

# Animal Science (BS): Veterinary Bioscience (11ANSCBS – 11ANSCVET)

## Freshman Year<sup>1</sup>

Fall Semester	Credit	Spring Semester	Credit
ALS 103 Freshman Transitions and Diversity in Agriculture and Life Sciences	1	Animal Science Course <sup>3</sup>	2
ANS 150 Introduction to Animal Science <sup>2</sup>	3	BIO 183 Intro Bio: Cell & Molec Biol & Lab	4
ANS 151 Intro to Animal Science Lab	1	CH 101 Chem – A Molecular Science <sup>2</sup>	3
BIO 181 Intro Bio: Ecol, Evol, Biodiv & Lab	4	CH 102 General Chemistry Lab	1
ENG 101 Acad Writing & Research <sup>2</sup>	4	MA 121 Elements of Calculus <u>or</u> MA 131 Calc for Life & Mgt Sci A (MA 141 Calculus I is also accepted)	3
MA 107 Precalculus I <sup>2</sup>	3		
	<b>Total:16</b>		<b>Total:13</b>

## Sophomore Year<sup>1</sup>

Fall Semester	Credit	Spring Semester	Credit
ANS 205 Physiol Domestic Animals	3	ANS 220 Reproductive Physiology	3
ANS 206 Anatomy Domestic Animals	1	ANS 221 Reproductive Physiology Lab	1
Interdisciplinary Perspectives GEP Course <sup>6,G</sup>	2	CH 223 Organic Chem II	3
ARE 201, EC 201, EC202, or EC 205 <sup>D</sup>	3	CH 224 Organic Chem II Lab	1
CH 221 Organic Chemistry I	3	ST 311 Intro to Statistics or ST 350	3
CH 222 Organic Chem I Lab	1	Humanities GEP course <sup>6,C</sup>	3
COM 110, COM 112, or COM 211	3	Physical Education/Healthy Living <sup>E</sup>	1
	<b>Total:16</b>		<b>Total:15</b>

## Junior Year<sup>1,7</sup>

Fall Semester	Credit	Spring Semester	Credit
ANS 230 Animal Nutrition	3	GN 311 Principles of Genetics	4
ANS 231 Animal Nutrition Lab	1	PY 212 College Physics II & Lab	4
Animal Science Course <sup>3</sup>	3	Physical Education/Healthy Living <sup>E</sup>	1
MB 351 General Microbiology	3	Humanities GEP course <sup>6,C</sup>	3
MB 352 or MB 354 Microbiology Lab	1	ANS An Elective <sup>4</sup>	3
PY 211 College Physics I & Lab	4		
	<b>Total:15</b>		<b>Total:15</b>

## Senior Year<sup>1,7</sup>

Fall Semester	Credit	Spring Semester	Credit
ANS Discipline Course Elective <sup>5</sup>	3	ANS Discipline Course Elective <sup>4,5</sup>	3
Social Science GEP Course <sup>D</sup>	3	Interdisciplinary Perspectives GEP Course <sup>6,G</sup>	3
CH 201 Chemistry – A Quant Sci	3	BCH 351 or BCH 451, Biochemistry	4
CH 202 Quantitative Chem Lab	1	Free Elective <sup>6</sup>	4
Additional Breadth GEP Course <sup>6,F</sup>	3		
Free Elective <sup>6</sup>	3		
	<b>Total:16</b>		<b>Total:14</b>

Minimum Credit Hours Required for Graduation<sup>\*,7</sup>: 120

## Major/Program Footnotes

1. Use of animals and animal specimens is critical to our educational program. To obtain full credit for Animal Science courses, students are required to participate in laboratory procedures involving animals and animal specimens. All activities with live animals are IACUC (Institutional Animal Care and Use Committee) approved. Many lectures also incorporate animals or animal specimens into the course.
2. ANS 150, MA 107, ENG 101, and CH 101 must be completed with a grade of C-minus or higher, and the student should repeat the course in the semester following the initial attempt if less than a C-minus is earned.
3. VMP 420 or any Animal Science (ANS) course (except ANS 225, ANS 301, ANS 480, ANS 492, ANS 493, ANS 494) that is not fulfilling another requirement can fulfill this Animal Science Elective category. Most pre-vet students take ANS 215 (Agricultural Genetics) to prepare for GN 311.
4. Students must select at least one animal management course from the following list: ANS 400, Companion Animal Management; ANS 402 plus ANS 462, Beef Cattle Mgt plus lab; ANS 403, Swine Management; ANS 404 plus ANS 464, Dairy Cattle Management plus lab; ANS 408, Small Ruminant Management; ANS 410, Equine Breeding Farm Management; or ANS 411, Management of Growing and Performance Horses.
5. Students must select at least one Animal Science Discipline course from the following list: ANS (NTR, PO) 415, Comparative Nutrition; ANS (NTR) 419, Human Nutrition in Health and Disease; ANS 440, Animal Genetic Improvement; ANS 452, Comparative Reproductive Physiology and Biotechnology; ANS 453, Physiology and Genetics of Growth & Development; ANS 454, Lactation, Milk, and Nutrition; VMP 420, Diseases of Farm Animals; or any 500-level ANS course.
6. Students are encouraged to take an Ethics course as part of their Humanities, Additional Breadth, Interdisciplinary Perspectives, or Free Electives.

### \*General Education Program (GEP) requirements and GEP Footnotes

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied. University approved GEP course lists for each of the following categories can be found at <https://oucc.dasa.ncsu.edu/general-education-program/>.

1. **Mathematical Sciences** (6 credit hours; one course with MA or ST prefix): Major requirements fulfill this requirement
2. **Natural Sciences** (7 credit hours; include one laboratory course or course with a lab): Major requirements fulfill this requirement
3. **Humanities**(6 credit hours selected from two different disciplines/course prefixes)  
*Choose from the University approved GEP Humanities course list or the following course(s) if completed as part of the Major requirements may fulfill part of this requirement: COM 211*
4. **Social Sciences** (6 credit hours selected from two different disciplines/course prefixes)  
*Choose from the University approved GEP Social Sciences course list or the following course(s) if completed as part of the Major requirements may fulfill part of this requirement: Economics (ARE 201 or EC 201 or EC 202 or EC 205) taken as part of the major requirements satisfies 3 credit hours of the 6 credit hours needed to fulfill the GEP Social Sciences requirement. Students must select the other course (3 credits) from a discipline other than economics from the approved GEP Social Sciences list.*
5. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)  
*Choose from the University approved GEP Physical Education/Healthy Living course list.*
6. **Additional Breadth** (3 credit hours to be selected from the following checked University approved GEP course lists)  
Humanities/Social Sciences/Visual and Performing Arts
7. **Interdisciplinary Perspectives** (5-6 credit hours)  
*Choose from the University approved GEP Interdisciplinary Perspectives course list*
8. **Introduction to Writing** (4 credit hours satisfied by completing ENG 101 with a C- or better)

The following **Co-Requisites** must be satisfied to complete the General Education Program requirements

9. **US. Diversity(USD)**

*Choose from the University approved GEP U.S. Diversity course list or choose a course identified on the approved GEP course lists as meeting the U.S. Diversity (USD) co-requisite.*

10. **Global Knowledge(GK)**

*Choose from the University approved GEP Global Knowledge course list or choose a course identified on the approved GEP course lists as meeting the Global Knowledge (GK) co-requisite.*

11. **Foreign Language proficiency** Proficiency at the FL\_102 level is required for graduation.