

BIOCHEMICAL SCIENCES MAJOR – PRE-VETERINARY MEDICINE SPECIALIZATION (A.S.) INTERESTED IN ANIMAL SCIENCES MAJOR – ANIMAL BIOSCIENCES (PRE-VET) SPECIALIZATION (B.S.)

This model plan of study is presented as a suggested path to graduate in 4 years with an Associate of Science Degree with a major in Biochemical Sciences and specialization in Pre-Veterinary Medicine and a Bachelor of Science Degree in Agriculture with a major in Animal Sciences and specialization in Animal Biosciences. It is intended to be a useful guide; however, each student is unique and should review the Degree Requirements and work with their advisor to develop an individualized course plan that best fits their personal academic background and goals.

NOTE: This sheet should not be used in isolation. In order to graduate in a timely manner, students must consult their academic advisor on a regular basis.

Freshman Year (ATI)	Autumn Semester				Spring Semester			
Benchmarks	Department	Course #	Course Name	Hours	Department	Course #	Course Name	Hours
<i>BIOLOGY 1113.01 should be completed by the end of this year.</i>	BIOTECH	1201T	Biochemical Sciences and Biotechnology	.5	AEDECON	2001	Principles of Food and Resource Economics	3
<i>CHEM 1210 & 1220 should be completed by the end of this year.</i>	CHEM	1210	General Chemistry I	5	BIOLOGY	1113.01	Energy Transfer and Development	4-5
<i>ENGLISH 1110 should be completed by the end of this year.</i>	ENGLISH	1110.01	First-Year English Composition	3	CHEM	1220	General Chemistry II	5
<i>Begin to consider study abroad programs.</i>	GENSTDS	1201.01T	College Orientation	.5	GENED	1201	GE Launch Seminar	1
	MATH	1148	College Algebra	4	_____	_____	GE Hist. & Cultural Studies	3
	_____	_____	GE Lit, Vis and Perf Arts	3				
			Total:	16			Total:	16-17
Sophomore Year (ATI)	Autumn Semester				Spring Semester			
Benchmarks	Department	Course #	Course Name	Hours	Department	Course #	Course Name	Hours
<i>Apply to graduate from ATI at least one semester before the semester of your graduation.</i>	AGRCOMM	3130	Oral Expression in Ag	3	ANMLTEC	3140T	Animal Anatomy and Physiology	4
<i>Maintain at least a 2.0 cumulative GPA.</i>	ANIMSCI	2200.01	Intro Animal Sciences	3	BIOLOGY	1114.01	Form, Function, Diversity & Ecology	4
<i>Graduate with Associate of Science Degree.</i>	ANMLTEC	2200.02T	Intro Animal Sciences Lab	1	MICRBIO	4000.01	Basic and Practical Microbiology	4
	CHEM	2510	Organic Chemistry I	4	_____	_____	GE R.E. & G. Diversity	3
	_____	_____	Elective	4				
			Total:	15			Total:	15
Total credit hours for Associate of Science Degree: 62-63								
Junior Year (Columbus)	Autumn Semester				Spring Semester			
Benchmarks	Department	Course #	Course Name	Hours	Department	Course #	Course Name	Hours
<i>Begin to consider an internship location. Internship should be completed by end of this summer.</i>	ANIMSCI	2000	Animal Handling	2	ANIMSCI	2200.03	Animal Systems	2
<i>Apply to graduate from Columbus at least three semesters before the semester of your graduation.</i>	ANIMSCI	2260	Data Analysis	3	ANIMSCI	2367	Animals in Society	3
	ANIMSCI	3130	Principles of Animal Nutrition ^b	3	ANIMSCI	3170	Animal Health I ^b	2
	ANIMSCI	3150	Prin. of Genetic Improvement	3	ANIMSCI	3270	Animal Health II ^b	2
	_____	_____	GE Citizenship #1 ^a	3-4	_____	_____	GE Citizenship #2 ^a (or open elective)	3
	_____	_____	Major elective	2-3	_____	_____	Physiology option	2-3
			Total:	16-18			Total:	14-15
Senior Year (Columbus)	Autumn Semester				Spring Semestern			
Benchmarks	Department	Course #	Course Name	Hours	Department	Course #	Course Name	Hours
<i>Maintain at least a 2.0 GPA in the major, minor, and cumulative.</i>	ANIMSCI & FAES	3191	Internship ^b	2	_____	_____	Major Elective (4000 level or above)	3
<i>Graduate with Bachelor of Science Degree.</i>	ANIMSCI	3180	Intro. Animal Welfare	2	_____	_____	Major Elective	3
	GENED	4001	GE Reflection	1	_____	_____	Major Elective	3
	_____	_____	Laboratory Option #1	.5	_____	_____	Production Course #2	3-4
	_____	_____	Laboratory Option #2	.5	_____	_____	GE Theme Choice #2 ^a	3
	_____	_____	GE Theme Choice #1 ^a	3				
	_____	_____	Production Course #1	4				
	_____	_____	Open elective	1				
			Total:	14			Total:	15-16
Total credit hours for Bachelor of Science Degree: 121 ^c								

