BS FOOD SCIENCE

Program Learning Objectives
1. Graduates demonstrate critical thinking skills in addressing food science issues.
2. Graduates demonstrate the knowledge, ethics, and technical skills needed to succeed in food science fields and post-graduate studies.
3. Graduates demonstrate effective written and oral communication skills.
4. Graduates demonstrate the ability to work effectively as part of a problem-solving team.
5. Graduates demonstrate cultural competence with interacting diverse populations.

Program Educational Outcomes
- Food Science program graduates can integrate and apply principles of food chemistry, analysis, microbiology, processing and engineering to assure food quality and safety.

Degree Requirements and Curriculum
In addition to the program requirements listed on this page, students must also satisfy requirements outlined in more detail in the Minimum Requirements for Graduation (http://catalog.calpoly.edu/generalrequirementsbachelorsdegree/#generaleducationtext) section of this catalog, including:

- 60 units of upper division courses
- Graduation Writing Requirement (GWR)
- 2.0 GPA
- U.S. Cultural Pluralism (USCP)

Note: No major, support or concentration courses may be selected as credit/no credit.

MAJOR COURSES
FSN 101 Orientation to the Food Science and Nutrition Majors 1
FSN 125 Introduction to Food Science 4
FSN 204 Food Processing Operations 4
FSN 210 Nutrition 4
FSN 250 Food and Nutrition: Customs and Culture (USCP) (D4) 1 4
FSN 311 Sensory Evaluation of Food 4
FSN 330 Introduction to Principles of Food Engineering 4
FSN 334 Food Packaging 3
FSN 335 Food Quality Assurance 4
FSN 364 Food Chemistry 4
FSN 368 Food Analysis 4
FSN 370 Food Plant Sanitation and Prerequisite Programs 4
FSN 374 Food Laws and Regulations 4
FSN 375 Food Safety 4
FSN 408 Food Product Development 4
FSN 461 Senior Project I 3

FSN 462 Senior Project II 3
Concentration courses (see below) 19-20

SUPPORT COURSES
AGB 214 or BUS 212 Agribusiness Financial Accounting 4
BIO 111 General Biology (B2 & B4) 1 4
CHEM 127 & CHEM 128 General Chemistry for Agriculture and Life Science I and General Chemistry for Agriculture and Life Science II (B3 & B4) 1 8
CHEM 312 Survey of Organic Chemistry 5
CHEM 313 Survey of Biochemistry and Biotechnology 5
MATH 118 Precalculus Algebra (B1) 1 4
MCRO 221 Microbiology 4
MCRO 421 Food Microbiology 4
PHYS 121 College Physics I 4
STAT 218 Applied Statistics for the Life Sciences (B1) 1 4

GENERAL EDUCATION (GE)
(See GE program requirements below.) 52

FREE ELECTIVES
Free Electives 0-1
Total units 180

1 Required in Major or Support; also satisfies GE.

Concentrations
- Advanced Food Science (http://catalog.calpoly.edu/collegesandprograms/collegeofagriculturefoodenvironmentalsciences/foodsciencenutrition/bfoodscience/advancedfoodscienceconcentration)
- Applied Food Technology (http://catalog.calpoly.edu/collegesandprograms/collegeofagriculturefoodenvironmentalsciences/foodsciencenutrition/bfoodscience/appliedfoodtechnologyconcentration)
- Culinary (http://catalog.calpoly.edu/collegesandprograms/collegeofagriculturefoodenvironmentalsciences/foodsciencenutrition/bfoodscience/culinaryconcentration)

General Education (GE) Requirements
- 72 units required, 20 of which are specified in Major and/or Support.
- See the complete GE course listing (http://catalog.calpoly.edu/generalrequirementsbachelorsdegree/#generaleducationtext).
- Minimum of 12 units required at the 300 level.

Area A Communication
A1 Expository Writing 4
A2 Oral Communication 4
A3 Reasoning, Argumentation and Writing 4

Area B Science and Mathematics (no additional units required)
## BS Food Science

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Units</th>
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<tbody>
<tr>
<td>B1</td>
<td>Mathematics/Statistics (8 units in Support)</td>
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</tr>
<tr>
<td>B2</td>
<td>Life Science (4 units in Support)</td>
<td>0</td>
</tr>
<tr>
<td>B3</td>
<td>Physical Science (4 units in Support)</td>
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<tr>
<td>B4</td>
<td>One lab taken with either a B2 or B3 course</td>
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### Area C: Arts and Humanities

<table>
<thead>
<tr>
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<th>Description</th>
<th>Units</th>
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<tbody>
<tr>
<td>C1</td>
<td>Literature</td>
<td>4</td>
</tr>
<tr>
<td>C2</td>
<td>Philosophy</td>
<td>4</td>
</tr>
<tr>
<td>C3</td>
<td>Fine/Performing Arts</td>
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<tr>
<td>C4</td>
<td>Upper-division elective</td>
<td>4</td>
</tr>
<tr>
<td>C5</td>
<td>Upper-division elective</td>
<td>4</td>
</tr>
<tr>
<td>Area C elective</td>
<td>Choose one course from C1-C5)</td>
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</table>

### Area D/E: Society and the Individual

<table>
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<tr>
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<th>Description</th>
<th>Units</th>
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<tbody>
<tr>
<td>D1</td>
<td>The American Experience (Title 5, Section 40404 requirement)</td>
<td>4</td>
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<tr>
<td>D2</td>
<td>Political Economy</td>
<td>4</td>
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<tr>
<td>D3</td>
<td>Comparative Social Institutions</td>
<td>4</td>
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<tr>
<td>D4</td>
<td>Self Development (CSU Area E) (4 units in Major)</td>
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<tr>
<td>D5</td>
<td>Upper-division elective</td>
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</table>

### Area F: Technology

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<tbody>
<tr>
<td>F</td>
<td>Upper-division elective</td>
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</table>

Total units: 52

1 Required in Major or Support; also satisfies GE.