ANIMAL SCIENCE (SCIENCE) - BACHELOR OF SCIENCE IN AGRICULTURE

The science concentration provides you with a strong background in technical science and prepares you for advanced studies leading to graduate or professional degrees.

Students must complete all University degree requirements, which include: General Education requirements, Viewing a Wider World requirements, and elective credits to total at least 120 credits with 48 credits in courses numbered 300 or above. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

Prefix	Title	Credits
General Education		
Area I: Communications		
English Composition - Level 1 [1]		*4*
English Composition - Level 2 [1]		*3*
Oral Communication		*3*
Area II: Mathematics		
MATH 1220G	College Algebra [2]	3-4
or MATH 1511G	Calculus and Analytic Geometry I	
Area III/IV: Laboratory Sciences and Social/Behavioral Sciences		
BIOL 2610G & BIOL 2610L	Principles of Biology: Biodiversity, Ecology, and Evolution and Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory	4
CHEM 1215G	General Chemistry I Lecture and Laboratory for STEM Majors	4
Choose one from the following:		3
ECON 1110G	Survey of Economics	
ECON 2110G	Macroeconomic Principles	
ECON 2120G	Principles of Microeconomics	
Area V: Humanities [1]		*3*
Area VI: Creative and Fine Arts [1]		*3*
General Education Elective		
BIOL 2110G & BIOL 2110L	Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory (required for science option)	4
Viewing A Wider World [3]		**6**
Departmental/College Requirements [4]		
ANSC 1110	Animal Science Careers	1
ANSC 1120	Introduction to Animal Science	3
or ANSC 1120H	Introduction to Animal Science Honors	
ANSC 1120L	Introduction to Animal Science Lab	1
ANSC 303	Livestock, Meat and Wool Evaluation	4
or ANSC 308	Horse Evaluation	
ANSC 304	Feeds and Feeding	3
ANSC 370	Anatomy and Physiology of Farm Animals	4
ANSC/RGSC 402	Animal Science Seminar (or)	1
or ANSC 402 H	Animal Science Seminar	
ANSC 421	Physiology of Reproduction	4
ANSC 422	Animal Nutrition	3
ANSC 423	Animal Breeding	3
Ag Electives: choose a total of 6 credit with no more than 3 credits in ANSC Experience		*6*
RGSC 2110	Introduction to Rangeland Management	
ANSC 1140	Introduction to Dairy Science	
ANSC 1160	Introductory Horse Science	
ANSC 1180	Companion Animal in Society	
ANSC 2310	Introduction to Meat Science	
ANSC 301	Animal and Carcass Evaluation	
ANSC Experience		
ANSC 390	Internship	
ANSC 391	Undergraduate Research Experience	
ANSC 392	Animal Sciences Teaching/Extension Experience	
Concentration		
ANSC 305	Principles of Genetics	3
CHEM 1225G	General Chemistry II Lecture and Laboratory for STEM Majors	4
BCHE 395	Biochemistry I	3
or BCHE 341	Survey of Biochemistry	
Choose one Chemistry requirement from the following to complete the Chemistry requirement:		4-8
If the CHEM 313 set is selected all three courses must be completed		
CHEM 313 & CHEM 314 & CHEM 315	Organic Chemistry I and Organic Chemistry II and Organic Chemistry Laboratory (Students pursuing vet school or grad school must take CHEM 313, 314, 315)	
CHEM 2115	Survey of Organic Chemistry and Laboratory	
Production Electives		
Select two from the following:		6
ANSC 424	Swine Production	
ANSC 425	Horse Science and Management	
ANSC 426	Beef Production: Cow-Calf Management	
ANSC 427	Dairy Production	
ANSC 428	Sheep and Wool Production	
ANSC 429	Beef Production: Feedlot Management	
ANSC 468	Advanced Dairy Herd Management	
Designated Electives		
Select one from the following:		4
MATH 1511G	Calculus and Analytic Geometry I	
MATH 1521G	Calculus and Analytic Geometry II	
PHYS 1230G & PHYS 1230L	Algebra-Based Physics I and Algebra-Based Physics I Lab	
PHYS 1240G & PHYS 1240L	Algebra-Based Physics II and Algebra-Based Physics II Lab	
Select one from the following:		3
ANSC 462	Parasitology	
ANSC 480	Environmental Physiology of Domestic Animals	
ANSC 484	Ruminant Nutrition	
BIOL 311	General Microbiology	
TOX 361	Basic Toxicology	
TOX 461	Toxicology I	
Or any 300 level or higher Biol not counting BIOL 305		3
Non-Departmental Requirements (in addition to Gen.Ed/VWW)		
A ST 311	Statistical Applications	3

Second Language: (not required)	
Electives, to bring the total credits to 120 [5]	**9-14**
Total Credits	**120**

1. See the General Education (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/) section of the catalog for a full list of courses.
2. MATH 1220G College Algebra or MATH 1511G Calculus and Analytic Geometry I is required for the degree but students may need to take any prerequisites needed to enter MATH 1220G or MATH 1511G first.
3. See the Viewing a Wider World (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext) section of the catalog for a full list of courses
4. Required of Industry and Science Options
5. Elective credit may vary based on prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount indicated in the requirements list is the amount needed to bring the total to 120 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

A Suggested Plan of Study for Students

This roadmap assumes student placement in MATH 1220G College Algebra and ENGL 1110G Composition I. The contents and order of this roadmap may vary depending on initial student placement in mathematics and English. It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change.

