

# ANIMAL AND POULTRY SCIENCES MAJOR WITH PREVET OPTION

Code	Title	Credits
<b>Degree Core Requirements</b>		
Many courses in this list have prerequisites. Click on each course for its description and any co- or prerequisites.		
CHEM 1035	General Chemistry	3
CHEM 1036	General Chemistry	3
CHEM 1045	General Chemistry Laboratory	1
CHEM 1046	General Chemistry Laboratory	1
APSC 1454	Introduction to Animal and Poultry Science ( C ) <sup>1</sup>	3
APSC 1464	Animal and Poultry Science Laboratory <sup>1</sup>	1
APSC 1504	Animal and Poultry Sciences First Year Experience <sup>1</sup>	1
APSC 2004	Animal and Poultry Sciences Seminar <sup>1</sup>	1
ALS 2304	Comparative Animal Physiology and Anatomy <sup>1</sup>	4
ALS 3204	Animal Nutrition and Feeding <sup>1</sup>	3
Subtotal		21
<b>Major Requirements</b>		
Many courses in this list have prerequisites. Click on each course for its description and any co- or prerequisites.		
<i>Economics Requirement</i>		
Select one of the following:		3
AAEC 1006	Economics of the Food and Fiber System or ECON 200 Principles of Economics	
AAEC 2104	Personal Financial Planning	
AAEC 2434	Foundations of Agribusiness	
<i>Experiential Learning Requirement</i>		
Select one of the following:		1
APSC 4954	Capstone Experience in Animal and Poultry Sciences	
APSC 3954	Study Abroad	
APSC 4964	Field Study (Approved on a case-by-case basis.)	
APSC 4974	Independent Study (Approved on a case-by-case basis.)	
APSC 4994	Undergraduate Research (Approved on a case-by-case basis.)	
3954, 4964, 4974, and 4994 courses hosted in other departments will be approved on a case by case basis.		
<i>Species Requirement</i> <sup>1,2</sup>		
Many courses in this list have prerequisites. Click on each course for its description and any co- or prerequisites.		
Select one of the following:		3
APSC 3024	Equine Science and Management	
APSC 3064	Companion and Laboratory Animal Science	
APSC 4404	Commercial Poultry Enterprise Management	
APSC 4414	Beef and Sheep Production and Industry	
APSC 4424	Horse Production and Management	
APSC 4444	Swine Production	

APSC 4464	Companion and Laboratory Animal Health and Management	
<i>Animal Science/Management Requirement</i> <sup>1,2</sup>		
Many courses in this list have prerequisites. Click on each course for its description and any co- or prerequisites.		
Select three of the following. At least 9 credits total.		9
ALS 3304	Physiology of Reproduction	
ALS 4554	Neurochemical Regulation	
ALS 4574	Social Behavior of Birds and Mammals	
APSC 3024	Equine Science and Management	
APSC 3064	Companion and Laboratory Animal Science	
APSC 3134	Animal Agriculture and the Environment	
APSC 3214	Principles of Meat Science	
APSC 3254	Animal Products	
APSC 3334	Animal Welfare and Bioethics	
APSC 3434	Host Microbe Interactions	
APSC 4054	Genomics	
APSC 4204	Advanced Equine Nutrition and Feeding	
APSC 4224	Equine Exercise Physiology	
APSC 4404	Commercial Poultry Enterprise Management	
APSC 4414	Beef and Sheep Production and Industry	
APSC 4424	Horse Production and Management	
APSC 4444	Swine Production	
APSC 4464	Companion and Laboratory Animal Health and Management	
APSC 4514	Animal Growth and Development	
APSC 4554	Advanced Livestock Enterprise Management	
DASC 3274	Applied Dairy Cattle Nutrition	
DASC 3474	Dairy Information Systems	
DASC 4174	Applied Dairy Cattle Genetics	
DASC 4374	Physiology of Lactation	
DASC 4384	Mammary Immunology	
DASC 4475	Dairy Enterprise Management	
DASC 4476	Dairy Enterprise Management	
Subtotal		16
<b>Option Required Courses</b>		
All option requirements must be take A/F		
Consult individual schools of veterinary medicine requirements when choosing courses		
CHEM 2514	Survey of Organic Chemistry	3
or CHEM 2535 Organic Chemistry		
BCHM 2024	Concepts of Biochemistry	3
or BCHM 3114 Biochemistry for Biotechnology and the Life Sciences		
APSC 3434	Host Microbe Interactions (Cannot double count APSC 3434 for Major Requirements and for Option Requirement)	3
or BIOL 2604 General Microbiology		
<b>Elective Courses</b>		
<i>Restricted Electives</i> <sup>3,4</sup>		
Many courses in this list have prerequisites. Click on each course for its description and any co- or prerequisites.		
Take 15 credits from the following list.		15
AAEC 2104	Personal Financial Planning	