^a Students complete either a 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If any major-required courses are identified as a GE Theme course, one course in each GE Theme area may double count in the GE and major hours. Theme courses are identified with a ❖ symbol.

^b This course requirement may also be completed at ATI, and may be used as an elective in the A.S. major. See *Degree Requirements* for complete details.

^c 121 total credit hours are required to graduate with the B.S. Animal Sciences major. Additional coursework may be necessary to complete all veterinary school prerequisite requirements. In order to graduate in a timely manner, students should use A.S. elective credits to complete additional course requirements for the B.S. major and/or admission to veterinary school.

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This advising sheet is for Ohio State ATI students that wish to earn both an Associate of Science (A.S.) Degree with a Biochemical Sciences major and specialization in Pre-Veterinary Medicine and a Bachelor of Science (B.S.) Degree with a major in Animal Sciences and specialization in Animal Biosciences. The tables below outline the complete degree requirements to earn a B.S. in Agriculture with a major in Animal Sciences and specialization in Animal Biosciences. The underlined courses are those that may also fulfill a requirement for the A.S. Biochemical Sciences major with a specialization in Pre-Veterinary Medicine. These courses can count toward both degree programs simultaneously.

NOTE: This sheet should not be used in isolation. In order to graduate in a timely manner, students must consult their academic advisor on a regular basis.

Subject	Course Options	Hours	✓
GE Launch Seminar	<u>GENED 1201</u>	1	
Writing and Information Literacy	<u>ENGLISH 1110.01</u>	3	
Mathematical & Quantitative Reasoning/Data Analysis	<u>MATH 1148</u>	4	
Literary, Visual and Performing Arts	<u>Student Choice</u>	3	
Historical & Cultural Studies	<u>Student Choice</u>	3	
Natural Science	<u>BIOLOGY 1113.01</u>	4	
Social & Behavioral Sciences	<u>AEDECON 2001</u> or ECON 2001	3	
Race, Ethnic and Gender Diversity	<u>Student Choice</u>	3	
Theme: Citizenship for a Diverse & Just World ^a	Student Choice	4-6	
Theme: Student Choice ^a	Student Choice	4-6	
GE Reflection	GENED 4001	1	
Survey Courses	<u>GENSTDS 1201.01T*</u> OR FAES 1100 and <u>BIOTECH 1201T*</u> OR ANIMSCI 1100	.5 .5	
Oral Expression	<u>AGRCOMM 3130</u> or COMM 2110	3	
Additional Science	<u>CHEM 1210</u>	5	
Internship	ANIMSCI and FAES 3191	2	
Minor Equiv. ^b	Table 2.	15	
Major Requirements	Table 3.	50-52	
Major Supporting Coursework	Choose a course from the following list (courses will not double count in the minor equivalent): <u>BIOLOGY 1114</u> , <u>MICROBIO 4000.01</u> or .02, <u>PHYSICS 1200</u> , <u>CHEM 1220</u> , or <u>MOLGEN 4500</u>	3-5	
Open Electives	Consult advisor for selection.	1-9	
Minimum Total Credit Hours		121	

^a Students complete either a 4-credit course or two 3-credit courses in each of two General Education Theme areas: Citizenship for a Diverse & Just World (required), and the student's choice of available GE Themes. If any major-required courses are identified as a GE Theme course, one course in each GE Theme area may double count in the GE and major hours. Theme courses are identified with a ❖ symbol.

