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.

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: NUTR 203 and FSTC 320; junior or senior classification.

NUTR 320/FSTC 320 Understanding Obesity - A Social and Scientific Challenge
Credits 3.3 Lecture Hours.

NUTR 320/FSTC 320 Understanding Obesity - A Social and Scientific Challenge
Credits 3.3 Lecture Hours.

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 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.