AAEC 2434	Foundations of Agribusiness
AAEC 3XXX and higher	
ACIS 1504	Introduction to Business Analytics and Business Intelligence
ACIS 2XXX & higher	
AHRM 2404	Consumer Rights
ALCE 2XXX and higher	
ALS 2XXX and higher	
APSC 2XXX and higher	
APSC 2964, 2974, 2994, 3964, 4964, 4974, and 4994 (maximum of 3 credits)	
BCHM 2XXX and higher	
BIOL 2XXX and higher except 3404	
BIT 2XXX and higher	
BMVS 4XXX (except 4054)	
BSE 2XXX and higher	
CHEM 2XXX and higher	
COMM 2XXX and higher	
CONS 2304	Consumer and Family Finances
CSES 2XXX and higher	
DASC 2XXX and higher	
ECON 2XXX and higher	
ENGL 3774	Business Writing
or ENGL 3764 Technical Writing	
ENSC 3XXX	
ENT 2XXX and higher	
FIN 3XXX	
FIW 2XXX and higher	
FST 2XXX and higher	
GEOG 4XXX	
HNFE 2XXX and higher	
HORT 2XXX and higher	
HTM 2XXX and higher	
IS 2XXX and higher	
LDRS 2XXX & higher	
MATH 1025	Elementary Calculus
MATH 1026	Elementary Calculus
MATH 1214	Preparation for Calculus
MATH 1225	Calculus of a Single Variable
MATH 1226	Calculus of a Single Variable
MATH 1524	Business Calculus
MATH 2XXX & higher	
MKTG 3XXX and higher	
NEUR 2XXX and higher	
PHS 4014	Public Health Program Planning and Evaluation
PHS 4044	Public Health Policy and Administration
PHS 4054	Concepts in One Health
PHS 4064	Modeling Infectious Diseases
PHYS 2XXX and higher (except 2074, 2325, 2326)	
PPWS 2XXX and higher	
PSYC 2074	Animal Behavior (cannot take both PSYC 2074 and APSC 2574)
STAT 3XXX and higher	

