

# Animal Science (BS): Science (11ANSCBS-11ANSCSAS)

## Freshman Year

Fall Semester	Credit	Spring Semester	Credit
ALS 103 Freshman Transitions and Diversity in Agriculture and Life Sciences	1	CH 101 Chem – A Molecular Science <sup>2</sup>	3
ANS 150 Introduction to Animal Science <sup>2</sup>	3	CH 102 General Chemistry Lab	1
ANS 151 Intro to Animal Science Lab	1	Animal Science Course <sup>3</sup>	3
BIO 181 Intro Bio: Ecol, Evol, Biodiv & Lab	4	MA 121 Elements of Calculus <b>or</b> MA 131 Calc for Life & Mgt Sci A	3
ENG 101 Acad Writing & Research <sup>2</sup>	4	BIO 183 Intro Bio: Cell & Molec Biol & Lab	4
MA 107 Precalculus I <sup>2</sup>	3		
	16		14

## Sophomore Year

Fall Semester	Credit	Spring Semester	Credit
ANS 205 Physiol Domestic Animals	3	ANS 220 Repro & Lact Dom Anim	3
ANS 206 Anatomy Domestic Animals	1	ANS 221 Repro& Lact Dom Ani Lab	1
ANS 215 Basic Agric Genetics <b>or</b> CALS Group A, B, or C elective <sup>4,5</sup>	3	CH 223 Organic Chem II	3
ARE 201, EC 201, EC 202, 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	3
CH 222 Organic Chem I Lab	1	Humanities GEP course <sup>C</sup>	3
COM 110, COM 112, COM 211 <sup>6</sup>	3	HES_*** Health & Exercise Studies Course <sup>E</sup>	1
	17		15

## Junior Year

Fall Semester	Credit	Spring Semester	Credit
ANS 230 Nutrition Dom Anim	3	GN 311 Principles of Genetics <b>or</b> CALS Group A, B, or C elective <sup>4,5</sup>	4
ANS 231 Nutrition of Domestic Anim Lab	1	CALS Group A, B, or C elective <sup>4,5</sup>	4
CH 201 Chemistry – A Quant Sci	3	HES_*** Health & Exercise Studies Course <sup>E</sup>	1
CH 202 Quantitative Chem Lab	1	Humanities GEP course <sup>C</sup>	3
MB 351 General Microbiology <b>OR</b> MB 360 Scientific Inquiry in MB: At the Bench	3	ANS Animal Management Elective <sup>7</sup>	3
PY 211 College Physics I & Lab <b>OR</b> PY 131 Conceptual Physics	4		
	15		15

## Senior Year

Fall Semester	Credit	Spring Semester	Credit
ANS Discipline Course Elective <sup>8</sup>	3	ANS Discipline Course Elective <sup>8</sup>	3
Social Science GEP Course <sup>D</sup>	3	Animal Science Course <sup>3</sup>	2
Interdisciplinary Perspectives GEP Courses <sup>G</sup>	5-6	Additional Breadth GEP Course <sup>F</sup>	3
Free Elective <sup>9</sup>	3	Free Elective <sup>9</sup>	5
	14-15		13

Minimum Credit Hours Required for Graduation\*:

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 Animals Science (ANS) course (except ANS 225, 301, 480, 492, 493, 494) that is not fulfilling another requirement can fulfill this Animal Science Elective category.
  4. Students who are planning to apply to a College of Veterinary Medicine should take BCH 451 (Principles of Biochemistry) and a business course (BUS, ARE, EC, or ACC prefix) to fill the A,B,C elective category. Many Graduate schools also require Biochemistry. Other students: take any courses from the College of Agriculture and Life Sciences Group A, Group B, or Group C electives (<http://harvest.cals.ncsu.edu/index.cfm?showpage=25>)
  5. Students are required to take ANS 215 (Basic Ag Genetics) or GN 311 (Principles of Genetics – formerly numbered GN 411). Students who choose to take both should take ANS 215 before GN 311. For students who choose to take both, ANS 215 will count as an Animal Science department elective or a CALS group A elective. Pre-vet students: GN 311 is a vet-school required course.
  6. Pre-vet students: this course also meets a vet school requirement.
  7. Students must select at least one animal management course from the following list: ANS 400, Companion Animal Management; ANS 402, Beef Cattle Mgt with ANS 462, Beef Cattle Management Lab; ANS 403, Swine Management; ANS 404, Dairy Cattle Management with ANS 464, Dairy Cattle Management Lab, Dairy Cattle Management; ANS 408, Small Ruminant Management; ANS 410, Equine Management; ANS 411, Management of Growing and Performance Horses; ANS 464, Dairy Cattle Management Lab.
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1. Total of 6 credit hours is required from the following approved Animal Science Discipline Courses (each course = 3 credit hours): ANS(NTR,PO) 415, Comparative Nutrition; ANS(NTR) 419, Human Nutrition in Health and Disease; ANS 440, Selection of Domestic Animals; ANS 452, Advanced Reproductive Physiology and Biotechnology; ANS 453, Growth & Development of Domestic Animals; ANS/NTR 454, Lactation, Milk, and Nutrition; VMP 420, Diseases of Farm Animals; or any 500-level ANS course.
  2. 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/>.

**A. Mathematical Sciences** (6 credit hours – one course with MA or ST prefix) **Major requirements fulfill this requirement.**

**B. Natural Sciences** (7 credit hours – include one laboratory course or course with a lab) **Major requirements fulfill this requirement.**

**C. Humanities** (6 credit hours selected from two different disciplines/course prefixes)

*Choose from the University approved GEP Humanities course list.*

**D. 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 or all of this requirement: **3 credit hours to be selected in a discipline other than economics from the approved GEP Social Sciences list. Economics (EC 201, 202, 205 or ARE 201) taken as part of the major requirements satisfies 3 credit hours of the 6 credit hours needed to fulfill the GEP Social Sciences requirement.***

**E. Health & Exercise Studies** (2 credit hours – at least one 100-level Health & Exercise Studies Course)

*Choose from the University approved GEP Health & Exercise Studies course list.*

**F. Additional Breadth** (3 credit hours to be selected from the following checked University approved GEP course lists)

Humanities/Social Sciences/Visual and Performing Arts

**G. Interdisciplinary Perspectives** (5-6 credit hours)

*Choose from the University approved GEP Interdisciplinary Perspectives course list*

**H. 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

**I. U.S. 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.*

**J. 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.*

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