ANIMAL SCIENCE - BS, SCIENCE OPTION

This curriculum is designed to provide scientific expertise in chemistry, biological and physical sciences and mathematics and is recommended for students considering entry into the veterinary, medical or allied health field, or the graduate program of their choice. This option provides a strong background for graduate study in a wide variety of disciplines. Animal scientists graduating with a Bachelor of Science degree in this option who do not enter graduate or professional school find employment in rewarding careers in the pharmaceutical, clinical and food-related industries. Students may concentrate on an emphasis area within this option, including the following.

Pre-Professional

Students planning to pursue a career in veterinary medicine can complete course requirements for admission to the professional curriculum in this emphasis. Students gain experience working with animals through direct contact in laboratory courses and directed field study. Students acquire knowledge of animal systems and animal behavior principles through coursework and interaction with livestock industry leaders. Students are also prepared to seek admission to the professional curricula in medicine, dentistry, pharmacy, optometry and physical therapy.

Pre-graduate Studies

This emphasis prepares students to pursue a Master of Science, Master of Agriculture or Doctor of Philosophy degree. Possible graduate programs include animal behavior, animal breeding, biochemistry, cellular and molecular biology, meats, dairy science, food science and technology, genetics, growth biology, nutrition and reproductive physiology. Experience gained through honors courses, internships, special problems courses and research laboratories helps the student identify specific disciplines of interest for graduate study. Students with advanced degrees are employed as university professors, research scientists or technicians, extension livestock specialists and technical representatives for industry.

Program Requirements

First Year

Fall		**Semester Credit Hours**
ANSC 101	Introductory Seminar for Animal Science	1
ANSC 107 & ANSC 108	General Animal Science and General Animal Science Laboratory	4
CHEM 119	Fundamentals of Chemistry I	4
Language, philosophy and culture (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#language-philosophy-culture) [1]		3
Mathematics (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics) [1]		3
	Semester Credit Hours	**15**
Spring		
ANSC 111	Animal Production Systems	3
ANSC 113	Farm Animal Biosystems	2
CHEM 120	Fundamentals of Chemistry II	4
ENGL 104	Composition and Rhetoric	3
Mathematics (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#mathematics) [1]		3
	Semester Credit Hours	**15**

Second Year

Fall		
ANSC 303/ NUTR 303	Principles of Animal Nutrition	3
BIOL 111	Introductory Biology I	4
CHEM 227 & CHEM 237	Organic Chemistry I and Organic Chemistry Laboratory	4
American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) [1]		3
	Semester Credit Hours	**14**
Spring		
ANSC 307/ FSTC 307	Meats	3
BIOL 112	Introductory Biology II	4
CHEM 228 & CHEM 238	Organic Chemistry II and Organic Chemistry Laboratory	4
American history (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#american-history) [1]		3
Social and behavioral sciences (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#social-behavioral-sciences) [1]		3
	Semester Credit Hours	**17**

Third Year

Fall		
ANSC 318	Animal Feeds and Feeding	3
BICH 410 or BICH 409	Comprehensive Biochemistry I or Principles of Biochemistry	3
GENE 301 & GENE 312	Comprehensive Genetics and Comprehensive Genetics Laboratory	4
Select one of the following:		3
STAT 301	Introduction to Biometry	
STAT 302	Statistical Methods	
STAT 303	Statistical Methods	
Creative arts (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#creative-arts)		3
	Semester Credit Hours	**16**
Spring		
ANSC 305	Animal Breeding	3
ANSC 333 & ANSC 334	Reproduction in Farm Animals and Reproduction in Farm Animals Laboratory	3
Select one of the following:		4
ANSC 326/ FSTC 326 & ANSC 327/ FSTC 327	Food Bacteriology and Food Bacteriology Lab	

BIOL 206	Introductory Microbiology	
BIOL 351	Fundamentals of Microbiology	
VTPB 405	Biomedical Microbiology	
General elective [2]		6
	Semester Credit Hours	**16**
Summer		
Animal science experience [3]		0
ANSC 399	Animal Science Experience	
	Semester Credit Hours	**0**
Fourth Year		
Fall		
ANSC disciplinary focus [4]		4
ANSC disciplinary focus [4]		4
Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) [1]		3
General elective [2]		3
	Semester Credit Hours	**14**
Spring		
ANSC 498	Animal Science Capstone	4
COMM 203 or ENGL 210	Public Speaking or Technical and Professional Writing	3
Government/Political science (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/#government-political-science) [1]		3
General elective [2]		3
	Semester Credit Hours	**13**
	Total Semester Credit Hours	**120**

1. To be selected from the University Core Curriculum. The University Core Curriculum includes a requirement for 3 hours of International and Cultural Diversity (http://catalog.tamu.edu/undergraduate/general-information/degree-information/international-cultural-diversity-requirements/) and 3 hours of Cultural Discourse (http://catalog.tamu.edu/undergraduate/general-information/degree-information/cultural-discourse-requirements/). Refer to the the University Core Curriculum (http://catalog.tamu.edu/undergraduate/general-information/university-core-curriculum/) catalog page for a list of acceptable courses. A course satisfying another Core category, a college/department requirement or taken as a general elective can be used to satisfy these requirements. Select in consultation with an academic advisor.
2. Students may choose to use general electives to complete a concentration in a pre-professional program, a pre-graduate study area, and/or a certificate program.
3. All students are required to complete an animal science experience in order to graduate. May include but is not limited to: undergraduate research, study abroad, internships, and competitive judging teams. To be selected in consultation with your academic advisor.
4. Select from the following courses: ANSC 404, ANSC 406, ANSC 408, ANSC 412, ANSC 414, ANSC 420, ANSC 429, ANSC 434, ANSC 437, ANSC 447, ANSC 451; DASC 418. 8 total hours required.

Students are required to make a C or better for each of their courses in the major (ANSC) coursework area.

All undergraduate students must take at least (2) specific courses in their major designated as writing or communication intensive (W or C). To be chosen in consultation with your academic advisor.

Maximum of 4hrs of ANSC 485 may be used in this program.

Maximum of 5hrs of ANSC 494 may be used in this program.