

# ANIMAL SCIENCE BS

The Bachelor of Science in Animal Science prepares students for diverse careers involving all aspects of food animal agriculture. Careers in food animal production, support industries such as animal health and nutrition companies, and pre-professional preparation for graduate or professional school studies are all possible directions for students obtaining this degree. In addition, management level courses in several food animal species are offered. Students get hands-on learning about food animals such as sheep, beef and dairy cattle, and pigs at the University Farm.

**The option in food animal production.** This is a general animal science option that balances science and production. Students should select this option if they are interested in entering the livestock production field or any of the supporting industries (feed companies, pharmaceutical companies, etc.).

**The option in pre-veterinary science.** This option prepares students for application to professional programs such as veterinary schools and graduate programs. Emphasis is on advanced sciences to prepare students for post-baccalaureate education. Students interested in pre-veterinary medicine should pursue this option.

## Advising Requirement

Advising is mandatory for this program. Consult your department advisor or program coordinator for information.

## E-advising Tools

Use the interactive e-advising tools designed to help students graduate within four years. These tools can be accessed through the Student Center in the Portal (<https://portal.csuchico.edu>).

## Grading Requirement

All courses taken to fulfill program course requirements must be taken for a letter grade except those courses specified by the department as credit/no credit grading only.

## Course Requirements for the Major: 78 units

Completion of the following courses, or their approved transfer equivalents, is required of all candidates for this degree. Courses in this program may complete more than one graduation requirement.

Course	Title	Units
<b>Lower Division Core</b>		
ABUS 101	Introduction to Agricultural Business and Economics	3
ANSC 100	Introduction to Food Animal Systems	3
ANSC 101	Introduction to Animal Science	3
ANSC 230	Animal Feeds and Nutrition	3
MATH 105	Introduction to Statistics	3
Select one of the following:		4
CHEM 107	General Chemistry for Applied Sciences	
CHEM 111	General Chemistry I <sup>1</sup>	
Select one of the following:		4
CHEM 108	Organic Chemistry for Applied Sciences	
CHEM 112	General Chemistry II <sup>1</sup>	

### Upper Division Core

AGRI 305	Agricultural Genetics	3
AGRI 482W	Agricultural Issues (W)	3
AGRI 490W	Agricultural Experimental Research (W)	4
ANSC 330	Animal Nutrition	3
ANSC 340	Reproductive Physiology of Domestic Animals	3
ANSC 360	Animal Health and Disease	3
ANSC 440	Physiology of Domestic Animals	3

### Major Option

Select one of the following options:		33
Food Animal Production (p. 1)		
Pre-Veterinary Science (p. 2)		

<b>Total Units</b>	<b>78</b>
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<sup>1</sup> Pre-Veterinary Science option must take CHEM 111 / CHEM 112

## Major Option Course Requirements

Students must select at least one of the following options for completion of the major course requirements.

### The Option in Food Animal Production: 33 units

Course	Title	Units
Select one of the following:		3
PSSC 101	Introduction to Plant Science	
PSSC 250	Introduction to Soil Science	
Select nine units from the following:		9
Any combination of lower-division courses in Agricultural Business (ABUS), Agriculture (AGRI), Agricultural Engineering Technology (AGET), Animal Science (ANSC), and Plant and Soil Science (PSSC).		
Select one of the following:		3
AGRI 331	Agricultural Ecology	
ANSC 394	Livestock Grazing Ecology and Management	
PSSC 363	Forage Crops	
PSSC 432	Farm and Ranch Planning and Design	
Select three of the following: <sup>1</sup>		9
ANSC 250	Live Animal and Carcass Evaluation	
ANSC 271	Principles of Beef Cattle Production	
ANSC 274	Principles of Dairy Production	
ANSC 276	Principles of Meat Science	
ANSC 294	Principles of Rangeland Livestock Management	
ANSC 301	Intermediate Animal Systems	
ANSC 350	Meat and the Consumer	
ANSC 370	Livestock and Companion Animal Behavior	
ANSC 372	Sheep Production	
ANSC 373	Swine Production	
ANSC 374	Organic Dairy Production and Management	
ANSC 394	Livestock Grazing Ecology and Management	
ANSC 450	Food Sanitation and Quality Control	
ANSC 470	Animal Welfare	
ANSC 471	Advanced Beef Cattle Management and Production	
ANSC 474	Dairy Production and Management	

Select nine units from the following: <sup>2</sup>	9
Any combination of upper-division courses in Agricultural Business (ABUS), Agriculture (AGRI), Agricultural Engineering Technology (AGET), Animal Science (ANSC), and Plant and Soil Science (PSSC). Choose courses in consultation with your advisor.	

<sup>1</sup> One course can be lower division.  
<sup>2</sup> At least one course must be Agricultural Business (ABUS).

