

# NUTRITION, FOOD, AND DIETETICS

## Program Description

The Nutrition, Food & Dietetics Department provides high-quality experiential learning to diverse Sacramento State students so that they become empowered professionals in their community who lead disease prevention, sustainability, food access, and health promotion for individuals, families, and communities.

The undergraduate program prepares students for careers in the field of nutrition, food management, community nutrition, and food sustainability. The BS Degree in Nutrition and Food emphasizes the roles of nutrition and food in individual and family health, cultural and behavioral influences on food selection, and the management of commercial and noncommercial food systems. The optional Concentration in Dietetics (Didactic Program in Dietetics) prepares students for supervised practice leading to eligibility for the Commission on Dietetic Registration credentialing exam to become a registered dietitian nutritionist (RDN), as well as to prepare students for graduate school and a variety of careers in clinical nutrition, community nutrition, private practice, food service administration, and food science.

The graduate program includes specialized coursework in nutrition science, advanced community nutrition, behavioral nutrition, and food and nutrition policy plus a wide array of interdisciplinary electives. Designed for career advancement in food access and nutrition education agencies and to complement Sacramento State's Dietetic Internship for those on the path to becoming Registered Dietitian Nutritionists.

The Nutrition and Food minor provides students with an understanding of the role food and nutrition play in health and disease prevention. The minor could be a relevant addition to many majors.

## Degree Programs

BS in Nutrition and Food (<http://catalog.csus.edu/colleges/social-sciences-interdisciplinary-studies/nutrition-food-dietetics/bs-nutrition-food/>)

BS in Nutrition and Food (Dietetics) (<http://catalog.csus.edu/colleges/social-sciences-interdisciplinary-studies/nutrition-food-dietetics/bs-nutrition-food-dietetics/>)

Minor in Nutrition and Food (<http://catalog.csus.edu/colleges/social-sciences-interdisciplinary-studies/nutrition-food-dietetics/minor-nutrition-food/>)

Certificate in Grocery Management (<http://catalog.csus.edu/colleges/social-sciences-interdisciplinary-studies/nutrition-food-dietetics/certificate-grocery-management/>)

MS in Nutrition and Food (<http://catalog.csus.edu/colleges/social-sciences-interdisciplinary-studies/nutrition-food-dietetics/ms-nutrition-food/>)

### Accreditation

In addition to California State University, Sacramento's full accreditation by the Western Association of Schools and Colleges, the Bachelor of Science in Nutrition and Food Dietetics Concentration (Didactic Program in Dietetics) is also individually accredited by the Accreditation

Council for Education in Nutrition and Dietetics (ACEND), the accrediting agency for the Academy of Nutrition and Dietetics. The department also administers a Dietetic Internship (DI) program accredited by ACEND.

### Special Features

- The B.S. Nutrition and Food degree is offered in multiple modalities (On-campus, Hybrid, and Online) to meet student needs and learning preferences to enhance student success and be more student focused.
- Faculty in Nutrition, Food & Dietetics provide quality education incorporated with innovative strategies and ample opportunities to apply knowledge and skills in laboratory, real-world, and service-learning projects.
- The Department is committed to reflecting in our study and in our practices the diverse populations with which our students will work, including diversity in race, ethnicity, gender identity, gender expression, sexual orientation, family situation or structure, age, ability, socioeconomic status, nationality, religion, political affiliation, veteran status, immigration status, or disciplinary areas, etc.
- The Department is equipped with a laboratory for food production and partners with Sacramento State's division of Sustainability in various projects, including work in the Campus Garden.
- The Didactic Program in Dietetics (DPD) and the Dietetic Internship (DI) are accredited by the Accreditation Council for Education in Nutrition and Dietetics (ACEND).
- Service-Learning course (NUFD 117) and Academic Internships (NUFD 195) for community engaged learning are a hallmark of our degree and certificate programs. These provide an opportunity for students to work under the supervision of a professional in business, education, government, or public service settings. Internships are planned a semester in advance with an advisor.
- In addition to serving majors and minors, the Department provides several general education courses for other majors including classes that meet the graduation requirements for the writing intensive course.
- The department offers a certificate in Grocery Management that builds upon lower division NUFD courses and provides an opportunity to work in the "real world" through an internship within the retail food/grocery industry.

