

SHOHREH S. NIKU

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EDUCATION

M.Sc.: Food Science and Nutrition Department, College of Agriculture, Cal Poly, San Luis Obispo, June 2000.

M.Sc.: Completed course work in Food Science and Technology, Iran Institute of Nutrition Science and Food Technology, Tehran, Iran, September 1979 to June 1981.

B.Sc.: Food Science and Technology, College of Nutrition Science and Food Technology, Tehran, Iran, June 1978.

PROFESSIONAL EXPERIENCE

FOOD SCIENCE AND NUTRITION DEPARTMENT, CAL POLY: Lecturer, September 2000 to present.

WINE & VITICULTURE DEPARTMENT, CAL POLY: Lecturer, September 2014 to present.

CAL POLY EXTENDED EDUCATION: Wine Analysis Course, co-taught with Dr. Joe Montecalvo, Fall 2000, Winter 2001, Summer 2002, Spring 2003.

FOOD SCIENCE AND NUTRITION DEPARTMENT, CAL POLY: Teaching Assistant, Food Chemistry Lab (FSN-0364), January 2000 to March 2000.

YOMBO MACARONI: Tehran, October '85 to March '86, Production Supervisor, Supervisor of Quality Control Laboratory, responsible for general plant sanitation, plant manager.

LIANA COMPANY: Tehran, October '82 to October '85, Accountant and bookkeeper.

COLLEGE OF NUTRITION SCIENCE AND FOOD TECHNOLOGY: Tehran, September '81 to October '82, Research Assistant.

COLLEGE OF NUTRITION SCIENCE AND FOOD TECHNOLOGY: Tehran, September '80 to June '81, Teaching Assistant: Food Chemistry Lab and Food Microbiology Lab.

MINISTRY OF AGRICULTURE: Tehran, June '78 to September '78, CO-OP Project: "Influence of Wheat Germ on Rheological Characteristics of Flour and Breads".

PROFESSIONAL CERTIFICATIONS

Alcohol, Tobacco, and Firearms Procedure 86-2 certification, January 1, 2003 and 2004-2006.

PUBLICATIONS

“Comparative Method Analysis of White Wines”, Master’s degree thesis, Cal Poly, June 2000.

“Influence of Wheat Germ on Rheological Characteristics of Flour and Breads”, undergraduate thesis, College of Nutrition Science and Food technology, Tehran, June 1981.

COURSES TAUGHT

Elements Food Processing (FSN 230)
Cereal Science, Bakery, and Snack Food Technology (FSN 244)
Wine Chemistry, BATF Requirement (WIN1 E807)
Basic Calculations in Food Processing (FSN 154)
Food Technology for the Consumers (FSN 319)
Food Laws and Regulations (FSN 374)
Food Analysis (FSN 368)
Food Chemistry (FSN 364)
Wine Chemistry and Analysis (FSN 464)
Wine Analysis and Amelioration (FSN/WVIT365)
Food Processing Operations (FSN 204)
Food Nutrition, Customs and Culture (FSN 250)
Introduction to Food Science (FSN 125)
Food and Wine Plant Sanitation (FSN 270)
Fundamentals of Enology (WVIT 202)
Senior project (FSN/WVIT 461 and 462)

NEW COURSE PREPARATION

Food Laws and regulations (FSN 374)
Wine Chemistry and Analysis (FSN 464)
Wine Analysis and Amelioration (FSN/WVIT 365)
Food and Nutrition, Customs and Cultures (FSN 250)
Food Processing Operations (FSN 204)
Food and Wine Plant Sanitation (FSN 270)
Fundamentals of Enology (WVIT 202)

MAJOR REVISIONS AND INNOVATIONS IN EXISTING COURSES

Cereal Science, Bakery, and Snack Food Technology (FSN 244)
Elements of Food Processing (FSN 230)
Lab Manual for the Element of Food Processing (FSN 230)
Lab Manual for the Wine Analysis and Amelioration (FSN/WVIT 365)
Creating lecture notes for Wine Analysis and Amelioration class (WVIT 365)
Creating lecture notes for Fundamentals of Enology class (WVIT 202)
Creating a lecture book for Food Laws and Regulations (FSN 374)
Adding new chapters to the Food Laws and Regulations (FSN 374)
Adding new chapter to Food and Nutrition, Customs and Cultures (FSN 250)

SERVICE TO THE DEPARTMENT

Cal Poly Vines to Wines IRA advisor, Cal poly, spring 2018, and 2018-2019, Academic year.