SPES 2004	Cannabis - Science, Industry, and Culture	
SPES 2244	World Crops: Food and Culture	
<i>Free Electives</i>		
Select credit hours to fulfill degree requirement.		12
Subtotal		36
<b>Pathways to General Education <sup>5</sup></b>		
<i>Pathways Concept 1 - Discourse</i>		
ENGL 1105	First-Year Writing (1F)	3
ENGL 1106	First-Year Writing (1F)	3
APSC 4004	Contemporary Issues in the Animal Sciences (1A) <sup>1</sup>	3
<i>Pathways Concept 2 - Critical Thinking in the Humanities</i>		
Select six credits in Pathway 2 ( <a href="https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G02">https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G02</a> )		6
<i>Pathways Concept 3 - Reasoning in the Social Sciences</i>		
AAEC 1005	Economics of the Food and Fiber System	3
or ECON 2005 Principles of Economics		
Select an additional three credit hours of Pathway 3 ( <a href="https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G03">https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G03</a> )		3
<i>Pathways Concept 4 - Reasoning in the Natural Sciences</i>		
BIOL 1105	Principles of Biology	3
BIOL 1106	Principles of Biology	3
BIOL 1115	Principles of Biology Laboratory	1
BIOL 1116	Principles of Biology Laboratory	1
<i>Pathways Concept 5 - Quantitative and Computational Thinking</i>		
MATH 1014	Precalculus with Transcendental Functions (5F)	3
or MATH 1025 Elementary Calculus		
or MATH 1225 Calculus of a Single Variable		
STAT 2004	Introductory Statistics (5F)	3
or STAT 3005 Statistical Methods		
ALS 3104	Animal Breeding and Genetics (5A) <sup>1</sup>	3
<i>Pathways Concept 6 - Critique and Practice in Design and the Arts</i>		
Select three credits in Pathway 6a ( <a href="https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06A">https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06A</a> ) and three credits in Pathway 6d ( <a href="https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06D">https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G06D</a> ) or six credits in integrated arts and design.		6
<i>Pathways Concept 7 - Critical Analysis of Identity and Equity in the United States</i>		
Select three credits in Pathway 7 ( <a href="https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G07">https://catalog.vt.edu/course-search/?attrs_pathways=attrs_pathways_G07</a> ) Students may have 3 more credits of free electives by choosing a course that double counts for Pathways 7 and Pathways 2, Pathways 3, or Pathways 6.		3
Subtotal		47
<b>Total Credits</b>		<b>120</b>

<sup>1</sup> These courses are included in the in-major GPA calculation and must be taken A-F unless offered P-F only.

<sup>2</sup> At least 6 credits of Species and/or Animal Science/Management courses must be 4XXX. Cannot double count courses in Species Requirement and Animal Science/Management Requirement.

<sup>3</sup> All restricted electives must be taken on an A-F basis, unless only offered P/F. Only free electives may be taken P/F if offered A-F. At least 6 credits of approved restricted electives must be 4XXX. These 4xxx credits cannot double count with 4xxx credits used for Species and/or Animal Science/Management requirements. Except as noted in

the list of Restricted Electives, 2964, 2974, 2984, 2994, 3954, 3964, 3984, 4964, 4974, 4984, and 4994 courses will be considered on a case-by-case basis. Courses used for Major Requirements or Option Requirements cannot double count as Restricted Electives or Free Electives. Enrollment in specific courses listed as Restricted Electives is not guaranteed. Consult with your advisor when choosing restricted electives.

<sup>4</sup> APSC majors completing a foreign language minor may use up to 6 credits of 3xxx or 4xxx courses from the minor as restricted electives. APSC majors completing a Psychology minor may use 1 3XXX or 4XXX course towards their restricted electives if they also complete PSYC 2074.

<sup>5</sup> Courses used for Pathways 1-7 or Degree Core cannot be used for Major Requirements, Restricted Electives, or Free Electives.

Upon the completion of 72 credits, APSC students must have completed CHEM 1036 General Chemistry, CHEM 1046 General Chemistry Laboratory, APSC 1454 Introduction to Animal and Poultry Science, APSC 1464 Animal and Poultry Science Laboratory, and 6 credits from ALS 2304 Comparative Animal Physiology and Anatomy, ALS 3104 Animal Breeding and Genetics, or ALS 3204 Animal Nutrition and Feeding; have a minimum overall GPA of 2.00; and have completed at least 24 credits that apply to the Pathway to General Education requirements.

## Graduation Requirements

Students must complete the courses listed to equal at least 120 credits, with a minimum overall GPA of 2.00 and a minimum in-major GPA of 2.00.

For purposes of GPA computation, courses included in the calculation of **in major** GPA are courses notated with the applicable footnote.

