

## Food Science and Technology

### Submitter's Information

Name

LeAnn Riley

Title

Professor

Region

Central/Mother Lode

College

Bakersfield College

### CTE Dean's Information

CTE Dean

Cornelio Rodriguez

### Program Information

Program Title

## Food Science and Technology

### TOPs Code

Food Processing and Related Technologies (011300)

### Projected Start Date

06/10/2019

### Catalog Description

The Food Science and Technology program is a hands-on program designed to prepare students for a career in the food industry by providing a strong knowledge in food science, production, safety, product development, management, and packaging of food products. Pre-and postharvest handling and preparation of foods for processing will be emphasized. Potential career areas students may enter upon completion of this degree are: Food Chemistry, Food Engineering, Food Microbiology, Sensory Science, Food Nutrition and Health, Food Processing and Packaging, Food Safety and Defense, Education and Careers, Public Policy and Regulations, Sustainability, and Product Development. This program is designed for the Food Science and Technology student who is interested in transferring to a CSU or UC after graduation, earning an Associate's Degree, or Certificate of Achievement for those desiring specialized training in order to enter the workforce.

### Enrollment Completer Projections

The current faculty and facilities allow for the program to enroll 24 students per semester, with a planned student completion in 4 semesters. This schedule would allow for the program to potentially graduate 24 completers annually.

## Program Proposal Attributes

### Program Type(s)

- Certificate of Achievement: 16 or greater semester (or 24 or greater quarter) units (C)
- A.S. Degree (S)

### Program Goals

The Food Science and Technology program is designed to prepare students with the knowledge to successfully enter the food science, safety, processing, and manufacturing workforce by learning the industry standard skills that lead to employment. The Food Science and Technology program prepares students for careers in the following areas: food product research

and development, quality assurance, production management, food technology, and food safety. Students will be provided with relevant career and professional development opportunities within the program. Completion of the program will prepare students to continue their education at a 4-year university. Students also have the opportunity to earn an Associate's degree and a Certificate of Achievement in Food Science and Technology to enter directly into the food industry workforce. Upon completion of the Food Science and Technology program the student will be able to meet the following objectives: a. Identify and apply food science principles to food safety, production, product development, and food systems management. b. Integrate knowledge and skills in food science and technology with professional issues affecting the food industry both locally and worldwide. c. Apply scientific research in the areas of microbiology, food science, and safety of food products during and after processing. d. Identify career opportunities and requirements related to the food science and technology industry sector with an emphasis on career planning. e. Understand various types of food production and be aware of changes that occur to food due to processing. f. Explain laws and regulations governing food safety principles. g. Identify and analyze the general processing flow (pre- and post-harvest) for various food products, the impact of processing on the physical, chemical and sensory properties of the food products including the harvesting, processing, packaging, and storage of processed food products. h. Work effectively in teams and apply critical thinking skills to new food processing situations.

## Course Units and Hours

Certificate Required Units

24

Units of Major Degree

24

Total Units for Degree

62

## Course Report

Program Requirements

Core Courses - Title - Units FDST B1 Orientation to the Food Science and Technology Industry 3 FDST B50 Food and Culture 3 FDST B2 Principles of Food Science 3 FDST B3 Food Safety 3 FDST B5 Food Processing Technology 3 FDST B10. Food Systems Management 3 Total Units Core Courses 18 In addition to the core courses, the student is recommended to take at least 6 units from the following courses: Elective Courses Title - Units FDST B20 Pre-Harvest Practices 3 FDST B25 Food Product Research and Development 3 FDST B30 Introduction to Viticulture 3 FDST B35 Introduction to Brewing 3 Chem B1b General Chemistry and Chemical Analysis 5 Chem B18 Elementary Organic Chemistry 5 Bio B16 General Microbiology 5 Total Elective Courses 7 First Semester - Units Second Semester - Units FDST B1 3 FDST B2. 3 FDST B50 3 FDST B3 3 Third Semester - Units Fourth Semester - Units FDST B5 3 FDST B10 3 Elective 3-5 Elective. 3-5

### Supporting Document(s)

#### Labor Market Information

- [Download Labor Market Analysis.pdf \(/storage/lmi/279--Labor Market Analysis.pdf\)](/storage/lmi/279--Labor Market Analysis.pdf)
- [Download Additional LMI Data.docx \(/storage/lmi/279-441-Additional LMI Data.docx\)](/storage/lmi/279-441-Additional LMI Data.docx)

### Submission Details

#### Created At

08/17/18 - 03:08 PM

#### Status

**Recommended**

### Central/Mother Lode Region Specific Questions

#### Advisory Minutes

[Download Advisory Minutes 6\\_6\\_2018.docx \(/storage/Central/Mother Lode/279-441-1946-Advisory\\_Minutes\\_6\\_6\\_2018.docx\)](/storage/Central/Mother Lode/279-441-1946-Advisory_Minutes_6_6_2018.docx)