DEPARTMENT OF NUTRITION AND FOOD SCIENCES

http://www.uvm.edu/nfs/

The Department of Nutrition and Food Sciences (NFS) prepares students to enter the rapidly expanding field of dietetics, food science, nutrition, health, and fitness. Nutrition and Food Science, unique fields of study, are rooted in the physiological, chemical, and biochemical sciences but are comprehensive in scope since they integrate knowledge learned in the social and psychological sciences. Through formal course work, field experience, and independent research, students prepare themselves in the biochemical, psychological, and socioeconomic aspects of diet, nutrition and foods. Thus, NFS majors are able to meet the current and future needs in nutrition and food science and assume innovative leadership roles in society and industry.

The credits earned in NFS provide background in preventive and therapeutic nutrition as well as nutrient requirements for human growth, development, health, and fitness throughout the life cycle. Other courses focus on the physical, chemical, and nutritional properties of food, food safety, and consumer aspects of food related to socioeconomic status, life style, cultural beliefs, and health. Although a series of courses providing knowledge in these areas is required of all majors, each student has a generous amount of free elective credits to pursue personal interests.

Departmental majors may elect to meet the undergraduate requirements needed for admission to medical schools (including naturopathic, chiropractic or osteopathic) or graduate school in nutrition, food science or dietetics.

Depending on current interests and future plans, majors may select one of two departmental majors:

DIETETICS, NUTRITION AND FOOD SCIENCES MAJOR

Dietetics is a profession concerned with the science and art of human nutritional care, an essential component of human health science. The didactic program in Dietetics is accredited by the:

Accreditation Council for Education and Dietetics
Academy of Nutrition and Dietetics
120 South Riverside Plaza, Suite 2000
Chicago, IL 60606-6995
(312) 899-0040 ext. 5400

This program prepares students for careers as Registered Dietitians by providing the undergraduate requirements needed to apply to dietetic internships.

To become a Registered Dietitian, students must complete the didactic program in Dietetics, complete an ACEND accredited supervised practice/internship program, and pass the National Registration Examination for Dietitians. This major prepares graduates to counsel people about the preventive and therapeutic role of nutrition in the maintenance of health and fitness.

NUTRITION AND FOOD SCIENCES MAJOR

This customized major is designed to provide a strong background in preventive nutrition, food science, and basic science. Students have an opportunity to integrate course work in medical, biochemical, biological, physiological, psychological, and sociological sciences or business. This option can prepare students for careers in the commercial food processing industry or in professions where the knowledge of food and beverage, nutrient content of foods, eating behavior, and the role of food in society is critical. The demand for qualified professionals with education and training in the food science arena greatly exceeds the number of graduates available thus making this option highly desirable for the career motivated student.

Through appropriate selection and advisement, students in either DNF5 or NFS may meet the undergraduate requirements needed for admission to medical school (including naturopathic, chiropractic or osteopathic) or graduate school.

GENERAL EDUCATION STUDIES FOR ALL MAJORS

<table>
<thead>
<tr>
<th>Communication Skills</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ENGS 001</td>
<td>3</td>
</tr>
<tr>
<td>CALS 183</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fine Arts and Humanities</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Any two humanities courses (Note: See diversity course substitute for Humanities)</td>
<td>6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Science Core</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PSYC 001</td>
<td>3</td>
</tr>
<tr>
<td>SOC 001</td>
<td>3</td>
</tr>
<tr>
<td>or ANTH 021</td>
<td>D2: Cultural Anthropology</td>
</tr>
<tr>
<td>or HLTH 105</td>
<td>D2:Cultural Health Care</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basic Science Core</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 023</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 031</td>
<td>General Chemistry 1</td>
</tr>
<tr>
<td>CHEM 042</td>
<td>4</td>
</tr>
<tr>
<td>or CHEM 141</td>
<td>Organic Chemistry 1</td>
</tr>
<tr>
<td>ANPS 019</td>
<td>Ugr Hum Anatomy &amp; Physiology</td>
</tr>
<tr>
<td>ANPS 020</td>
<td>Ugr Hum Anatomy &amp; Physiology</td>
</tr>
<tr>
<td>PBIO 185 &amp; PBIO 187</td>
<td>Survey of Biochemistry</td>
</tr>
<tr>
<td></td>
<td>and Survey of Biochemistry: Lab</td>
</tr>
</tbody>
</table>

Analytic Sciences Core
NUTRITION AND FOOD SCIENCES MAJORS

Dietetics, Nutrition and Food Sciences B.S.