Wine and Viticulture University level Safety committee member 2017-2018, Academic year.

Wine and Viticulture internationalization committee member 2018-2019, Academic year.

Wine and Viticulture, Enology concentration Advisor, Cal Poly, 2006-2012, Academic years.

Food Science freshman and transfer students Advisor, Cal Poly, 2007-2011, Academic years.

Food Science College Bowl coach, Cal Poly, 2008-2012, Academic years.

Substitution Committee Member, Cal Poly, 2005-2010, Academic years.

Wine and Viticulture Committee Member, Cal Poly, 2005-2012 Academic years.

Food Science Minor Coordinator, Cal Poly, 2005-2010 Academic years.

Food Science Club Advisor, Cal Poly, 2000-2001 Academic year.

Food Science Club Advisor, Cal Poly, 2005-2006 Academic year.

Co-coach for the Food Science and Nutrition Department's Product Development Team, Cal Poly, fall 2008-Spring 2009

Advisor for the Food Science and Nutrition Department's Food Media Club, Cal Poly, 2008-2011 Academic years.

Advisor for the Food Science and Nutrition Department's Culinary Carriers Club, Cal Poly, Fall 2011-Spring 2012

Co-coach for the Food Science and Nutrition Department's Product Development Team, Cal Poly, fall 2000-Spring 2001.

BATF lab coordinator, Food Science and Nutrition Department, Cal Poly, 2000.

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Institute of Food Technologists (IFT)

American Society for Enology and Viticulture (ASEV)

Courses Taught:

WVIT 202: Fundamentals of Enology

I taught this course for the first time in fall of 2014 and have been teaching it ever since. Along with the lectures I planned field trips to the local wineries and have invited the local winemakers to class as guest speakers. As a part of this class students are supposed to write a final winemaking plan on a scenario given to them to use their understanding of the material in a real life situation.

FSN 250: Food and Nutrition: Customs and Cultures

I taught this course fall quarters 2010-14. I added a chapter on sustainability in food production, ethics of food processing and mass production of ethnic foods to this course.

FSN 230: Elements of Food Processing

I have taught FSN 230 since fall 2000. I have prepared a new set of lectures and power-point presentations for my classes. I also suggested a new textbook for the course, which was accepted by the faculty. Biotechnology was also added to the course content. I have also re-written the lab manual for this course.

In the lab portion of this course, in addition to the traditional production activities and field trips to local wineries and breweries, I have introduced new experiments such as ice cream production and sensory analysis, added new items to the sensory experiment, introduced ash measurement for liquid foods such as wine, and added demonstration of spray drying methods.

FSN 125: Introduction to Food Science Laboratory

I taught two sections of FSN 125 labs in fall of 2012.

FSN 270: Food and Wine Plant Sanitation

I taught this course for the first time in winter quarter 2012. Along with the lectures I planned field trips to local food processing plants such as DPTC and local wineries to familiarize students with the sanitation practices routinely done in industry.

FSN 319: Food Technology For the Consumers

I have taught this course since fall 2003. I have added food regulations and an introduction to biotechnology to FSN 319 lectures. I have also introduced new items into different chapters of the lecture, such as artificial sweeteners to the "Sweet Talk", hard ionization of aluminum in the "Technology", and the super-heated water in "Microwave" chapters.