First Year		
Semester 1		**Credits**
ENGL 1110G	Composition I [1]	4
MATH 1220G or MATH 1511G	College Algebra [1] or Calculus and Analytic Geometry I	3
ANSC 1120 or ANSC 1120H	Introduction to Animal Science or Introduction to Animal Science Honors	3
ANSC 1120L	Introduction to Animal Science Lab	1
ACES 1120	Freshman Orientation	1
Choose from one of the following AG Elective Options:		3
RGSC 2110	Introduction to Rangeland Management	
ANSC 1160	Introductory Horse Science	
ANSC 1180	Companion Animal in Society	
	Credits	**15**
Semester 2		
ACOM 1130G or COMM 1115G	Effective Leadership and Communication in Agriculture [1] or Introduction to Communication	3
CHEM 1215G	General Chemistry I Lecture and Laboratory for STEM Majors	4
CHEM 1121	General Supplemental Instruction I	1
ANSC 1110	Animal Science Careers	1
Area V: Humanities Course [2]		3
Area VI: Creative and Fine Arts Course [2]		3
	Credits	**15**
Second Year		
Semester 1		
ENGL 2210G	Professional and Technical Communication Honors [1]	3
BIOL 2610G & BIOL 2610L	Principles of Biology: Biodiversity, Ecology, and Evolution and Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory	4
CHEM 1225G	General Chemistry II Lecture and Laboratory for STEM Majors	4
CHEM 1122	General Supplemental Instruction II	1
ANSC 304	Feeds and Feeding [1]	3
	Credits	**15**
Semester 2		
A ST 311	Statistical Applications	3
BIOL 2110G & BIOL 2110L	Principles of Biology: Cellular and Molecular Biology and Principles of Biology: Cellular and Molecular Biology Laboratory	4
Area IV: Social and Behavioral Science Course		3
ECON 1110G	Survey of Economics	
ECON 2110G	Macroeconomic Principles	
ECON 2120G	Principles of Microeconomics	
VWW: Viewing a Wider World Course [3]		3
Choose from one of the following AG Elective Options:		3
ANSC 2310	Introduction to Meat Science	
ANSC 301	Animal and Carcass Evaluation	
ANSC 390	Internship	
ANSC 391	Undergraduate Research Experience	
ANSC 392	Animal Sciences Teaching/Extension Experience	
	Credits	**16**
Third Year		
Semester 1		
ANSC 370	Anatomy and Physiology of Farm Animals (Fall Only) [1]	4
Choose from one of the following:		4
ANSC 303	Livestock, Meat and Wool Evaluation (Fall Only)	
ANSC 308	Horse Evaluation (Spring Only)	
CHEM 313	Organic Chemistry I [1]	3
CHEM 303	Organic Supplemental Instruction I	1
ANSC 305	Principles of Genetics [1]	3
	Credits	**15**
Semester 2		
ANSC 421	Physiology of Reproduction (Spring Only) [1]	4
CHEM 314 & CHEM 315	Organic Chemistry II and Organic Chemistry Laboratory [1]	5
CHEM 304	Organic Supplemental Instruction II	1
Choose from one of the following:		4
MATH 1511G	Calculus and Analytic Geometry I [1]	
MATH 1521G	Calculus and Analytic Geometry II [1]	
PHYS 1230G & PHYS 1230L	Algebra-Based Physics I and Algebra-Based Physics I Lab [1]	
PHYS 1240G & PHYS 1240L	Algebra-Based Physics II and Algebra-Based Physics II Lab [1]	
Elective Course		1
	Credits	**15**

Fourth Year

Semester 1		
ANSC 422	Animal Nutrition [1]	3
ANSC 423	Animal Breeding [1]	3
ANSC 402 or ANSC 402 H or RGSC 402	Animal Science Seminar or Animal Science Seminar or Seminar	1
Choose from one of the following:		3
ANSC 462	Parasitology	
ANSC 480	Environmental Physiology of Domestic Animals	
ANSC 484	Ruminant Nutrition	
TOX 361	Basic Toxicology	
TOX 461	Toxicology I	
Elective Course		3
Elective Course		2
	Credits	**15**
Semester 2		
BCHE 395 or BCHE 341	Biochemistry I [1] or Survey of Biochemistry	3
Choose any two from the following courses:		6
ANSC 424	Swine Production	
ANSC 425	Horse Science and Management	
ANSC 426	Beef Production: Cow-Calf Management	
ANSC 427	Dairy Production	
ANSC 428	Sheep and Wool Production	
ANSC 429	Beef Production: Feedlot Management	
ANSC 468	Advanced Dairy Herd Management	
VWW: Viewing a Wider World Course [3]		3
Elective Course		2
	Credits	**14**
	Total Credits	**120**

1 These courses have prerequisites and it is the students responsibility to check and fulfill all course prerequisites listed for these courses.

2 See the General Education (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/) section of the catalog for a full list of courses.

3 See the Viewing a Wider World (https://catalogs.nmsu.edu/nmsu/general-education-viewing-wider-world/#viewingawiderworldtext) section of the catalog for a full list of courses.