



## Food Science and Technology

Career Cluster	Hospitality and Tourism
Course Code	19254
Prerequisite(s)	N/A
Credit	0.5
Program of Study and Sequence	Foundation Course - Cluster Course – <b>Food Science and Technology</b> – Capstone Experience
Student Organization	Family, Career and Community Leaders of America (FCCLA)
Coordinating Work-Based Learning	Workplace Tours; Mentoring
Industry Certifications	N/A
Dual Credit or Dual Enrollment	See: <a href="https://sdmylife.com/images/Approved-CTE-Dual-Credit.pdf">https://sdmylife.com/images/Approved-CTE-Dual-Credit.pdf</a>
Teacher Certification	Family and Consumer Sciences (FACS); FACS Education; Hospitality and Tourism Pathway Endorsement
Resources	FCCLA Food Innovations STAR Event

### Course Description

Food Science and Technology offers opportunities to study the composition, structure, and properties of foods. Students examine changes that occur during the processing, storage, preparation, and consumption of food. Students explore effects of various materials, microorganisms, and processes on food products through laboratory experiments.

### Program of Study Application

Food Science and Technology is a pathway course in the Hospitality and Tourism career cluster; Restaurant and Food/Beverage Services pathway.

## Course Standards

### FT 1: Students will integrate knowledge, skills, and practices required for careers in food science, food processing and food production.

<i>Webb Level</i>	<i>Sub-indicator</i>
Two Skill/Concept	FT 1.1 Determine the contributions of food science to society.
Two Skill/Concept	FT 1.2 Summarize food science in relation to social trends and technological advances.
Two Skill/Concept	FT 1.3 Explain contributions of food science to changing food quality and availability.
Two Skill/Concept	FT 1.4 Investigate careers in food science, food processing, and food production industries.

### FT 2: Students will explore scientific practices as they relate to the food industry.

<i>Webb Level</i>	<i>Sub-indicator</i>
Two Skill/Concept	FT. 2.1 Demonstrate safe laboratory practices.
Three Strategic Thinking	FT 2.2 Apply skills needed for valid and reliable scientific experiments.

### FT 3: Students will demonstrate food safety and sanitation procedures.

<i>Webb Level</i>	<i>Sub-indicator</i>
Two Skill/Concept	FT 3.1 Practice procedures that minimize the risks of food borne illness.
Three Strategic Thinking	FT 3.2 Differentiate how microorganisms act in food and their effect on food products.
Two Skill/Concept	FT 3.3 Classify sources of contamination: chemical, physical, and biological.

### FT 4: Students will investigate physical and chemical changes of food composition.

<i>Webb Level</i>	<i>Sub-indicator</i>
Two Skill/Concept	FT 4.1 Differentiate roles of the three phases of water in food preparation, food processing and food safety.
Three Strategic Thinking	FT 4.2 Investigate changes of macro nutrients in food processing and preparation.
Three Strategic Thinking	FT 4.3 Investigate changes of micro nutrients in food processing and preparation.

### FT 5: Students will use the role of sensory evaluation in the food industry.

<i>Webb Level</i>	<i>Sub-indicator</i>
Three Strategic Thinking	FT 5.1 Differentiate sensory characteristics that affect food preferences.
Two Skill/Concept	FT 5.2 Implement procedures for evaluation of sensory characteristics.

**FT 6: Students will investigate technological advances in food science, food processing, and food production.**

<i>Webb Level</i>	<i>Sub-indicator</i>
Two Skill/Concept	FT 6.1 Distinguish scientific advances that have changed the food supply and preparation.
Three Strategic Thinking	FT 6.2 Investigate use of technology in new food product development.