# Program Learning Objectives

1. Possess the well-rounded subject matter breadth and depth required to effectively teach subject matter in agriculture.
2. Professionally communicate and articulate knowledge to others in multi modal, succinct and creative teaching styles.
3. Lead and direct individuals and groups in thought and action.
4. Analyze and communicate effectively about major issues in agriculture.
5. Demonstrate cultural competencies in an increasingly global agricultural industry and society.
6. Develop a high degree of agricultural literacy.
7. Demonstrate critical thinking and problem solving skills.
8. Seamlessly and professionally integrate technology into instructional practices.

# Degree Requirements and Curriculum

In addition to the program requirements listed on this page, student 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 or support courses may be selected as credit/no credit.

## MAJOR COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGED 102</td>
<td>Introduction to Agricultural Education</td>
<td>2</td>
</tr>
<tr>
<td>or AGC 102</td>
<td>Orientation to Agricultural Communication</td>
<td></td>
</tr>
<tr>
<td>AGED 404</td>
<td>Agricultural Leadership</td>
<td>3</td>
</tr>
<tr>
<td>AGED 410</td>
<td>Computer Applications in Agricultural Education</td>
<td>2</td>
</tr>
<tr>
<td>AGED 460</td>
<td>Research Methodology in Agricultural Education and Communication</td>
<td>1</td>
</tr>
<tr>
<td>AGED 461</td>
<td>Senior Project I</td>
<td>1</td>
</tr>
<tr>
<td>or AGC 461</td>
<td>Senior Project I</td>
<td></td>
</tr>
<tr>
<td>AGED 462</td>
<td>Senior Project II</td>
<td>1</td>
</tr>
<tr>
<td>or AGC 462</td>
<td>Senior Project II</td>
<td></td>
</tr>
<tr>
<td>AGC 452</td>
<td>Current Trends and Issues in Agricultural Communication</td>
<td>4</td>
</tr>
<tr>
<td>or AG 360</td>
<td>Holistic Management</td>
<td></td>
</tr>
<tr>
<td>or AG 450</td>
<td>Applied Holistic Management</td>
<td></td>
</tr>
<tr>
<td>or AG 452</td>
<td>Issues Affecting California Agriculture</td>
<td></td>
</tr>
<tr>
<td>AEPS 120</td>
<td>Principles of Horticulture and Crop Science</td>
<td>4</td>
</tr>
<tr>
<td>or AEPS 230</td>
<td>Environmental Horticulture</td>
<td></td>
</tr>
<tr>
<td>AGB 202</td>
<td>Introduction to Sales</td>
<td>4</td>
</tr>
<tr>
<td>AGB 212</td>
<td>Agricultural Economics</td>
<td>4</td>
</tr>
<tr>
<td>AGB 301</td>
<td>Food and Fiber Marketing</td>
<td>4</td>
</tr>
</tbody>
</table>

Select one from the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASCI 112</td>
<td>Principles of Animal Science (B2)</td>
<td>4</td>
</tr>
<tr>
<td>ASCI 225</td>
<td>Introduction to Poultry Management</td>
<td>4</td>
</tr>
<tr>
<td>BRAE 121</td>
<td>Agricultural Mechanics</td>
<td>2</td>
</tr>
<tr>
<td>BRAE 141</td>
<td>Agricultural Machinery Safety</td>
<td>3</td>
</tr>
<tr>
<td>DSCI 230</td>
<td>General Dairy Husbandry</td>
<td>4</td>
</tr>
<tr>
<td>DSCI 231</td>
<td>General Dairy Manufacturing</td>
<td>4</td>
</tr>
<tr>
<td>or FSN 230</td>
<td>Elements of Food Processing</td>
<td></td>
</tr>
<tr>
<td>SS 121</td>
<td>Introductory Soil Science</td>
<td>4</td>
</tr>
<tr>
<td>or SS 131</td>
<td>Soils in Environmental and Agricultural Systems</td>
<td></td>
</tr>
</tbody>
</table>

## Approved Electives in Emphasis Area

Select courses from the below Guide to Approved Electives - Emphasis Areas. At least 12-20 units must be at the 300-400 level.