FSN 374: Food Laws and Regulations

I started teaching this course in winter 2004. Since the previous faculty member had retired and there was no textbook or other teaching material available, I redesigned all the activities and prepared a complete set of lecture notes for the course. Most activities in this course are web-based, in which, students research related laws and regulations by accessing appropriate web sites. One major activity in this course includes research, a written paper, and presentation of all regulatory aspects of an assigned food product, including its label, related food ingredients, required inspections, food additive regulations, and health claims.

Other activities in this class include, looking into, discussing and evaluating the real industry scenarios. By doing that students become familiar with different cases and how they have been handled and should have prevented.

I added a new chapter to the manual covering the bioterrorism and food security regulations in 2007.

In winter 2011 I added two new chapter to the manual covering Kosher and Hallal food processing and labeling regulations, and California Department of Food and Agriculture's role in California's food safety.

Then I adopted a new text book for this class. "Guide to US Food Laws and Regulations" second edition by Patricia Curtis.

FSN 204: Food Processing Operations

I taught the lecture portion of FSN 204 winter quarter 2014, and three sections of FSN 204 lab winter quarter 2010.

FSN 244: Cereal science, Bakery, and Snack Food Technology

I taught FSN 244 in winter 2001 and spring 2002. I adopted a new textbook and prepared power-point presentations for the course.

FSN 464: Wine Chemistry and Analysis

I developed FSN 464 Wine Chemistry and Analysis course which I am taught for 3 years from 2004 to 2007. I adopted "Concept in Wine Chemistry" text book by Yair Margalit for this course. I also prepared a power point presentation and a lab manual for this class. I added new experiments to the lab.

WVIT/FSN365: Wine Analysis and Amelioration Laboratory

I have taught WVIT/FSN 365 lab since spring 2008. I developed a lab manual for this course on spring 2010. I have been successful in bringing many donations to this lab in the form of equipment which helps students to work with the state of the art equipment in analyzing wine.

I have started teaching WVIT 365 lecture again in spring of 2016 when the instructor who used to teach it retired and left California. I developed lecture materials and PowerPoints along with some recommended text books for students to study from.

FSN 354: Food Chemistry Laboratory

I taught the Food Chemistry Laboratory Winter quarter 2006.

FSN 368: Food Analysis Lecture and Lab

I taught the Food Analysis course and lab in spring quarter 2006. I developed a power point presentation for it and added new material to the lecture.

FSN 154 Basic Calculations in Food Processing Laboratory

I taught FSN 154 lab winter 2001 and 2002.

Extended Education BATF-Required Wine Chemistry Course

I have Co-taught Wine Chemistry BATF Requirements Course through Continuing Education since fall 2000. I have also helped design, and write the lab manual for this course.

FSN/WVIT 461 and 462:

I have advised the following senior projects:

2004-2010

- Microbial Monitoring of Food Preparation Utensils and Equipment in the Cal Poly State University's Meat Science, Pilot Plant, and Culinary Lab Facilities Tested by Petrifilm.
- Comparative Study of Organic and Conventionally Produced Chocolate Chip Cookies Based on Cost Analysis, Shelf-Life Studies, and Sensory Evaluation.
- Development of Federally Approved and Consumer Friendly Product Label to be used on EW Foods Quiche Product Line.
- Calcium Supplements Can Ease Symptoms Associated with Premenstrual Syndrome
- Educational Recipe Pamphlet on Essential Fatty Acids.
- Comparing the Shelf Life of Head Lettuce Washed with Ozonated Water Versus Chlorinated Water after they are picked.
- Production and Sensory Evaluation of Mango Wheat Ale.
- Evaluating Sanitation Knowledge of Fast Food vs. Eat-In restaurant Employees.
- The Effect of Barrel Age on Total Phenols, Total Anthocyanins, Copigmented Anthocyanins and pH in 2005 Syrah Wine.
- Tomato Paste an Alternative Ingredient

- Calcium Fortified Pizza Sauce
- Organic and Hypoallergenic Dog Biscuit
- Wine quality differences between native yeast wine and commercial yeast wine
- A study of tasting room effectiveness

