

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		
<i>Area I: Communications</i>		
	English Composition - Level 1 ¹	4
	English Composition - Level 2 ¹	3
	Oral Communication	3
<i>Area II: Mathematics</i>		
MATH 1220G	College Algebra ²	3-4
	or MATH 1511G Calculus and Analytic Geometry I	
	or MATH 1511H Calculus and Analytic Geometry I Honors	
<i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i>		
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 Honors	
	<i>Area V: Humanities</i> ¹	3
	<i>Area VI: Creative and Fine Arts</i> ¹	3
<i>General Education Elective</i>		
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	System 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
<i>Ag Electives: choose a total of 6 credit with no more than 3 credits in ANSC Experience</i>		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
CHEM 313	Organic Chemistry I	3
CHEM 314	Organic Chemistry II	3
CHEM 315	Organic Chemistry Laboratory	2
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
	PHYS 1230G Algebra-Based Physics I & PHYS 1230L and Algebra-Based Physics I Lab	
	PHYS 1240G Algebra-Based Physics II & PHYS 1240L and Algebra-Based Physics II Lab	
	MATH 1511G Calculus and Analytic Geometry I or MATH 1511H Calculus and Analytic Geometry I Honors	
	MATH 1521G Calculus and Analytic Geometry II or MATH 1521H Calculus and Analytic Geometry II Honors	
Select one from the following:		3
	ANSC 360 Meat and Muscle Biology	
	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 120⁵	10
Total Credits	120-121

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 or ENGL 1110H	Composition I ¹ or Composition I Honors	4
MATH 1220G	College Algebra ¹	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	
ANSC 2310	Introduction to Meat Science	
Credits		15

Semester 2

ACOM 1130G or COMM 1115G or HNRS 2175G	Effective Leadership and Communication in Agriculture ¹ or Introduction to Communication or Introduction to Communication Honors	3
CHEM 1215G	General Chemistry I Lecture and Laboratory for STEM Majors	4
ANSC 1110	Animal Science Careers	1
Area V: Humanities Course ²		3
Choose an elective course. Consider a minor in horse management, human animal interaction, dairy science range science or ranch management.		3
Credits		14

Second Year

Semester 1

ENGL 2210G or ENGL 2210H	Professional and Technical Communication ¹ or Professional and Technical Communication	3
BIOL 2610G	Principles of Biology: Biodiversity, Ecology, and Evolution	3
BIOL 2610L	Principles of Biology: Biodiversity, Ecology, and Evolution Laboratory	1
CHEM 1225G	General Chemistry II Lecture and Laboratory for STEM Majors	4
ANSC 303 or ANSC 308	Livestock, Meat and Wool Evaluation or Horse Evaluation	4

Credits 15

Semester 2

BIOL 2110G	Principles of Biology: Cellular and Molecular Biology	3
BIOL 2110L	Principles of Biology: Cellular and Molecular Biology Laboratory	1
ECON 1110G	Survey of Economics	3
ANSC 304	Feeds and Feeding	3
Area VI: Creative and Fine Arts - see catalog for complete list		3
VWW: Viewing a Wider World Course ³		3

Credits 16

Third Year

Semester 1

CHEM 313	Organic Chemistry I ¹	3
ANSC 370	System Physiology of Farm Animals	4
ANSC 305	Principles of Genetics ¹	3
Designated Elective II: see catalog for complete list		3-5

Credits 13-15

Semester 2

ANSC 421	Physiology of Reproduction (Spring Only) ¹	4
CHEM 314	Organic Chemistry II ¹	3
CHEM 315	Organic Chemistry Laboratory	2
Choose from one of the following:		4
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	
MATH 1511G or MATH 1511H	Calculus and Analytic Geometry I ¹ or Calculus and Analytic Geometry I Honors	
MATH 1521G or MATH 1521H	Calculus and Analytic Geometry II ¹ or Calculus and Analytic Geometry II Honors	
Choose an elective course. Consider a minor in horse management, human animal interaction, dairy science range science or ranch management.		3

Credits 16

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
A ST 311	Statistical Applications	3
BCHE 395	Biochemistry I	3

Choose an elective course. Consider a minor in horse management, human animal interaction, dairy science range science or ranch management. 3

Credits 16

Semester 2

VWW: Viewing a Wider World Course³ 3

Choose an elective course. Consider a minor in horse management, human animal interaction, dairy science range science or ranch management. 3

AG Elective: see catalog for complete list 3

Choose any two production courses 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

Credits 15

Total Credits 120-122

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.