### Career Possibilities

Nutrition and Health Educator · Community/Public Health Nutritionist · Food Service Manager/Hospitality · Foodservice Inspector · Grocery Retailing · State Nutrition Program Assistant, Consultant, or Analyst · School Nutrition Services Specialist · Entrepreneur/Consultant · Nutrition Program Representative · University/Medical Research Assistant.

**Additional careers in Dietetics:** Registered Dietitian Nutritionist (RDN) · Nutrition and Dietetics Technician, Registered (NDTR) · Clinical Dietetics-Hospitals, Clinics, or other Health Care Facilities · Community and Public Health · Private Practice · Sports Nutrition · Corporate Wellness · University/Medical Centers · Research · Food and nutrition-related business and industries

### Contact Information

Department Chair

Administrative Support Coordinator II  
Mariposa Hall  
(916) 278-

<http://www.csus.edu/nufd/>

**NUFD 5. Science of Food.** **3 Units**  
**General Education Area/Graduation Requirement:** Physical Science (B1)  
**Term Typically Offered:** Fall, Spring, Summer

Introduction to food science fundamentals including food composition, chemical and physical reactions, and nutritional properties of food. Overview of evidence-based practices for food selection, storage, and preparation. Examination of specific issues such as food safety, food technology, food supply, and food law. Lecture 3 hours.

**NUFD 9. Food Safety and Sanitation.** **3 Units**  
**Term Typically Offered:** Fall, Spring, Summer

Introduction to food safety principles and application, microbiology of food safety, infection control, and safety issues. Examination of laws and regulations related to consumer and food service operations. Preparation for national food service sanitation certification exam.

**NUFD 10. Nutrition And Wellness.** **3 Units**  
**General Education Area/Graduation Requirement:** Understanding Personal Development (E)  
**Term Typically Offered:** Fall, Spring, Summer

Introduction to the basic principles of nutrition and the relationship of the human diet to health. Overview of the nutrition profession, the biological uses of nutrients and tools for dietary planning. Examination of specific issues such as weight loss, sports nutrition, food safety, the diet-disease relationship and global nutrition. Analysis of special nutritional requirements and needs during the life cycle. Evaluation of personal dietary habits using current dietary guidelines and nutritional assessment methods.

**NUFD 11. Principles of Food Preparation.** **3 Units**  
**Prerequisite(s):** NUFD majors and FACS majors only.  
**Term Typically Offered:** Fall, Spring

Chemical, physical, sensory, and nutritional properties of food related to processes used in food preparation. Activity includes preparation and evaluation of individual food products.

**NUFD 100. Research: Methods and Application in Nutrition and Food.** **3 Units**  
**Prerequisite(s):** 6 NUFD units completed. NUFD majors or minors only.  
**Term Typically Offered:** Fall, Spring, Summer

Study of methods and application of research in the field of Nutrition & Food. Focus on scientific inquiry, methodology, evidenced-based practice, interpretation of research results, program and project evaluation, and professional communication. Includes the examination of ethical practices, professional presentation skills, and technical writing skills.

**NUFD 107. Nutrition Education, Communication, and Counseling.** **3 Units**  
**Prerequisite(s):** NUFD 10 and an additional 3 NUFD units  
**Term Typically Offered:** Fall, Spring

Nutrition Education, communication and counseling techniques for use by the nutrition/dietetics professional. Introduction and application of various health behavior theories to promote change in diverse target audiences. Development of nutrition care plans, educational materials and activities for individual groups. Understand and apply methods of dietary assessment and motivational interviewing.

**NUFD 110. Food Production and Sustainability.** **4 Units**  
**Prerequisite(s):** NUFD 9, NUFD 10 and NUFD 11  
**Term Typically Offered:** Fall, Spring, Summer

Study and laboratory experience in planning, procuring, production, serving and evaluation of food for individuals, families, commercial, and institutional foodservice operations. Application of menu development techniques such as recipe modification and standardization to various target populations. Examination and application of marketing analysis and promotion. Understanding of current issues and sustainability topics related to food production.

**NUFD 111. Grocery Procurement & Merchandising.** **3 Units**  
**Prerequisite(s):** NUFD 5 or NUFD 10; and NUFD 9  
**Term Typically Offered:** Fall, Spring

This course examines the processes for purchasing and receiving food and non-food products in a retail market setting. The course focuses on procurement and merchandising strategies in the grocery industry which tap into consumer trends and preferences.