2010

- Development of a high antioxidant content milk chocolate bar
- Smoke taint: the effects on wine and winemaking processes to reverse the damage
- Aerating wine helps improve red wines' aromas/sensory analysis
- Freeze dried wine as a cooking and baking ingredient
- Gluten free waffles
- Gorill@: energy stick© organic caffeinated honey sirup formulation
- Hyper oxidation of white hard press must
- The human exhale as a wine preservative
- Flavor chemistry and perceived flavor analysis
- Fining agents – price versus quality
- Packaging effects on methoxypyrazines in cabernet sauvignon and sauvignon blanc
- Evaluating the sensory aspects and consumer preferences of a freeze-dried wine-infused chocolate product
- Use and importance of the glycemic index in food product formulation for the diabetic population
- Wine quality differences between native yeast wine and commercial yeast wine
- A study of tasting room effectiveness part 2

2011 and 2012

- Sensory evaluation of ten adult drink recipes
- Gorill@!: energy stick © caffeinated honey sirup formulation part 2
- Hyper oxidation of white hard press must
- Cal poly royal red raspberry dessert wine jam
- A look at compounds in wine and health benefits
- Chateau Deveraux, Creating a business plan for a new winery in California
- Use and importance of the glycemic index in food product formulation for the diabetic population
- The human exhale as a wine preservative
- Evaluating the sensory aspects and consumer preferences of a freeze-dried wine-infused chocolate product
- The overall use & application of sulfur dioxide (SO₂) in the wine industry; also the comparison of SO₂ levels in organic & nonorganic wine
- Cal poly royal red raspberry dessert wine jam
- Development of gelatin substitute for marshmallow confections
- Nutritional menu analysis of Mondeo pronto
- Developing an organic dry mix treat with antioxidants for dogs
- Disaster nutrition and immune health bar
- The effects of fining agents-making the best pinot noir and cabernet

- Nutritional menu analysis of Mondeo pronto
- Disaster nutrition and immune health bar
- Review of fermentation and fermentation vessel options
- Influence of cap management techniques in Syrah grape ethanol fermentation
- Nutrient intake of Cal poly students compared to the USDA dietary guidelines 2010
- Defect action levels of selected spices and how quality affects their trade
- The overall use & application of sulfur dioxide (SO₂) in the wine industry; also the comparison of SO₂ levels in organic & nonorganic wine
- A business plan for 'the red dog' restaurant & market
- Variation of pinot noir in clones 115, 667, 777, and swan selection as evaluated by phenolic assay
- Creating a calming dog treat
- New vinification techniques involving malolactic fermentation and diacetyl production
- In home alcoholic beverage recipe book
- The development of mango-pineapple jam for possible distribution through Cal poly jam enterprise
- Development of a gluten and sugar free pre-packaged cookie mix
- Literature review on flavor chemistry and low calorie carbonated soft drinks
- Creating a calming dog treat
- Enhancing the tear strength of microbial cellulose: a comparative between casein and a. xylinum
- Nutrient intake of Cal poly students compared to the USDA dietary guidelines 2010
- Influence of cap management Techniques in Syrah Grape Ethanol Fermentation

2013

- Flavor chemistry and
- Low calorie carbonated soft drinks
- Quantifying the effect of wine oxidation on aldehyde and ester levels using the znose®
- The effects of wine yeasts when used for beer brewing
- Enhancing the tear strength of microbial cellulose: a comparative between casein and a. xylinum
- The development of powdered coffee extract by means of freeze-drying
- The research and analysis of healthy eating: investigation of deli foods vs. fried foods
- Development of dog food that supports a healthy immune system
- Reasons to use bio surfactants as an alternative to synthetic surfactants
- Bio surfactants
- Creating a label for an oat extrusion snack
- Effect of substituting sugar with artificial and natural sweeteners in baked sugar cookies on sensory attributes, physical properties, and shelf life

2015

- Jessee family winery business plan

- The use of different aeration scenarios and their effects on the
- Quality of beer, yeast viability, and fermentation rates
- Inoculation strategies of bacteria for the achievement of malolactic fermentation in high-ethanol zinfandel wine
- Development of Brussel sprouts chips
- Development and design of packaging for Brussel Sprouts chips according to government regulations.