**The Option in Pre-Veterinary Science: 33 units**

Course	Title	Units
BIOL 162	Principles of Cellular and Molecular Biology	4
BIOL 163	Principles of Physiology and Development	4
CHEM 270	Organic Chemistry I	4
CHEM 370	Organic Chemistry II	3
CHEM 451	Biochemistry I	3
Select two of the following: <sup>1</sup>		6
ANSC 250	Live Animal and Carcass Evaluation	
ANSC 271	Principles of Beef Cattle Production	
ANSC 274	Principles of Dairy Production	
ANSC 276	Principles of Meat Science	
ANSC 294	Principles of Rangeland Livestock Management	
ANSC 301	Intermediate Animal Systems	
ANSC 350	Meat and the Consumer	
ANSC 370	Livestock and Companion Animal Behavior	
ANSC 372	Sheep Production	
ANSC 373	Swine Production	
ANSC 374	Organic Dairy Production and Management	
ANSC 394	Livestock Grazing Ecology and Management	
ANSC 450	Food Sanitation and Quality Control	
ANSC 470	Animal Welfare	
ANSC 471	Advanced Beef Cattle Management and Production	
ANSC 474	Dairy Production and Management	
Select nine units from the following:		9
Any combination of upper-division courses in Agricultural Business (ABUS), Agriculture (AGRI), Agricultural Engineering Technology (AGET), Animal Science (ANSC), and Plant and Soil Science (PSSC). Choose courses in consultation with your advisor to meet the subject matter competency requirements.		

<sup>1</sup> One course can be lower division.

**Honors in the Major**

Honors in the Major is a program of independent work in your major. It requires six units of honors coursework completed over two semesters.

The Honors in the Major program allows you to work closely with a faculty mentor in your area of interest on an original performance or research project. This year-long collaboration allows you to work in your field at a professional level and culminates in a public presentation of your work. Students sometimes take their projects beyond the University for submission in professional journals, presentation at conferences, or academic competition. Such experience is valuable for graduate school and professional life. Your honors work will be recognized at your

graduation, on your permanent transcripts, and on your diploma. It is often accompanied by letters of commendation from your mentor in the department or the department chair.

Some common features of Honors in the Major program are:

- You must take six units of Honors in the Major coursework. All six units are honors courses (marked by a suffix of H), and at least three of these units are independent study (399H, 499H, 599H) as specified by your department. You must complete each course with a minimum grade of B.
- You must have completed 9 units of upper-division coursework or 21 overall units in your major before you can be admitted to Honors in the Major. Check the requirements for your major carefully, as there may be specific courses that must be included in these units.
- Your cumulative #GPA should be at least 3.5 or within the top 5% of majors in your department.
- Your GPA in your major should be at least 3.5 or within the top 5% of majors in your department.
- Most students apply for or are invited to participate in Honors in the Major during the second semester of their junior year. Then they complete the six units of coursework over the two semesters of their senior year.
- Your honors work culminates with a public presentation of your honors project.

Honors in the Major is not part of the Honors Program. Each department administers its own program. Please contact your major department or major advisor to apply.

See Bachelor's Degree Requirements (<https://catalog.csuchico.edu/undergraduate-requirements/bachelors-degree-requirements/>) for complete details on general degree requirements. A minimum of 39 units, including those required for the major, must be upper division.

**General Education Requirements: 43 units**

See General Education (<https://catalog.csuchico.edu/colleges-departments/undergraduate-education-academic-success/general-education/#gerequirementstext>) and the Class Schedule (<http://www.csuchico.edu/schedule/>) for the most current information on General Education requirements and course offerings.

This major has approved GE modification(s). See below for information on how to apply these modification(s).

- ANSC 101 is an approved major course substitution for Biological Science (5B).
- AGRI 482W is an approved major course substitution for Upper-Division Social and Behavioral Sciences (UD-4).

**American Institutions Course Requirements: 6 units**

The American Institutions graduation requirement, as mandated in Title 5, Section 40404 (<https://govt.westlaw.com/calregs/Document/I56C041434C6911EC93A8000D3A7C4BC3/?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPage>) requires that students satisfactorily complete courses in United States history, the US Constitution, and government and American ideals (including California state and local government). At Chico State, HIST 130 meets the US history requirement (US-1), and POLS 155 meets the US Constitution and government requirement (US-2) and the

California state and local government requirement (US-3). POLS 155 also fulfills three units of GE Area 4, Social and Behavioral Sciences. See Bachelor's Degree Requirements (<https://catalog.csuchico.edu/undergraduate-requirements/bachelors-degree-requirements/#amin>) for more information.

## Diversity Course Requirements: 6 units

You must complete a minimum of two courses that focus primarily on cultural diversity. At least one course must be in US Diversity (USD) and at least one in Global Cultures (GC). See Diversity Requirements (<https://catalog.csuchico.edu/undergraduate-requirements/diversity-requirements/>) for a full list of courses. Many courses taken to satisfy these requirements may also apply to General Education (<https://catalog.csuchico.edu/colleges-departments/undergraduate-education-academic-success/general-education/>).

## Upper-Division Writing Requirement

Writing Across the Curriculum (EM 17-009 (<https://www.csuchico.edu/pres/em/2017/17-009.shtml/>)) is a graduation requirement and may be demonstrated through satisfactory completion of four Writing (W) courses, two of which are designated by the major department. See Writing and Math Requirements (<https://catalog.csuchico.edu/undergraduate-requirements/writing-math-requirements/>) for more details on the four courses. The first of the major designated Writing (W) courses is listed below.

- AGRI 490W Agricultural Experimental Research (W)

The second major-designated Writing course is the Graduation Writing Assessment Requirement (GW) (EO 665 (<https://calstate.policystat.com/policy/9585618/latest/>)). Students must earn a C- or higher to receive GW credit. The GE English Composition (1A) (<https://catalog.csuchico.edu/colleges-departments/undergraduate-education-academic-success/general-education/#1A>) requirement must be completed before a student is permitted to register for a GW course.