**NUFD 112. Current Topics in Nutritional Sciences.** **3 Units**  
**Prerequisite(s):** Junior standing; a WPJ Portfolio score OR ENGL 109M or ENGL 109W

**General Education Area/Graduation Requirement:** Writing Intensive Graduation Requirement (WI), Further Studies in Area B (B5), Upper Division Further Studies in Area B5  
**Term Typically Offered:** Fall, Spring, Summer

Examination of contemporary and controversial topics in nutrition science and how they relate to nutritional needs of different population groups. Analyzes the research process and evaluation of validity of nutrition research. Lecture, discussion.

**NUFD 113. Nutrition And Metabolism.** **3 Units**  
**Prerequisite(s):** NUFD 10; BIO 2 or BIO 10 or BIO 20; and Chem 1A or Chem 5 or Chem 6A

**General Education Area/Graduation Requirement:** Upper Division Further Studies in Area B5  
**Term Typically Offered:** Fall, Spring, Summer

Study of the structures, types and metabolism of carbohydrates, lipids and proteins. Discussion of the biological roles of vitamins and minerals. Application and integration of metabolic knowledge with health promotion and chronic disease. Lecture, discussion.

**NUFD 114. Cultural and Social Aspects of Food.** **3 Units**  
**Prerequisite(s):** FACS/NUFD 10.  
**General Education Area/Graduation Requirement:** Humanities (Area C2)  
**Term Typically Offered:** Fall, Spring

Examination of the cross-cultural and social meaning of food and dietary behaviors. Regional, ethnic, religious, economic, and environmental influences on food habits and health status. Study of how cultural and societal values affect intake, health belief practices, and communication styles. Overview of health disparities in the context of socioeconomic status, race, ethnicity, and education. Understanding implicit bias, cultural differences, diversity, equity, and inclusion while working in a multicultural and diverse environment.