2017

- Yeast strain's effects on wine characteristics
 - Evaluating the sensory aspects and consumer preferences of a freeze-dried wine-infused chocolate product
 - Packaging effects on methoxypyrazines in Cabernet Sauvignon and Sauvignon Blanc
 - Fining Agents – Price versus Quality
 - Gluten Free Waffles
 - Freeze Dried Wine As A Cooking And Baking Ingredient
 - Aerating Wine Helps Improve Red Wines' Aromas/Sensory Analysis
 - Smoke Taint: The effects on Wine and winemaking processes to reverse the damage
 - Hyperoxidation of Chardonnay, hard press
 - Development of a high antioxidant content milk chocolate bar
 - In home alcoholic beverage recipe book
 - Use and importance of Glycemic Index in food product formulation for the diabetic population
 - Energy stick, a caffeinated honey sirrup formulation
 - A human exhale as a wine preservative
 - H₂S production with yeast
 - Reasons to Use Bio surfactants as an Alternative to Synthetic Surfactants
 - Effect of substituting sugar with artificial and natural sweeteners in baked sugar cookies on sensory attributes, physical properties, and shelf life
 - A Business Plan for 'The Red Dog' Restaurant & Market
- I have also served on the thesis committee of Jenny filter.
 - Filter Farms Walnut Huller Business Plan

Professional Development Activities

International Wine Institute

I participated and helped coordinate the International Wine Institute at Cal Poly Summer 2014. I travelled with 35 international students and faculty members from Switzerland, Australia, and Cal Poly to visit the wine regions of Central coast of California, as well as Northern California and Oregon and Washington for 3 weeks. My duties were coordinating the trip as well as contacting the wineries and universities along the way for accommodation.

Inter Group Dialog Training

I participated in the IGD training class held at Cal Poly San Luis Obispo. This class trained selected faculty, staff and counseling graduate students to become facilitators in Inter Group Dialogs. This training was very helpful with teaching and interacting with multicultural groups.

Joint Summer School with Ecole Dingenieurs De Changins

During the summer of 2009, I planned and attended the summer school at Cal Poly San Luis Obispo, CA. and Fresno State University in Fresno CA. The program was intense one month classes and field trips on wine regions of Central Coast, Northern (Napa, Sonoma), and Central Valley of CA.

Summer School at Ecole Dingenieurs De Changins

During the summer of 2008, I attended the summer school at Changins in Switzerland. The program was intense two weeks classes of one week on wine regions, and wine making practices of Switzerland and one week on Tuscan wine in Italy.

Wine and Viticulture Advanced Enology course proposal (with Dr. Mary Pedersen)

I worked with Dr. Mary Pedersen in putting together the course proposal for the Advanced Enology course and its laboratory.

Dale Carnegie Course No. 04D01:

I participated in the Dale Carnegie Course offered in winter 2004. The course was offered in conjunction with the College of Agriculture and lasted 10 weeks.

The Center For Teaching and Learning (Cal Poly State University)

I have attended the following courses:

- Teaching an Effective Laboratory Class
- Developing Your Teaching Philosophy
- Implementing Active Learning In Your Classroom
- Scholarly Writing workshop
- An Introduction to Proposal Writing
- Dale Carnegie Course
- Polylearn Accessibility 2018
- Accessible Document Design 2018
- Accessible Video Creation 2018
- Zoom Workshop 2018

Awards and recognitions

I was the recipient of CAFE'S (College of Agriculture, Food, and Environmental Sciences) 2011 Outstanding Lecturer Award.

Conferences Attended:

Institute of Food Technologists Annual Conference, New Orleans, LA, June 2001.

Institute of Food Technologists Annual Conference, Anaheim, CA, July 2002.

Institute of Food Technologists Annual Conference, Las Vegas, NV, July 2004.

