FOOD SCIENCE & SAFETY (FSS)

FSS 100: Introduction to Food Science (3 credits)
Students examine the discipline and profession of food science in the United States in this introduction to the field. They explore concepts such as food production, food composition, food quality and deterioration, food preservations, food defense, and product development.

FSS 120: Foodborne Microorganisms with Laboratory (4 credits)
Students learn basic principles of microbiology applied to food manufacture. Laboratory exercises emphasize safety, quality control, and experimental approaches to food microbiology. Laboratory experiences required throughout the course. Please note that lab supplies required by this online course take time to order and ship. If you choose to enroll in this course, it is your responsibility to make sure that you follow up on lab related communications as needed in order to secure your lab supplies in a timely fashion. Adding this course to your schedule after the start of class may result in obtaining your lab supplies late.
Lab fee: $295

FSS 150: Foodborne Diseases with Laboratory (4 credits)
Students are introduced to the principal microbiological agents responsible for foodborne diseases. Student conduct laboratory experiments to recognize and classify these microbiological agents. Laboratory experiences required throughout the course. Please note that lab supplies required by this online course take time to order and ship. If you choose to enroll in this course, it is your responsibility to make sure that you follow up on lab related communications as needed in order to secure your lab supplies in a timely fashion. Adding this course to your schedule after the start of class may result in obtaining your lab supplies late.
Lab fee: $295
Prerequisite: FSS 120 or permission of the program director

FSS 220: Food Chemistry I with Laboratory (4 credits)
Students examine the biochemical, physical, and sensory properties of food components including proteins, lipids, carbohydrates, and pigments. Students conduct laboratory exercises that classify the chemical, physical, and biological changes in foods during processing and storage. Laboratory experiences required throughout the course. Please note that lab supplies required by this online course take time to order and ship. If you choose to enroll in this course, it is your responsibility to make sure that you follow up on lab related communications as needed in order to secure your lab supplies in a timely fashion. Adding this course to your schedule after the start of class may result in obtaining your lab supplies late.
Lab fee: $125

FSS 250: Food Chemistry II with Laboratory (4 credits)
Students explore the impact of other food components such as minerals, vitamins, nutraceuticals, colors, flavors, direct food additives (e.g. preservatives, texture modifiers and stabilizers, colors, flavors), incidental food additives (e.g. processing aids, chemical toxins), intentional adulterants, allergens. In this course students design scientific experiments that enhance food quality and safety. Laboratories Required. Please note that lab supplies required by this online course take time to order and ship. If you choose to enroll in this course, it is your responsibility to make sure that you follow up on lab related communications as needed in order to secure your lab supplies in a timely fashion. Adding this course to your schedule after the start of class may result in obtaining your lab supplies late.
Lab fee: $140
Prerequisite: FSS 220 or permission of the program director

FSS 300: Food Processing with Laboratory (4 credits)
Students explore the characteristics of food and are introduced to how it is preserved and processed. Students evaluate how food spoilage and deterioration can be reduced or accelerated. Laboratory experiences required throughout the course.
Prerequisite: FSS 100 or FSS 120 or FSS 150 or FSS 220 or FSS 250

FSS 320: Food Defense (1 credits)
This course will explore intentional food safety threats to the food system such as intentional and economically motivated adulteration. It includes a course-long project focused on developing a food defense plan to mitigate such risks in a simulated food manufacturing setting.

FSS 330: Food Safety and Preventative Controls (3 credits)
This course covers essential elements of federal requirements for food manufacturers and handlers otherwise known as HACCP (Hazard Analysis and Critical Control Point) and Preventative Controls. HACCP and Preventative Controls are risk-based systems to ensure safe food production. In this course, students will learn to identify potential food safety hazards through a hazard analysis, formulate preventive controls, and design a food safety system for a fictitious food manufacturer. The course culminates in students compiling and presenting their completed food safety plan.
Prerequisite: FSS 100 or FSS 120 or FSS 150 or FSS 220 or FSS 250 or FSS 300

FSS 350: Food Science Seminar (3 credits)
Students explore current topics in health and food safety and develop a personal and professional philosophy to guide their careers.
Prerequisite: FSS 330