BS AGRICULTURAL SYSTEMS MANAGEMENT
2022-2026

CAL POLY

This document displays only your course requirements at the time of publication of the catalog. You must use your Degree Progress Report to track all graduation requirements.

Note: No Major or Support courses may be selected as credit/no credit.

MAJOR COURSES		
BRAE 128	Careers in Bioresource and Agricultural Engineering	2
BRAE 129	Laboratory Skills and Safety	1
BRAE 142	Agricultural Power and Machinery Management	4
BRAE 150	Design Graphics and CAD for Agricultural Engineering	2
BRAE 152	3-D Solids Modeling	1
BRAE 203	Agricultural Systems Analysis	4
BRAE 237 or BRAE 239	Introduction to Engineering Surveying Engineering Surveying	2-4
BRAE 301	Hydraulic and Mechanical Power Systems	4
BRAE 317	Agricultural Systems Management Theory	4
BRAE 321	Agricultural Safety	3
BRAE 324	Principles of Agricultural Electrification	4
BRAE 340	Irrigation Water Management	4
BRAE 342	Agricultural Materials	4
BRAE 343	Mechanical Systems Analysis	4
BRAE 348	Energy for a Sustainable Society (Upper-Division B) [1]	4
BRAE 418	Agricultural Systems Management I	4
BRAE 419	Agricultural Systems Management II	4
BRAE 425	Computer Controls for Agriculture	3
BRAE 432	Agricultural Buildings	4
BRAE 438 or BRAE 440	Drip/Micro Irrigation [2] Agricultural Irrigation Systems	4
BRAE 460	Senior Project Organization	1
BRAE 465	Senior Project Operation, Testing, and Safety	2
Approved Electives [2, 3] (see list below)		12
Total Major Units		**81-83**

SUPPORT COURSES		
AGB 212	Agricultural Economics	4
AGB 260	Agribusiness Data Literacy	4
AGB 310	Agribusiness Credit and Finance	4
AGB 369	Agricultural Personnel Management	4
BUS 212 or AGB 214	Financial Accounting for Nonbusiness Majors Agribusiness Financial Accounting	4
CHEM 110	World of Chemistry (B1 & B3) [1]	4
or CHEM 127	General Chemistry for Agriculture and Life Science I	
ENGL 147	Writing Arguments about STEM (A3) [1]	4
Select from the following:		4
MATH 119	Precalculus Trigonometry (B4) [1]	
STAT 217	Introduction to Statistical Concepts and Methods (B4) [1]	
STAT 218	Applied Statistics for the Life Sciences (B4) [1]	
MATH 221	Calculus for Business and Economics (GE Electives) [1]	4
PHYS 121	College Physics I	4
SS 120	Introductory Soil Science	4
Animal or Plant Production Course		
Any ASCI, DSCI, PLSC course except for internship or enterprise courses.		3
Total Support Units		**47**

GENERAL EDUCATION		
Area A	**English Language Communication and Critical Thinking**	
A1	Oral Communication	4
A2	Written Communication	4
A3	Critical Thinking (4 units in Support) [1]	0
Area B	**Scientific Inquiry and Quantitative Reasoning**	
B1	Physical Science (4 units in Support) [1]	0
B2	Life Science	4
B3	One lab taken with either a B1 or B2 course	
B4	Mathematics/Quantitative Reasoning (4 units in Support) [1]	0
Upper-Division B (4 units in Major) [1]		0
Area C	**Arts and Humanities**	
Lower-division courses in Area C must come from three different subject prefixes.		
C1	Arts	4
C2	Humanities	4
Lower-Division C Elective - Select a course from either C1 or C2		4
Upper-Division C		4
Area D	**Social Sciences - Select courses in Area D from at least two different prefixes**	
D1	American Institutions (Title 5, Section 40404 Requirement)	4
D2	Lower-Division D	4
Upper-Division D		4
Area E	**Lifelong Learning and Self-Development**	
Lower-Division E		4
Area F	**Ethnic Studies**	
F	Ethnic Studies	4
GE Electives in Areas B, C, and D		
Select courses from two different areas; may be lower-division or upper-division courses.		
GE Electives (4 units B in Support) [1]		0
GE Electives (Area C or D)		4
Total GE Units		**52**
FREE ELECTIVES		**0**
TOTAL DEGREE UNITS		**180-182**

FOOTNOTES

1 Required in Major or Support; also satisfies General Education (GE) requirement.
2 If a course is taken to meet a Major requirement, it cannot be double-counted as an Approved Elective.
3 Consultation with advisor is recommended prior to selecting Approved Electives; bear in mind your selections may impact pursuit of post-baccalaureate studies and/or goals.

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Approved Electives [2,3]

Minimum of 9 units must be upper division

No more than 4 units of internship or enterprise may be used

Select from the following:

Any AGB course eligible for the Agribusiness minor

AGC 102	Orientation to Agricultural Communication & Ag Science
BRAE 200	Special Problems for Undergraduates (4 units max)
BRAE 236	Principles of Irrigation
BRAE 302	Servo Hydraulics
BRAE 331	Irrigation Theory
BRAE 333	Aquacultural Engineering
BRAE 335	Internal Combustion Engines
BRAE 337	Landscape Irrigation
BRAE 344	Fabrication Systems
BRAE 345	Aerial Photogrammetry and Remote Sensing
BRAE/NR 349	Water for a Sustainable Society
BRAE 400	Special Problems (4 units maximum)
BRAE 405	Chemigation
BRAE/EE 434	Automotive Engineering for a Sustainable Future
BRAE 435	Drainage
BRAE 436	Food and Agriculture Process Water Engineering
BRAE 438	Drip/Micro Irrigation
or BRAE 440	Agricultural Irrigation Systems
BRAE 447	Advanced Surveying with GIS Applications
BRAE 448	Bioconversion
BRAE 450	Solar Photovoltaic System Engineering
BRAE 532	Water Wells and Pumps
BRAE 533	Irrigation Project Design
CHEM 212	Introduction to Organic Chemistry
FSN 125	Introduction to Food Science
FSN 204	Food Processing Operations
FSN 230	Elements of Food Processing
FSN 275	Elements of Food Safety
FSN 330	Introduction to Principles of Food Engineering
FSN 334	Food Packaging
FSN 340	Fermented Foods
FSN 354	Packaging Function in Food Processing
FSN 370	Food Plant Sanitation and Prerequisite Programs
FSN 375	Food Safety
FSN 444	Food Engineering
IME 141	Manufacturing Processes: Net Shape
IME 142	Manufacturing Processes: Materials Joining
IME 143	Manufacturing Processes: Material Removal
IME 144	Introduction to Design and Manufacturing
IME 319	Human Factors Engineering
IME 320	Human Factors and Technology
ITP 330	Packaging Fundamentals
ITP 341	Packaging Polymers and Processing
NR/LA 218	Introduction to Geographic Information Systems (GIS)
NR 306	Natural Resource Ecology and Habitat Management
NR/CRP 408	Water Resource Law and Policy
NR 416	Environmental Impact Analysis and Management
SS 221	Soil Health and Plant Nutrition

Animal or Plant Production Course

Any ASCI, DSCI, PLSC course except for internship or enterprise courses