Food Science (A Graduate Group)

Gary M. Smith, Ph.D., Chairperson of the Group
Group Office, 1204 RMI South Building 530-752-8035; Fax 530-752-0382; http://foodscience.ucdavis.edu

Faculty. Includes members from twelve departments in the Colleges of Agricultural and Environmental Sciences and Engineering, and the Schools of Medicine and Veterinary Medicine.

Graduate Study. The interdepartmental Graduate Group in Food Science offers programs of study leading to the M.S. and Ph.D. degrees in Food Science is available (see below). For further information on graduate study, contact the graduate adviser.

Food Science (A Graduate Group)

Gary M. Smith, Ph.D., Chairperson of the Group

Food Science and Technology (Food Science and Technology, Biological and Agricultural Engineering)

Charlotte Biltekoff, Ph.D., Assistant Professor (Food Science and Technology, American Studies)
Stephanie R. Dungan, Ph.D., Professor (Food Science and Technology, Chemical Engineering and Materials Science)
J. Bruce German, Ph.D., Professor
Jean-Xavier Guinard, Ph.D., Professor
Maria L. Marcro, Ph.D., Assistant Professor
Kathryn L. McCarthy, Ph.D., Professor (Food Science and Technology, Biological and Agricultural Engineering)
Michael J. McCarthy, Ph.D., Professor (Food Science and Technology, Biological and Agricultural Engineering)
David A. Mills, Ph.D., Professor (Food Science and Technology, Viticulture and Enology)
Alyson Mitchell, Ph.D., Professor
Nitin N. Nitin, Ph.D., Assistant Professor (Food Science and Technology, Biological and Agricultural Engineering)
Michael A. O'Mahony, Ph.D., Professor
Robert Powell, Ph.D., Professor (Food Science and Technology, Chemical Engineering and Materials Science)
Moshe Rosenberg, Ph.D., Professor and Specialist in Cooperative Extension
Charles F. Shoemaker, Ph.D., Professor Emeritus
Christopher Simmons, Ph.D., Assistant Professor
R. Larry Merson, Ph.D., Professor Emeritus
Dieter W. Gruenwedel, Ph.D., Professor Emeritus
Gerald F. Russell, Ph.D., Senior Lecturer Emeritus
Norman F. Haard, Ph.D., Professor Emeritus
Walter G. Jennings, Ph.D., Professor Emeritus
Charlotte Biltekoff, Ph.D., Assistant Professor

Emeriti Faculty

Everett Bandman, Ph.D., Professor Emeritus
Ericka L. Barrett, Ph.D., Professor Emeritus
John C. Bruhn, Ph.D., Professor Emeritus
Jerald M. Henderson, D.Eng., Professor Emeritus
Walter G. Jennings, Ph.D., Professor Emeritus
John M. Krochta, Ph.D., Professor Emeritus
Academic Senate Distinguished Teaching Award
Lecture/laboratory—4 hours. Prerequisite: course 100B (may be taken concurrently). Study of fresh food preservation including use of chemicals and microorganisms, and their interaction with food products. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth
Food Product Development Field Study (1) Discussion—6 hours; fieldwork—2 days (course given between winter and spring quarters). Prerequisite: advanced pre-requisites may be waived in special cases. Special topics of food science and technology, and methods for applying this knowledge to the development of new food products. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth

99. Special Study for Undergraduates (1-5) (P/NP grading only.)

Upper Division

100A. Food Chemistry (4) Lecture—3 hours; discussion—1 hour. Prerequisite: Chemistry 8B; Biological Sciences 1A recommended. Chemical aspects of food composition. Emphasis on the functional properties of foods and their interactions with other components of the diet. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth

100B. Food Chemistry Laboratory (4) Lecture/laboratory—4 hours. Prerequisite: course 100A may be taken concurrently. Chemical aspects of food composition described in course 100A. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth

12A. Food Chemistry Laboratory (4) Lecture/laboratory—4 hours. Prerequisite: Biological Sciences 12A recommended. Study of the chemistry and physiology of the food processing and storage processes. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth

12B. Food Chemistry Laboratory (4) Lecture/laboratory—4 hours. Prerequisite: Biological Sciences 12B recommended. Study of the chemistry and physiology of the food processing and storage processes. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth

102A. Malting and Brewing Science (4)

Lecture—4 hours. Introduction to the principles of malting, brewing and fermentation processes. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth

101A. Food Chemistry Laboratory (2) Lecture/laboratory—4 hours. Prerequisite: course 100A may be taken concurrently. Chemical aspects of food composition described in course 100A. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth

101B. Food Chemistry Laboratory (2) Lecture/laboratory—4 hours. Prerequisite: course 100B may be taken concurrently. Study of properties of foods described in course 100B. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth

102. Food Chemistry (3) Lecture—2 hours; discussion—1 hour. Food science fundamentals: fresh and processed food technology; food microbiology and toxicological safety; food laws; evaluation of acceptability and nutritional value. Not open for credit to students who have completed any Food Science and Technology course except course 101A. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth

103. Introduction to Brewing and Beer (3) Lecture—3 hours. Basic description of brewing and associated processes, from raw materials to final product; history of brewing and brewing science; types of beer worldwide; world beer markets; basics of beer quality, including wholesomeness; role of scientist in brewing. GE credit: SciEng | SE, SL.—I, II, III. (I, II, III.) Bamforth


47. Food Product Development Field Study (1) Discussion—6 hours; fieldwork—2 days (course given between winter and spring quarters). Prerequisite: advanced pre-requisites may be waived in special cases. Special topics of food science and technology, and methods for applying this knowledge to the development of new food products. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth

50. Introduction to Food Preservation (3) Lecture—2 hours; laboratory—2 hours. Prerequisite: Chemistry 2A, Biological Sciences 2A, Statistics 13. Restricted to Food Science Majors. Introduction to modes of fresh food preservation including use of chemicals and microorganisms, and their interaction with food products. GE credit: SciEng | VL, WE.—II, III. (II.) Bamforth

99. Special Study for Undergraduates (1-5) (P/NP grading only.)

Quarter Offered: I-Fall, II-Winter, III-Spring, IV-Summer; 2013-2016 offering in parentheses.

Pre-Fall 2011 General Education (GE): AH–Arts and Humanities; SE–Science and Engineering; SS–Social Sciences; ACHG–American Cultures, DD–Domestic Diversity; Div–Diverse; SciEng–Science and Engineering; SocSci–Social Sciences; Div–Domestic Diversity; Wrt–Writing Experience