Nutrition and Food Sciences B.S.

NUTRITION AND FOOD SCIENCES MINORS

Nutrition and Food Sciences

Food Systems

Animal, Nutrition and Food Science Ph.D.

Dietetics M.S.D.

Food Systems AMP

Food Systems M.S.

Nutrition and Food Sciences M.S.

See the online Graduate Catalogue for more information

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

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.

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.
Study of the scientific aspects of food with emphasis on reasons for procedures used and phenomena occurring in food preparation. Spring.

NFS 054. Basic Concepts of Foods Lab. 1 Credit.
Developing comprehension of scientific principles of food preparation through modification of standard recipes, manipulation of ingredients and techniques, and evaluation using sensory and objective methods. Prerequisite: NFS 053 or concurrent registration in NFS 053 or permission. Spring; Department majors only.

NFS 063. Obesity, Weight Control & Fitness. 3 Credits.
Introduction to the causes, consequences, and treatment of obesity. Fall.

NFS 073. D2: Farm to Table: Our 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 095. Special Topics. 1-18 Credits.
Introductory level special topics courses.

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 underlining 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 054, 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. Prerequisite: Instructor permission. Fall/Spring.
NFS 185. D2: Food and Culture. 3 Credits.
This course examines how the cultivation, preparation and consumption of food are rich symbolic processes through which humans interact with our natural and social environments. Prerequisite: ANTH 021. Cross-listed with: ANTH 185.

NFS 195. Intermediate Special Topics. 1-12 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. Field Experience. 1-15 Credits.
Professionally-oriented field experience under joint supervision by faculty and business or community representative. Credits negotiable, maximum of 15 hours in NFS 196 and NFS 296 combined. Prerequisite: Department permission.

NFS 197. Undergraduate Research. 1-3 Credits.
Individual laboratory or community research in food or nutritional sciences under the guidance of a faculty member. Arrangement with faculty member and permission of Department Chair.

NFS 198. Undergraduate Research. 1-15 Credits.
Individual laboratory or community research in food or nutritional sciences under the guidance of a faculty member. Arrangement with faculty member and Department Chair permission.

NFS 203. Food Microbiology. 0 or 4 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: A course in Biochemistry. Fall.

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. Pre/co-requisites: NFS 153, NFS 154, or Instructor permission.

NFS 208. Sensory Evaluation of Foods. 3 Credits.
Practical study of the methods and protocols used to evaluate the sensory quality of food in the industry and research world. Prerequisite: NFS 053.

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 043, NFS 053, NFS 054, 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; PBIO 201 or equivalent; ANPS 019 or equivalent; Junior standing. Spring.

NFS 244. Nutr in Hlth & Disease Preventrn. 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: CHEM 042, ANPS 020, NFS 053, NFS 054, NFS 143.

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 065 and BSAD 120.

NFS 253. Food Safety & Regulation. 3 Credits.
Comprehensive study of the relationships between food processing and preservation, food toxicology, and the scope, applicability, and limitations of U.S. food laws. Prerequisite: AGBI 201 or equivalent. Spring.

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, NFS 244.

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: NFS 260; Senior standing. Spring.

NFS 263. Nutritional Biochemistry. 3 Credits.
Comprehensive study of metabolism of carbohydrates, lipids, and protein emphasizing diet induced, hormone mediated alterations in metabolism (e.g. starvation and obesity). Prerequisite: NFS 243 or Instructor permission. Spring.

NFS 274. Community Practicum. 1-6 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 295. Advanced Special Topics. 1-15 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. Field Experience. 1-15 Credits.
Professionally-oriented field experience under joint supervision of faculty and business or community representative. Prerequisite: Departmental permission. Credit negotiable. Maximum of fifteen hours in NFS 196 and NFS 296 combined.