### SUPPORT COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRAE 340</td>
<td>Irrigation Water Management (Area F)</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 110</td>
<td>World of Chemistry (B3 &amp; B4)</td>
<td>4-5</td>
</tr>
<tr>
<td>or CHEM 111</td>
<td>Survey of Chemistry</td>
<td></td>
</tr>
<tr>
<td>MATH 118</td>
<td>Precalculus Algebra (B1)</td>
<td>4</td>
</tr>
<tr>
<td>or MATH 119</td>
<td>Precalculus Trigonometry</td>
<td></td>
</tr>
<tr>
<td>NR/ES 308</td>
<td>Fire and Society (D5)</td>
<td>4</td>
</tr>
<tr>
<td>or NR 323</td>
<td>Human Dimensions in Natural Resources Management</td>
<td></td>
</tr>
</tbody>
</table>

### FREE ELECTIVES

Select courses from the below Guide to Approved Electives - Career Areas. At least 12-20 units must be at the 300-400 level.  

### GENERAL EDUCATION (GE)

(See GE program requirements below.)

### Approved Electives in Career Area

Select courses from the below Guide to Approved Electives - Career Areas. At least 12-20 units must be at the 300-400 level.

### Guide to Approved Electives - Emphasis Areas

Approved electives have been categorized by emphasis area to guide students in their selections. Advisor approval of electives is not required, but consultation with an advisor is recommended to ensure that the required number of upper-division units is met. Also, bear in mind that selection may impact pursuit of post-baccalaureate studies and/or goals. It is imperative for students seeking a teaching credential to select one Emphasis Area and adhere to the approved list of courses.

### Emphasis Areas

Select Emphasis Area of choice (At least 12 to 20 units must be at the 300-400 level):  

### Agricultural Engineering Technology

Core Courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRAE 133</td>
<td>Introduction to Engineering Design Graphics</td>
<td></td>
</tr>
</tbody>
</table>
BRAE 237 Introduction to Engineering Surveying or BRAE 239 Engineering Surveying
BRAE 321 Agricultural Safety
BRAE 335 Internal Combustion Engines

Select from the following electives:
BRAE 142 Agricultural Power and Machinery Management
BRAE 151 CAD for Agricultural Engineering
BRAE 152 3-D Solids Modeling
BRAE 240 Agricultural Engineering Laboratory
BRAE 331 Irrigation Theory
BRAE 337 Landscape Irrigation
BRAE 348 Energy for a Sustainable Society
BRAE 438 Drip/Micro Irrigation
BRAE 481 Advanced Agricultural Mechanics
BRAE 532 Water Wells and Pumps
PHYS 121 College Physics I

Agricultural Supplies and Services
Core Courses:
AGB 214 Agribusiness Financial Accounting
AGB 309 Advanced Sales Techniques
AGB 310 Agribusiness Credit and Finance

Select from the following electives:
AGB 260 Agribusiness Data Literacy
AGB 312 Agricultural Policy
AGB 313 Agriculture Economic Analysis
AGB 314 Fair and Fair Facility Management
AGB 322 Principles of Agribusiness Management
AGB 323 Agribusiness Managerial Accounting
AGB 331 Farm Accounting
AGB 369 Agricultural Personnel Management
AGB 404 Food Retail Management
AGB 440 Field Studies in Agribusiness
AGB 445 Produce Marketing
AGB 455 Advanced Fair Management Seminar
WVIT 343 Branded Wine Marketing

Animal Science
Core Courses:
ASCI 220 Introductory Animal Nutrition and Feeding

Select two from the following:
ASCI 221 Introduction to Beef Production
ASCI 222 Systems of Swine Production
ASCI 223 Systems of Small Ruminant Management

Select one from the following:
DSCI 330 Artificial Insemination and Embryo Biotechnology
ASCI 321 Zoonoses and Veterinary Public Health Concerns
ASCI 350 Nonruminant Nutrition

Select from the following electives:
ASCI 311 Advanced Beef Cattle System Management
ASCI 325 Egg Production, Processing and Distribution
ASCI 329 Principles of Range Management
ASCI 330 Poultry Meat Production and Processing
ASCI 342 Poultry Business Management
ASCI 425 Meat Industry Study Tour
DSCI 301 Dairy Cattle Nutrition
DSCI 333 Dairy Animal Health, Safety and Applied Technology

Crop and Soil Science
Core Courses:
AEPS 150 Forage Crops
SS 221 Soil Health and Plant Nutrition

Select from the following electives (must be a course not already taken in the major):
AEPS 321 Weed Biology and Management
AEPS 355 Citrus and Avocado Fruit Production
AEPS 421 Postharvest Technology of Horticultural Crops
AEPS 423 Advanced Vegetable Science

