

FOOD SCIENCE/SAFETY INTERDISCIPLINARY MINOR

Gifford Building, Room 200B
(970) 491-7180

www.chhs.colostate.edu/fshn (<https://www.chhs.colostate.edu/fshn/>)

Professor Juan Moreira, Ph.D. Department of Food Science and Human Nutrition, Extension Specialist, Interdisciplinary Studies Program Chair

Coordinated by a Faculty Advisory Board

Are you interested in the safety and quality of food from “farm to fork”? The Food Science/Safety interdisciplinary studies programs (<https://www.chhs.colostate.edu/fshn/programs-and-degrees/food-science-safety-interdisciplinary-minor/>) provide students with the interdisciplinary background necessary for understanding the roles and responsibilities of growers, producers, processors, retailers, consumers, and others working within the food system to ensure that food is safe and healthful. These programs are a cooperative effort by faculty from several departments and colleges within CSU who share a common interest in food quality and safety, and integrated production and processing. Students enrolling in a program will receive their degree from their home department. Completion of requirements for the interdisciplinary minor will be noted on the transcript.

The programs are available at both the undergraduate and graduate levels. Program details are available from the Office of the Dean in the Colleges of Agricultural Sciences (<http://agsci.colostate.edu/>), Health and Human Sciences (<http://www.chhs.colostate.edu/>), or Veterinary Medicine and Biomedical Sciences (<http://csu-cvmb.colostate.edu/Pages/default.aspx>), or from one of the collaborating departments.

The interdisciplinary minor in Food Science/Safety is designed to complement the student's major. It consists of a core of required courses (6 credits), foundation courses in the sciences (6 credits), and a selection of advanced courses (12 credits minimum) taken from at least three of the six collaborating departments: Animal Sciences; Environmental and Radiological Health Sciences; Food Science and Human Nutrition; Horticulture and Landscape Architecture; Microbiology, Immunology, and Pathology; and Soil and Crop Sciences.

Learn more about the Food Science/Safety Interdisciplinary Minor on the Department of Food Science and Human Nutrition website. (<https://www.chhs.colostate.edu/fshn/programs-and-degrees/food-science-safety-interdisciplinary-minor/>)

Learning Objectives

Students will:

1. Integrate biological and chemical processes into production and quality of foods, and analyze the relationships among food production, nutrition, and food safety.
2. Demonstrate discipline-specific knowledge of the skills and competencies needed in food science, safety, and technology, including food microbiology, sensory evaluation, food chemistry, quality assessment, packaging technologies, and food production.
3. Analyze the production, service, and consumption of foods and beverages, including financial aspects, functional skills, and efficient management of resources (with emphasis on safe service training).

Requirements

Students must satisfactorily complete the total credits required for the minor. Minors and interdisciplinary minors require 12 or more upper-division (300- to 400-level) credits.

Additional coursework may be required due to prerequisites.

Effective Fall 2022

Code	Title	Credits
Required Courses		
Select one from the following:		3
FTEC 400	Food Safety ¹	
MIP 334	Food Microbiology ¹	
Select one from the following:		3
LIFE 205	Microbial Biology	
MIP 300	General Microbiology	
Foundation Courses		
Select a minimum of 6 credits from the following:		6
BC 351 or BC 401	Principles of Biochemistry Comprehensive Biochemistry I	
CHEM 245	Fundamentals of Organic Chemistry ²	
ERHS 320	Environmental Health–Water Quality	
FSHN 150	Introduction to Human Nutrition	
FTEC 110	Food-From Farm to Table	
FTEC 447	Food Chemistry	
HORT 100	Horticultural Science	
LIFE 206 or MIP 302	Microbial Biology Laboratory General Microbiology Laboratory	
MIP 101	Introduction to Human Disease and Immunity (GT-SC2)	
SOCR 100	Introduction to Crop Science	
SOCR 240	Introductory Soil Science	
Advanced Courses		
Select a minimum of 12 credits, which must include at least three subject codes from the collaborating departments (ANEQ, ERHS, FSHN/FTEC, HORT, MIP, SOCR), from the following:		12
ANEQ 300L	Topics in Animal Sciences: Quality Assurance	
ANEQ 360	Principles of Meat Science	
ANEQ 361	Introduction to Meat Product Evaluation	
ANEQ 460	Meat Safety	
ANEQ 470	Meat Processing Systems	
ERHS 220	Introduction to Environmental Public Health (GT-SC2)	
ERHS 332	Principles of Epidemiology	
ERHS 430	Human Disease and the Environment	
FSHN 300	Culinary Nutrition	
FSHN 350	Human Nutrition	
FSHN 496E		
FTEC 350	Fermentation Microbiology	
FTEC 400	Food Safety ¹	
FTEC 430	Sensory Evaluation of Food Products	
FTEC 460	Brewing Science II	

HORT 401	Medicinal and Value-Added Uses of Plants
HORT 424/ SOCR 424	Topics in Organic Agriculture
HORT 451	Vegetable Crop Management
HORT 453	Principles of Fruit Crop Management
HORT 454	Horticulture Crop Production and Management
MIP 302	General Microbiology Laboratory ³
MIP 315	Pathology of Human and Animal Disease
MIP 334	Food Microbiology ¹
MIP 335	Food Microbiology Laboratory
SOCR 330	Principles of Genetics
SOCR 460/ HORT 460	Plant Breeding and Biotechnology
Independent Study/Group Study/Internship ⁴	
500-level courses that may be selected as Advanced Courses by high-achieving undergraduates: ⁵	
ANeq 522	Animal Metabolism
ANeq 565	Interpreting Animal Science Research
ANeq 567	HACCP Meat Safety
FTEC 570	Food Product Development
FTEC 572	Food Biotechnology
FTEC 574	Current Issues in Food Safety
FTEC 578/ HORT 578	Phytochemicals and Probiotics for Health
MIP 540	Fundamentals of Biosafety and Biosecurity
VS 570/AGRI 570	Issues in Animal Agriculture

Program Total Credits: **24**

¹ If both FTEC 400 and MIP 334 are taken, credit for one class may be used for Advanced Courses credit.

² Or higher level organic chemistry course.

³ Cannot double count as a Foundation course.

⁴ Maximum of three upper-division (300- or 400-level) credits allowed for Independent Study/Group Study/Internship (must be food related). Select from subject codes ANeq, ERHS, FSHN, FTEC, HORT, MIP, SOCR.

⁵ With approval of advisor.