- NUFD 115. Nutrition: Pre-conception Through Childhood. 3 Units**  
**Prerequisite(s):** NUFD 113  
**Term Typically Offered:** Fall, Spring
- Examination of nutritional requirements, metabolism and issues during stages of the early life cycle, including: pre-conception, pregnancy, lactation, infancy, and early and late childhood. Study of assessment and methods for achieving nutritional needs through dietary selection and promotion of maternal, infant, and child health. Analysis of social, environmental, physical and economic factors affecting nutritional status.
- NUFD 116. Food Service Management. 3 Units**  
**Prerequisite(s):** NUFD 110.  
**Term Typically Offered:** Fall, Spring
- Study of financial, facility, human resource management in commercial and noncommercial foodservice operations. Application of accounting principles, evaluation and selection of equipment, layout and design, and principles and practices of human resource management as an entry-level manager.
- NUFD 117. Community Nutrition. 3 Units**  
**Prerequisite(s):** NUFD 107; and either NUFD 115 or NUFD 119.  
**Term Typically Offered:** Fall, Spring
- Study of theory, concepts and philosophy affecting nutrition education and services in the community. Introduction to techniques of interviewing and counseling clients. Emphasis on culturally sensitive approaches to dietary assessment, counseling and community nutrition research. Use of a variety of teaching methods to improve nutrition status of the community. Field study involves practical experience in a community nutrition program. Lecture, discussion two hours; field study three hours.
- NUFD 118A. Medical Nutrition Therapy I. 3 Units**  
**Prerequisite(s):** NUFD 113, NUFD 121, and BIO 131.  
**Term Typically Offered:** Fall only
- Study of the principles of medical nutrition therapy and the Nutrition Care Process. Use the Nutrition Care Process to make decisions, identify nutrition-related problems and determine and evaluate nutrition interventions with patients/clients with various conditions, including, cardiovascular and gastrointestinal disorders.
- NUFD 118B. Medical Nutrition Therapy II. 3 Units**  
**Prerequisite(s):** NUFD 118A, and CHEM 161 or instructor permission.  
**Term Typically Offered:** Spring only
- Continuation of principles, methods, and skills as developed in NUFD 118A. Review of the etiology, development and dietary prevention and intervention of diseases influenced by nutrition such as: diabetes mellitus, hepatic and biliary diseases, cancer, renal disease, pulmonary disease, neurological disorders, HIV and AIDS, and inborn errors of metabolism. Lecture, discussion two hours; activity two hours.
- NUFD 119. Nutrition: Adolescence Through Older Adulthood. 3 Units**  
**Prerequisite(s):** NUFD 113  
**Term Typically Offered:** Fall, Spring
- Examination of nutritional requirements, metabolism and issues during stages of the life cycle, including: adolescence, adulthood, and old age. Study of assessment and methods for achieving nutritional needs through dietary selection and promotion of adolescent, adult, and elderly adult health. Analysis of social, environmental, physical and economic factors affecting nutritional status.
- NUFD 120. Practical Application in Sports Nutrition. 3 Units**  
**Prerequisite(s):** NUFD 113  
**Term Typically Offered:** Fall, Spring
- A survey course in nutrition with an emphasis on the relationship among diet, physical activity, and health; exploration of the changes in the metabolism of carbohydrates, lipids, protein and water; discussion of the function of vitamins and minerals; practical application of evidence-based dietary recommendations for common sports and varying physical intensity.
- NUFD 121. Nutrition Assessment, Methods and Support. 3 Units**  
**Prerequisite(s):** NUFD 113  
**Term Typically Offered:** Fall, Spring, Summer
- Study of health care systems, the nutrition care process including assessment and support, and clinical implications of malnutrition. Topics include nutrition-focused physical examination, anthropometric, biochemical, dietary, body composition, and functional status evaluation and an understanding of advantages and disadvantages of assessment approaches. Application of various assessment methods and problem solving will be achieved through hands on training and clinical case studies in the context of malnutrition, nutrition support, cancer, eating disorders, and obesity.
- NUFD 122. Social Media for Nutrition Communication. 3 Units**  
**Prerequisite(s):** NUFD 10 and NUFD 100 or NUFD 113  
**Term Typically Offered:** Fall, Spring
- Examine the uses of social media in the nutrition field and develop a framework to apply to future social media use in professional ventures. Focus on the critical analysis of the appropriateness, potential target populations, health behavior change strategies, the risks and benefits, and overall intended outcomes of social media communication. Create the design and evaluation framework of a social media campaign/initiative.
- NUFD 168. Senior Seminar. 3 Units**  
**Prerequisite(s):** 21 NUFD and/or FACS units  
**Term Typically Offered:** Fall, Spring, Summer
- Designed to synthesize knowledge in the Nutrition and Food discipline. Examination of the major and career exploration. Analysis of public policy and ethical issues, professionalism and leadership strategies. Includes a capstone project and development of an academic and/or professional portfolio.
- NUFD 195. Internship. 1 - 3 Units**  
**Prerequisite(s):** Upper division status; instructor permission obtained in the preceding semester; 2.5 GPA or above.  
**Term Typically Offered:** Fall, Spring
- Directed observation and supervised work experience in an approved professional setting including, but not limited to, agencies in the areas of community, business, education, government, or service. During the normal course of an internship, students must progress from observation to a responsible and instrumental role in the agency's program.  
**Note:** Student must make arrangements with a faculty member for a work program one semester prior to admittance to the course.
- Credit/No Credit

**NUFD 199. Special Problems.****1 - 3 Units**

**Prerequisite(s):** NUFD majors or minors; Permission of faculty under whom individual work will be conducted; Permission of Department Chair; Upper-division status.

**Term Typically Offered:** Fall, Spring

Individual projects or directed reading.

**Note:** Open only to NUFD majors who appear competent to conduct independent work such as

Credit/No Credit

**NUFD 199D. Dietetic Pathways.****1 Unit**

**Prerequisite(s):** Senior standing in the Dietetics Concentration or instructor permission.

**Term Typically Offered:** Fall only

Examination of dietetics career paths, processes and options. Students will learn about the profession of dietetics, including professionalism, the professional organization, pathways, mentoring and the code of ethics.

**NUFD 200. Research Methods.****3 Units**

**Prerequisite(s):** Admittance to the NUFD graduate program or instructor permission.

**Term Typically Offered:** Spring only

A critical examination of quantitative and qualitative research methods used in the nutrition and food discipline. Develop skills in research design selection, measurement, analysis, and interpretation and presentation of results. Study human research ethics and IRB submission protocol. Explore techniques to ensure assessment tools are valid, reliable, and culturally appropriate.

**NUFD 213. Advanced Nutrition with Community Program Applications.****3 Units**

**Prerequisite(s):** Admittance into the MS program or instructor permission.

**Term Typically Offered:** Fall only

In-depth review of current knowledge and research of nutrients in food and application to nutrition policy and public health practice within the US and globally. Examination of physiological function, metabolism, transport, deficiency, toxicity, and interrelationships of macro and micronutrients in relation to the nutrient-disease relationship. Evaluating scientific findings relating to nutrient function, with an emphasis on nutrients of public health concern and food components that pose public health challenges.

