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 101 and CHEM 111. Majors only.

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. 4 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 Lecture Hours.
Selected topics in an identified area of nutrition. May be repeated for credit.
Prerequisite: Approval of department head.

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/FSTC 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.
Cross Listing: FSTC 300/NUTR 300.

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: ANSC 107 and ANSC 108; CHEM 222 or CHEM 227 or equivalent.
Cross Listing: ANSC 303/NUTR 303.

NUTR 304 Food Service Systems Management
Credits 4. 4 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 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.

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 4. 4 Lecture Hours. 3 Lab Hours.
Methods of determining the nutritional status of individuals; dietary techniques; planning nutritional care including diet modification and/or nutrition support; nutrition counseling.
Prerequisites: NUTR 203, NUTR 211 and NUTR 301; junior classification or approval of department head.

NUTR 405 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; BICH 410 or concurrent enrollment; senior classification 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 203 or FSTC 201 or CHEM 222 or CHEM 227 or approval of instructor; junior or senior classification.
Cross Listing: FSTC 410/NUTR 410.

NUTR 420 Supervised Research in Mediterranean Nutrition and Food Processing in Italy
Credits 3. 3 Other Hours.
Exploration of principles of Mediterranean diet, European nutrition regulatory aspects, wine-making and food processing in Italy.
Prerequisite: FSTC 201, NUTR 202 or NUTR 203; must be 18 years of age; class and tours taught in English; priority given to majors in FSTC or NUTR.
Cross Listing: FSTC 420.

NUTR 422 Food Processing for Sustainable Nutrition in Brazil
Credits 3. 3 Other Hours.
Sustainable nutrition and food processing in Brazil; hands-on learning at the Federal University of Vicosa, the Amazon Biotechnology Center, food processing plants and other research centers in the Amazon, central Brazil and Rio De Janeiro.
Prerequisites: FSTC 201, NUTR 202, or NUTR 203; must be 18 years of age; class and tours taught in English; priority given to majors in FSTC or NUTR.
Cross Listing: FSTC 422.

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/FSTC 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.
Cross Listing: FSTC 440/NUTR 440.

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/FSTC 469 Experimental Nutrition and Food Science Laboratory
Credits 4. 1 Lecture Hour. 6 Lab Hours.
Investigation of nutritional intervention in animal models of metabolic and psychological disorders (e.g. obesity and depression); investigational approaches: behavioral analyses; RNA and protein analyses; reverse transcription PCR.
Prerequisites: CHEM 227; CHEM 237; junior or senior classification or approval of instructor.
Cross Listing: FSTC 469/NUTR 469.

NUTR 470 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; BICH 410; senior classification or approval of department head.

NUTR 471/FSTC 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 and STAT 302; junior or senior classification; knowledge of technical writing helpful.
Cross Listing: FSTC 471/NUTR 471.

NUTR 481 Seminar
Credit 1. 1 Lecture Hour.
Review of current literature and research in nutrition; oral presentations and critical discussions.
Prerequisite: NUTR 203; NUTR 301; senior classification or approval of department head.

NUTR 485 Directed Studies
Credits 0 to 4. 0 to 4 Other Hours.
Directed study on selected problems in the area of nutrition.
Prerequisites: Junior or senior classification in scientific nutrition or allied area; approval of instructor; 2.0 GPR in major and overall.

NUTR 489 Special Topics in...
Credits 1 to 4. 0 to 4 Lecture Hours. 0 to 4 Lab 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 faculty member in nutrition. May be repeated 3 times for credit. Registration in multiple sections of this course is possible within a given semester provided that the per semester credit hour limit is not exceeded.