tracts and on digestion, absorption, and metabolism of nutrients. **Prerequisites:** CHEM 119 and a grade of C or better in ANSC 113, or CHEM 222 or CHEM 227; junior classification or approval of instructor. **Cross Listing:** ANSC 303/NUTR 303.

NUTR 304 Food Service Systems Management

Credits 4. 3 Lecture Hours. 3 Lab Hours. Principles of food service management used in selecting, storing, preparing and serving food in quantity; emphasis on menu planning, quality control, purchasing, equipment and layout/design; application of basic food service systems management principles, including financial planning and personnel issues. **Prerequisites:** NUTR 203 and NUTR 211, junior or senior classification.

NUTR 320/FSTC 320 Understanding Obesity - A Social and Scientific Challenge

Credits 3. 3 Lecture Hours. Perspectives of obesity in food science, nutrition, health and psychology; study of obesity factors in relation to genetics, exercise physiology and sociology with emphasis on food and nutrition. **Prerequisites:** Junior or senior classification or approval of instructor. **Cross Listing:** FSTC 320/NUTR 320.

NUTR 365 Nutritional Physiology of Vitamins and Minerals

Credits 3. 3 Lecture Hours. Fundamental nutritional significance of fat soluble and water soluble vitamins and minerals to human metabolism, cell biology and physiology; micro-nutrient groups as per metabolic function or biochemical and physiological actions; important dietary sources, absorption, storage, metabolism, (bio)chemistry, deficiency and toxicity of individual nutrients in this context and basis of DRIs. **Prerequisites:** NUTR 203 and NUTR 301; junior or senior classification.

NUTR 404 Nutrition Assessment and Planning

Credits 3. 3 Lecture Hours. Examines the methods of determining the nutritional status of individuals, dietary assessment techniques, planning nutritional care including diet modification and nutrition counseling.

Prerequisites: NUTR 203, NUTR 211 and NUTR 301; junior classification or approval of department head.

NUTR 407 Nutrition Care and Therapy

Credits 4. 3 Lecture Hours. 3 Lab Hours. Application of the Nutrition Care Process for clinical diagnoses and conditions; planning of nutritional care plans for complex patients, including the formulation and planning for enteral and parenteral nutrition support. **Prerequisites:** NUTR 203, NUTR 211, NUTR 301 and NUTR 404; junior classification; dietetics track; or approval of instructor.

NUTR 408 Professional Development in Nutrition and Dietetics

Credit 1. 1 Lecture Hour. Techniques in professional development with focus on knowledge requirements for a Registered Dietitian Nutritionist; emphasis on oral and written communication, professional leadership, interprofessional relationships, mentoring, and critical thinking.

Prerequisites: Senior classification; NUTR-DPD majors.

NUTR 410/FSTC 410 Nutritional Pharmacometrics of Food Compounds

Credits 3. 3 Lecture Hours. Nutritional pharmacokinetics and pharmacodynamics of food compounds; specific examples of toxicological and pharmacological effects of food compounds.

Prerequisites: NUTR 201, NUTR 202, NUTR 203, CHEM 222, or CHEM 227, or approval of instructor; junior or senior classification. **Cross Listing:** FSTC 410/NUTR 410.

NUTR 412 Nutritional Treatment of Disease

Credits 3. 3 Lecture Hours. Nutritional intervention in pathological conditions, based on biochemical, physiological and psychological effects of disease state; current research in clinical nutrition.

Prerequisites: NUTR 203; NUTR 301, BIOL 319 and BICH 410, or concurrent enrollment; senior classification or approval of instructor.

NUTR 430 Community Nutrition

Credits 3. 3 Lecture Hours. Principles of assessing nutrition problems in populations and planning nutrition programs to promote health in communities including nutrition education and food and nutrition policy; introduction to food and nutrition assistance programs. **Prerequisites:** NUTR 203 and NUTR 301; junior or senior classification.

NUTR 440 Therapeutic Microbiology - Probiotics and Related Strategies

Credits 3. 3 Lecture Hours. Topics relevant to alimentary (gastrointestinal) microbiology including (i) the "normal" intestinal microbiota; (ii) probiotic and prebiotic nutritional supplements; (iii) recombinant pharmabiotics; (iv) gut-associated lymphoid tissue and mucosal immunity; (v) foodborne gastrointestinal pathogens; and (vi) fermented products as functional foods. **Prerequisites:** Undergraduate survey course in microbiology or approval of instructor; junior or senior classification.

NUTR 450 Nutrition and Metabolism of Minerals

Credits 3. 3 Lecture Hours. The role of minerals in living systems and the exploration of their multitude of functions; chemical properties of minerals and how that relates to function in cells and tissues; consequences of mineral deficiencies based on known functions; insight into experimental approaches used to assess minerals in a living environment. **Prerequisite:** NUTR 203, BICH 303, or BICH 410, or approval of instructor.

NUTR 469 Experimental Nutrition Laboratory

Credits 3. 2 Lecture Hours. 3 Lab Hours. Investigation of tools and molecular techniques used in studies of nutrition and metabolism (e.g. obesity, diabetes, cardiovascular disease, etc.); didactic and hands-on laboratory components; includes model systems, measurements of energy balance, body composition, RNA and protein analyses.

Prerequisites: Junior or senior classification or approval of instructor.

NUTR 471 Critical Evaluation of Nutrition and Food Science Literature - Evidence Based Reviews

Credits 3. 3 Lecture Hours. Evaluation of scientific literature, research methods within the literature, and the quality of scientific studies to produce an evidence-based review in areas specific to nutrition and food science. **Prerequisites:** NUTR 202 or NUTR 203; STAT 302; junior or senior classification; knowledge of technical writing helpful.

NUTR 475 Nutrition and Physiological Chemistry

Credits 3. 3 Lecture Hours. Fundamentals of physiology, biochemistry and nutrition and their relationship to the organismic and cellular metabolism of animals; biochemical basis of hormonal action.

Prerequisites: NUTR 203, NUTR 301, NUTR 365, and BICH 410; senior classification or approval of department head.

NUTR 481 Seminar

Credit 1. 1 Lecture Hour. Guidelines and practice in journal article review and making effective technical presentations; strategies for conducting a job search; development of résumés and letters and interviewing targeted for careers in nutrition or graduate school. **Prerequisite:** Senior classification in nutrition.

NUTR 485 Directed Studies

Credits 0 to 4. 0 to 4 Other Hours. Directed study on selected problems in the area of nutrition not covered in other courses. **Prerequisites:** Junior or senior classification; approval of department head; 2.0 GPR in major and overall.

NUTR 489 Special Topics in...

Credits 1 to 4. 1 to 4 Other Hours. Selected topics in an identified area of nutrition. May be repeated for credit. **Prerequisite:** Junior or senior classification.

NUTR 491 Research

Credits 0 to 4. 0 to 4 Other Hours. Research conducted under the direction of a faculty member in nutrition. May be repeated 3 times for credit. Registration in multiple sections of this course are possible within a given semester provided that the per semester credit hour limit is not exceeded.