**NUFD 221A. Advanced Clinical Nutrition A.****3 Units**

**Prerequisite(s):** Admission into Dietetic Internship Program or instructor permission.

**Term Typically Offered:** Fall only

Perform nutrition assessment of patients with complex medical conditions. Integration of pathophysiology into medical nutrition therapy. Development, supervision and evaluation of nutrition care plans. Select, calculate, monitor and evaluate nutritional support regimens for patients. Lecture, composition.

**NUFD 221B. Advanced Clinical Nutrition B.****1 Unit**

**Prerequisite(s):** Admission into Dietetic Internship Program or instructor permission.

**Term Typically Offered:** Spring only

Continuation of principles and skills as developed in FACS 221A with application to other complex disease conditions and integration to multiple diseases. Application of genetics and pathophysiology to complex disease conditions. Demonstration of skills in assignments and presentations. Lecture, composition.

**NUFD 222. Advanced Community Nutrition and Nutrition Education.****3 Units**

**Prerequisite(s):** Admission into NUFD graduate program, Dietetic Internship program, or instructor permission.

**Term Typically Offered:** Fall only

The course will examine the implementation of nutrition care for population groups across the lifespan. Explore assessment and evaluation methodologies of community based food and nutrition programs. Nutrition policy development and evaluation based on community needs and resources to address health disparities. Learn advanced nutrition education intervention techniques applying behavioral models and theories.

**NUFD 223. Advanced Foodservice Management and Administration.****2 Units**

**Prerequisite(s):** Admission into Dietetic Internship Program or instructor permission.

**Term Typically Offered:** Fall only

Management of procurement, distribution, and service of food, and integration of financial, human, physical and material resources. Production of food that meets nutrition guidelines, cost parameters, and consumer acceptance; safety and sanitation issues related to food. Analysis of the operations of food service organization. Lecture, written assignments and practical experience.

**NUFD 224. Advanced Community Nutrition and Policy.****3 Units**

**Prerequisite(s):** Admission into NUFD graduate program, Dietetic Internship Program, or instructor permission.

**Term Typically Offered:** Spring only

Learn and apply the nutrition care process and manage nutrition care for population groups. Conduct outcome assessment, planning, implementation, marketing and evaluation of nutrition programs. Apply the research process and critically evaluate nutrition research. Develop an understanding of nutrition policy and resources.

**NUFD 225. Food Production and Sustainability Policy.****3 Units**

**Prerequisite(s):** Admittance into the NUFD graduate program or instructor permission.

**Term Typically Offered:** Fall only

Exploration of a variety topics including food policies, food systems and sustainable food production. The course will review the political landscape of both food and agriculture and current social movements towards sustainable and just food systems.

**NUFD 280. Teaching Methods in Family and Consumer Sciences/Home Economics. 3 Units**

**Prerequisite(s):** Current enrollment in a teaching credential program or instructor permission.

**Term Typically Offered:** Summer only

This course is designed to provide students with materials, classroom management strategies and methods necessary to successfully teach Family & Consumer Sciences (FCS)/Home Economics Careers and Technology (HECT) at the secondary level. Teacher candidates will become acquainted with legislation, standards, teaching strategies, resources, research and student leadership programs.

**NUFD 295. Field Study. 1 - 7 Units**

**Prerequisite(s):** Enrolled in Graduate Studies in NUFN Dietetic Internship

**Term Typically Offered:** Fall, Spring

Guided study, observation or work experience in an area in which the graduate student needs advanced and specialized study.

**Note:** May be repeated for credit

Credit/No Credit

**NUFD 299. Special Problems. 1 - 3 Units**

**Prerequisite(s):** Undergraduate major or minor in Family and Consumer Sciences.

**Term Typically Offered:** Fall, Spring

Any properly qualified student may pursue a problem after approval by his/her advisor and the staff member with whom he/she works.

Credit/No Credit

**NUFD 500. Culminating Experience. 3 Units**

**Prerequisite(s):** Advanced to candidacy or permission of the graduate coordinator.

**Term Typically Offered:** Spring only

Guides students through the completion of a thesis or project approved for the Master of Nutrition and Food degree.