**NUTRITION AND FOOD SCIENCES (NFS)**

**Courses**

**NFS 020. Vtrim for Undergrads. 1 Credit.**
This course is designed to teach healthy eating, exercise and weight management behaviors to college students.

**NFS 033. What’s Brewing in Food Science. 3 Credits.**
This course will explore food science via the production of beer and other fermented beverages. Students will also identify mechanisms to modify their drinking habits.

**NFS 034. Servsafe Certification Course. 1 Credit.**
This course will prepare students for the ServSafe Certification Exam. The topics include food safety and proper food handling in a restaurant setting.

**NFS 043. Fundamentals of Nutrition. 3 Credits.**
The study of standard guidelines to select foods that maximize human health and the functions of the essential nutrients needed to sustain human life. Prerequisites: High school chemistry and biology.

**NFS 044. Survey of the Field. 1 Credit.**
Nutrition and Food Sciences introduction to the professional field and career opportunities in dietetics, nutrition and food science. Required of all First-Year and transfer students. Fall. Prerequisite: Nutrition and Food Science majors and Dietetics, Nutrition and Food Science majors only, or Instructor permission.

**NFS 050. D2:Cheese and Culture. 3 Credits.**
The history of cheesemaking is used as a lens through which to view current conflicts in European and American attitudes towards foods.

**NFS 053. Basic Concepts of Foods. 3 Credits.**
Introduces the basic concepts of food central to the disciplines of nutrition, food science and food systems. Introduces these basic concepts in the same way as everyday Americans - through the process of meal preparation.

**NFS 063. D2:Obesity:What,Why,What to Do. 3 Credits.**
Introduction to the causes, consequences, and treatment of obesity. Fall.

**NFS 072. Kitchen Science. 3 Credits.**
Integrated lecture-lab course that explores the scientific concepts underlying why foods do what they do in the kitchen. Applications include topics such as ice cream, gluten, and molecular gastronomy. Labs and final project provide opportunities to design, conduct, and evaluate experiments investigating culinary phenomena.

**NFS 073. D2:SU:Farm to Table: Food Sys. 3 Credits.**
This course provides an introduction to the contemporary food system, focusing on the interdependence of all components, from farm to table.

**NFS 092. Independent Study. 1-18 Credits.**
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

**NFS 095. Special Topics. 1-18 Credits.**
Introductory level special topics courses.

**NFS 096. Internship. 1-3 Credits.**
On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion.

**NFS 113. U.S. Food Policy and Politics. 3 Credits.**
Provides a systems perspective on U.S. food policies and politics across the food system. Focuses on understanding the U.S. food policy process, policymakers, stakeholders, issues, goals and feedbacks between food policy and politics. Prerequisites: NFS 073 or CDAE 002 or CDAE 004. Cross-listed with: FS 101.

**NFS 114. Human Health in the Food Syst. 3 Credits.**
Explores the multifaceted and evolving intersection of food systems, dietary quality, food availability and human health outcomes. Investigates how political, economic, social and cultural drivers in the food system influence human health outcomes. Prerequisites: NFS 043 or NFS 073. Cross-listed with: FS 103.

**NFS 143. Nutrition in the Life Cycle. 3 Credits.**
Nutritional needs of people throughout the life cycle. Physiological and environmental factors which affect nutritional status. Designed for Nutrition majors. Prerequisite: NFS 043. Fall.

**NFS 153. Principles of Food Technology. 3 Credits.**
Food processing technologies and underlying principles of changes in microbiological quality and safety, chemical composition and nutritional value, and interaction of functional additives and ingredients. Prerequisite: NFS 043, NFS 053; organic chemistry. Spring.

**NFS 154. Principles Food Technology Lab. 1 Credit.**
Experiential learning of principles of major modern food processing and preservation technologies, essential skills of food quality and safety assurance, and new product development. Prerequisite: NFS 153, or concurrent enrollment in NFS 153, organic chemistry; Department majors only.

**NFS 163. Sports Nutrition. 3 Credits.**
Timing and composition of meals for training and pre- and post-competition. Fall/Spring. Prerequisite: NFS 043 or Instructor permission.

**NFS 183. Introduction to Biochemistry. 3 Credits.**
Exploring biological processes at the molecular level and how they are controlled. Topics include enzymes, gene expression, and metabolism of carbohydrates and lipids. Restricted to Nutrition and Food Sciences and Dietetics, Nutrition and Food Sciences majors; others by Instructor permission. Prerequisites: CHEM 042; or CHEM 141 and CHEM 142; or other acceptable coursework in organic chemistry. Cross-listed with: PBIO 185.
NFS 187. Intro to Biochemistry: Lab. 1 Credit.
Introduction to techniques used to explore fundamental biochemistry concepts including enzyme kinetics, lipids, carbohydrate chemistry, and gene expression. Includes spectrophotometry, gel electrophoresis, and mass spectrometry. Pre/Co-requisites: P BIO 185, BIOC 201, or NFS 183. Cross-listed with: ASCI 187, P BIO 187.

NFS 191. Teaching Assistantship. 1-3 Credits.
Undergraduate student service as a teaching assistant, usually in an introductory level course in the discipline, for which credit is awarded. Offered at department discretion.

NFS 192. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

NFS 195. Intermediate Special Topics. 1-18 Credits.
Lectures, laboratories, readings, or projects relating to contemporary areas of study. Credits negotiable. Enrollment may be more than once, maximum of 12 hours in NFS 195 and NFS 295 combined. Prerequisite: Department permission.