Forestry and Natural Resources
Core Courses:
BIO 227 Wildlife Conservation Biology
NR 142 Environmental Management
NR 208 Dendrology
NR 306 Natural Resource Ecology and Habitat Management

Select from the following electives:
NR/ES 308 Fire and Society
NR 312 Technology of Wildland Fire Management
NR/LA 317 The World of Spatial Data and Geographic Information Technology
NR 321 Water Systems Technology, Issues and Impacts
NR 323 Human Dimensions in Natural Resources Management
NR/ES 360 Ethnicity and the Land
NR 402 Forest Health
NR/CRP 404 Environmental Law
NR/CRP 408 Water Resource Law and Policy

Ornamental Horticulture
Core Courses:
BOT 121 General Botany
AEPS 123 Landscape Installation and Maintenance
AEPS 124 Plant Propagation

Select from the following electives:
AEPS 301 Principles of Landscape Design
AEPS 341 Cut Flower Production
AEPS 342 Potted Plant Production
Guide to Approved Electives - Career Areas

The following approved electives have been categorized by career area to guide students in their selections. Advisor approval of career area electives is not required, but consultation with an advisor is recommended to ensure that the required number of upper-division units is met. Also, bear in mind that selection may impact pursuit of post-baccalaureate studies and/or goals.

It is imperative for students seeking a teaching credential to follow the Teaching Agriculture Career Area and adhere to the approved list of courses. No more than 8 units total of BIO, BOT, CHEM, GEOL, MCRO, MSCI, PHYS can count towards the Teaching Agriculture Electives. If you are following the Individualized Career Area and need to count more than 8 units of the course prefixes listed above, consult with your advisor for approval.

Career Areas

Select Career Area of choice (At least 12-20 units must be at the 300-400 level):

Individualized

Any course with a prefix of AEPS, AG, AGC, AGED, AGB, ASCI, BRAE, DSCI, ERSC, FSN, NR, RPTA, SS, WVIT, COMS, GRC, JOUR (that is not already counting towards GE area), or any courses included as a required course within a minor at Cal Poly.

Teaching Agriculture

AGB 214 Agribusiness Financial Accounting
or BUS 212 Financial Accounting for Nonbusiness Majors
AGED 303 FFA and Supervised Agricultural Experience
AGED 350 Early Field Experience in Agriculture Education

Teaching Agriculture Electives

Restriction: No more than 8 units total of BIO, BOT, CHEM, GEOL, MCRO, MSCI, PHYS courses can count towards Teaching Agriculture Electives.

Select 4 units from the following electives:

AGED 220 Agricultural Youth Conferences
BUS 207 Legal Responsibilities of Business
ECON 222 Macroeconomics
IME 142 Manufacturing Processes: Materials Joining
KINE 305 Drugs in Society
or KINE 443 Health Education for Teachers

Any lower division or upper division course with a prefix of AEPS, AG, AGB, ASCI, BIO, BOT, BRAE, CHEM, DSCI, ERSC, FSN, GEOl, MCRO, MSCI, NR, PHYS, RPTA, SS, WVIT.

Select 14 units from the following electives:

Any upper division courses with a prefix of AEPS, AG, AGB, ASCI, BIO, BOT, BRAE, CHEM, DSCI, ERSC, FSN, GEOl, MCRO, MSCI, NR, PHYS, RPTA, SS, WVIT.

1 Required in Major or Support; also satisfies GE.
2 MATH 116 and MATH 117 substitute.
3 The teaching credential requires specific courses. Consult with an advisor prior to developing an academic plan.
4 Students in the teaching career area pathway may not double-count this course.

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
B1  Mathematics/Statistics (4 units in Support plus 4 units in GE)  4
B2  Life Science (4 units in Major)  1  0
B3  Physical Science (4 units in Support)  1
B4  One lab taken with either a B2 or B3 course

Area C  Arts and Humanities
C1  Literature  4
C2  Philosophy  4
C3  Fine/Performing Arts  4
C4  Upper-division elective  4
C5  Upper-division elective  4
Area C elective (Choose one course from C1-C5)  4

Area D/E  Society and the Individual
D1  The American Experience (Title 5, Section 40404 requirement)  4
D2  Political Economy  4
D3  Comparative Social Institutions  4
D4  Self Development (CSU Area E)  2
D5  Upper-division elective (4 units in Support)  1

Area F  Technology
F  Upper-division elective (4 units in Support)  0

Total units  52

1 Required in Major or Support; also satisfies GE.
Teaching candidates are advised to take KINE 250.