An APSC degree may be earned in combination with the first year of work in an accredited medical, dental, or veterinary school, provided that the following requirements are met: at least two of the three years of pre-professional work, including the third year, are in residence at VT; a minimum of 90 semester credits of undergraduate work that include all the courses listed above as Pathway to General Education and Degree Core, and at least one course listed under the Animal Science/Management Requirement.

Students majoring in Animal and Poultry Sciences cannot minor in Animal and Poultry Sciences or in Equine Sciences.

## Foreign Language Requirement

Four credits of accelerated foreign language or two semesters of a single foreign language are required unless 2 units of a single foreign language are completed in high school. These credits do not count toward graduation requirements.

First Year		
Fall Semester		Credits
ENGL 1105	First-Year Writing	3
MATH 1014 or MATH 1025 or MATH 1225	Precalculus with Transcendental Functions or Elementary Calculus or Calculus of a Single Variable	3
APSC 1454	Introduction to Animal and Poultry Science	3
APSC 1464	Animal and Poultry Science Laboratory	1
BIOL 1105	Principles of Biology	3
BIOL 1115	Principles of Biology Laboratory	1

APSC 1504	Animal and Poultry Sciences First Year Experience	1
<b>Credits</b>		<b>15</b>
<b>Spring Semester</b>		
ENGL 1106	First-Year Writing	3
Pathways Concept 6 - Critique and Practice in Design and the Arts		3
STAT 2004	Introductory Statistics	3
BIOL 1106	Principles of Biology	3
BIOL 1116	Principles of Biology Laboratory	1
Pathways Concept 2 - Critical Thinking in the Humanities		3
<b>Credits</b>		<b>16</b>
<b>Second Year</b>		
<b>Fall Semester</b>		
CHEM 1035	General Chemistry	3
CHEM 1045	General Chemistry Laboratory	1
AAEC 1005 or ECON 2005	Economics of the Food and Fiber System or Principles of Economics	3
Pathways Concept 3 - Reasoning in the Social Sciences		3
Restricted Electives <sup>3</sup>		3
<b>Credits</b>		<b>13</b>
<b>Spring Semester</b>		
CHEM 1036	General Chemistry	3
CHEM 1046	General Chemistry Laboratory	1
Economics Requirement: AAEC 1006 or ECON 2006 or AAEC 2104 or AAEC 2434		3
APSC 2004	Animal and Poultry Sciences Seminar	1
Pathways Concept 2 - Critical Thinking in the Humanities		3
ALS 2304	Comparative Animal Physiology and Anatomy	4
<b>Credits</b>		<b>15</b>
<b>Third Year</b>		
<b>Fall Semester</b>		
Pathways Concept 7 - Critical Analysis of Identity and Equity in the United States		3
Restricted Electives		3
Restricted Electives		3
ALS 3104	Animal Breeding and Genetics	3
CHEM 2514 or CHEM 2535	Survey of Organic Chemistry or Organic Chemistry	3
<b>Credits</b>		<b>15</b>
<b>Spring Semester</b>		
Restricted Electives		3
Pathways Concept 6 - Critique and Practice in Design and the Arts		3
Animal Science Management Course		3
APSC 3434 or BIOL 2604	Host Microbe Interactions or General Microbiology	3
ALS 3204	Animal Nutrition and Feeding	3
<b>Credits</b>		<b>15</b>
<b>Fourth Year</b>		
<b>Fall Semester</b>		
Restricted Electives		3
BCHM 2024 or BCHM 3114	Concepts of Biochemistry or Biochemistry for Biotechnology and the Life Sciences	3
Species Requirement Course		3
Experiential Learning Requirement		1
Free Electives		6
<b>Credits</b>		<b>16</b>
<b>Spring Semester</b>		
Animal Science/Management Course		3
APSC 4004	Contemporary Issues in the Animal Sciences	3
Animal Science/Management Course		3
Free Electives		6
<b>Credits</b>		<b>15</b>
<b>Total Credits</b>		<b>120</b>