Unified Grape and Wine Symposium Annual Conference, Sacramento, Ca. January 2006

Institute of Food Technologists Annual Conference, Orlando, Florida, July 2006

Summer School at E'COLE D'INGENIEURS DE CHANGINS, Nyon, Switzerland, June-July 2008.

Summer School with E'COLE D'INGENIEURS DE CHANGINS, Cal Poly, San Luis Obispo, Napa Valley, Ca. and Fresno State University, Fresno, June-July 2009.

Institute of Food Technologists Annual Conference, Anaheim, CA. June 2009

Institute of Food Technologists Annual Conference, Chicago, Illinois, June 2010

Institute of Food Technologists Annual Conference, New Orleans, June 2011

Unified Wine & grape symposium, Sacramento, CA. January 2011

WestPack Convention, Anaheim, CA, February 2011

In Thinking Together, From InSight Into Action, Patt and Wittney Rocketdyne, L.A., CA, 2011

WestPack Convention, Anaheim, CA, February 2012

Institute of Food Technologists Annual Conference, Las Vegas, June 2012

Unified Wine & grape symposium, Sacramento, CA. January 2012

Unified Wine & grape symposium, Sacramento, CA. January 2013

WestPack Convention , Anaheim, CA, February 2013

WestPack Convention, Anaheim, CA, February 2014

Unified Wine & grape symposium, Sacramento, CA. January 2014

Unified Wine & grape symposium, Sacramento, CA. January 2015

Unified Wine & grape symposium, Sacramento, CA. January 2016

Unified Wine & grape symposium, Sacramento, CA. January 2017

Unified Wine & grape symposium, Sacramento, CA. January 2018

Unified Wine & grape symposium, Sacramento, CA. January 2019

WestPack Convention, Anaheim, CA, February 2015

WestPack Convention, Anaheim, CA, February 2016

WestPack Convention, Anaheim, CA, February 2017

Non-Teaching Departmental Activities

I was an active member of FSN department in many different areas, and advised and helped the following clubs and activities without any release time. I have to mention that for the past 3 years I have not been involved in any of the following activities in the FSN department but I am involved with the WVIT activities.

Student advising

FSN freshman advisor

FSN transfer advisor

WVIT freshman advisor

WVIT transfer advisor

College-Bowl Team Advisor

Food Media Club /Culinary Careers club Advisor/Global Food Tasters

Wine and Viticulture committee

Food Science Minor Coordinator

Food Science Substitution Committee

Food Science Product Development Team Co-advisor

Cal Poly Vines to Wine IRA Advisor

Wine and Viticulture University level Safety committee member

Wine and Viticulture internationalization committee member

Donations brought to WVIT Department

I was successful in bringing close to \$100,000 worth of very valuable equipment to the department. This help our students to be familiar with state of the art analyzing equipment and the industry appreciate our students more.

Anton Paar Alcolyzer	\$ 20,000
Chemwell wine analyzer	\$ 35,000
Check stab tartaric stability	\$ 13,000
Cashstill measuring VA	\$ 1,000
Chiller	\$ 3,000
Spectrophotometer UV/V 3*	\$ 3,000
Tanks O2 or CO2 meter	
Total	<hr/>
	\$ 81,000

List of equipment purchased for WVIT department

The equipment I purchased for the department help the newly hired faculty to be able to run their research with the very new and recognized equipment such as the Y15 wine and grape analyzer.

pH meter	6	\$ 2,000
Y15 wine and grape analyzer	1	\$ 20,000
A/O	4	\$ 2,000
Cash steel	5	\$ 5,000
Refractometer	5	\$ 1,000
Micro Pipettes	12	\$ 1,200
Total		<hr/>
		\$ 31,200

Open House

Every year I participate in open house activities of both departments. I help with the booths and meet with the parents and alumni.

Non-Teaching University Activities

I have been the AEphi sorority faculty advisor since 2007. Attending their meetings on a weekly basis and hosting quarterly dinners at my house and helping them with their needs on campus such as their election meetings, fundraising meetings and many more.