NFS 196. Internship. 1-18 Credits.
On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion. Prerequisite: Department permission.

NFS 198. Undergraduate Research. 1-18 Credits.
Undergraduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion. Prerequisite: Department permission.

NFS 203. Food Microbiology. 3 Credits.
Desirable and undesirable activities of bacteria in foods. Mechanisms of food-borne infection and intoxication. Laboratory methods to enumerate and identify microorganisms associated with food. Prerequisite: NFS 153 or Instructor permission. Co-requisite: NFS 213.

NFS 205. Functional Foods:Prncpl & Tech. 3 Credits.
Examines the constituents that make food products functional and provides laboratory techniques needed to create a functional food. Prerequisites: NFS 153, NFS 154, or Instructor permission.

NFS 213. Food Microbiology Lab. 1 Credit.
Introduces microbiological techniques such as Gram Stain, Streak for Isolation, dilutions, aseptic technique as well as means of identifying the microbial content of food products. Prerequisites: NFS 153, NFS 154, or Instructor permission. Co-requisite: NFS 203.

NFS 223. Nutrition Educ & Counseling. 3 Credits.
Use of appropriate education theory, techniques, and media in nutrition education and counseling theories and negotiation, interviewing and counseling skills in individual and group counseling. Pre/co-requisites: NFS Prerequisites: NFS 043, NFS 053, NFS 143.

NFS 243. Advanced Nutrition. 3 Credits.
Study of nutrients and their specific functions in metabolic process integrating cellular physiology, biochemistry, and nutrition. Prerequisites: NFS 043, ANPS 019, NFS 183 or P BIO 185; minimum Junior standing. Spring.

NFS 244. Nutr in Hlth & Disease Prevtn. 3 Credits.
Examination of dietary planning, nutrition assessment, genetics, drug-nutrient interactions, CAM therapies and nutrition related to health and prevention of disease. Pre/co-requisites: NFS 053, NFS 143; minimum Junior standing.

NFS 250. Foodservice Systems. 4 Credits.
Emphasis on the foodservice system model for understanding quality control; food procurement, production, and marketing; management and evaluation of foodservice facilities, human and financial resources. Prerequisites: BSAD 060 or CDAE 158; BSAD 120; minimum Junior standing; Dietetics or Nutrition and Food Sciences, and Dietetics, Nutrition and Food Sciences majors only.

NFS 253. Food Regulation. 3 Credits.
Comprehensive examination of U.S. food laws and regulations and their relationships to the safety of the U.S. food supply. Focus on how food-related laws and regulations are enacted and enforced, through detailed examination of selected food regulation topics. Prerequisite: NFS 153 or equivalent course/training with Instructor permission.

NFS 254. Global Food Safety. 3 Credits.
An overview of food safety issues, policies, and opportunities around the globe, with a focus on bacterial, viral, and parasite-based food safety challenges. Prerequisites: NFS 113 or NFS 114; NFS 153 or MMG 002 or MMG 101.

NFS 260. Diet and Disease. 3 Credits.
Examination of the physiologic, biochemical, and psychosocial basis of several disease states and the application of medical nutrition therapy in treatment. Prerequisite: NFS 053, NFS 143, NFS 243; Senior standing.

NFS 262. Community Nutrition. 3 Credits.
Study of U.S. public health nutrition policies, programs and practices. Emphasis on community nutrition program planning including needs assessment, intervention development and evaluation. Prerequisite: Minimum Junior or Graduate standing. Spring.

NFS 274. Community Practicum. 1-3 Credits.
Professional field experience in a community nutrition organization. Credit negotiable but not to exceed three per semester. Enrollment may be more than once, maximum of six credits. Prerequisite: Instructor permission.
NFS 283. HACCP: Theory & Application. 3 Credits.
This course addresses the development of a HACCP plan. Requirements of both the USDA-FSIS and FDA are examined. A mock HACCP plan will be developed. Prerequisites: NFS 203 and Instructor permission.

NFS 286. DNFS Senior Seminar. 1 Credit.
Designed to help students through the process of identifying what they’d like to do with their dietetics degree after graduating from UVM, as well as prepare students to complete the required materials for future opportunities. Prerequisites: Dietetics, Nutrition and Food Sciences major; Senior standing.

NFS 291. Teaching Assistantship. 1-3 Credits.
Undergraduate student service as a teaching assistant, usually in an introductory level course in the discipline, for which credit is awarded. Offered at department discretion.

NFS 292. Independent Study. 1-18 Credits.
A course which is tailored to fit the interests of a specific student, which occurs outside the traditional classroom/laboratory setting under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.

NFS 295. Advanced Special Topics. 1-18 Credits.
Lectures, laboratories, readings, or projects relating to contemporary areas of study. Credits negotiable. Enrollment may be more than once, maximum of twelve hours in NFS 195 and NFS 295 combined. Prerequisite: Department permission.

NFS 296. Internship. 1-18 Credits.
On-site supervised work experience combined with a structured academic learning plan directed by a faculty member or a faculty-staff team in which a faculty member is the instructor of record, for which academic credit is awarded. Offered at department discretion. Prerequisite: Departmental permission.

NFS 298. Undergraduate Research. 1-18 Credits.
Undergraduate student work on individual or small team research projects under the supervision of a faculty member, for which credit is awarded. Offered at department discretion.