^b Students in this program complete a group of courses called a minor equivalent. Declaring an additional minor is not required.

* courses are only offered at the Wooster (ATI) Campus

Note: A capital **OR** separates a pair of *equivalent* courses, a lowercase **or** separates a choice between *different* courses that fulfill the same requirement

Course(s)	Hours	✓
Select 15 credit hours from the courses listed below:		
ANATOMY 2300.04 Human Anatomy	4	
<u>BIOLOGY 1114.01</u> Form, Function, Ecology & Diversity	4	
BIOCHEM 4511 Introduction to Biological Chemistry	4	
<u>CHEM 2510</u> Organic Chemistry Lecture 1	4	
CHEM 2520 Organic Chemistry Lecture 2	4	
CHEM 2540 Organic Chemistry Laboratory 1	2	
EEOB 2510 Human Anatomy	3	
ENTMLGY 4607 Veterinary Entomology	2	
MATH 1151 Calculus I	5	
<u>MICRBIO 4000.01</u> Basic & Practical Microbiology	4	
MICRBIO 4000.02 Basic & Practical Microbiology	4	
MOLGEN 4500 General Genetics	3	
PHYSICS 1200 Mechanics, Kinematics, Fluids, Waves	5	
PHYSICS 1201 E&M, Optics, Modern Physics	5	
Total Minor Equivalent Credit Hours		15

Course(s)	Hours	✓
ANIMSCI 2000 Animal Handling	2	
ANIMSCI 2200.01 & 2200.02 OR ANIMSCI 2200.01 & ANMLTEC 2200.02T* OR ANMLTEC 2200T* & 2300T* Intro. Animal Sciences w/ Lab	4	
ANIMSCI 2200.03 Animal Systems	2	
ANIMSCI 2260 Data Analysis & Interpret. for Decision Making or COMLDR 3537 Data Analysis in the Applied Sciences	3	
ANIMSCI 2367 Animals in Society	3	
ANIMSCI 3130 Principles of Animal Nutrition	3	
ANIMSCI 3140 Principles of Animal Systems Physiology OR ANMLTEC 3140T Animal Anatomy and Physiology	3	
ANIMSCI 3150 Principles of Genetic Improvement OR ANMLTEC 3150T Livestock Genetic Improvement OR ANMLTEC 3157T Dairy Cattle Genetic Improvement	3	
ANIMSCI 3170 Animal Health I OR ANMLTEC 3170T* Principles of Livestock Health	2	
ANIMSCI 3180 Introduction to Animal Welfare	2	
ANIMSCI 3270 Animal Health II	2	
Laboratory Requirement (select two options):		
ANIMSCI 3420 Animal Laboratory Research Methods (.5)	1	
ANIMSCI 3430 Animal Nutrition Laboratory (.5)		
ANIMSCI 3440 Animal Physiology Laboratory (.5)		
ANIMSCI 3470 Animal Health Laboratory (.5)		
ANIMSCI 3480 Animal Welfare Laboratory (.5)		
Physiology Requirement (select one option):		
ANIMSCI 3100 Growth and Development (3)	2-3	
ANIMSCI 3110 Introduction to Meat Science (3)		
ANIMSCI 3147 Milk Secretion (2)		
ANIMSCI 3160 Reproductive Physiology (3)		
Production Course 1 Options (one from the following):		
ANIMSCI 4001 Equine Production or ANIMSCI 4002.01 & 4002.02 Beef Cattle Prod. & Mgmt./Lab or ANIMSCI 4003.01 & 4003.02 Swine Production/Lab or ANIMSCI 4004.01 & 4004.02 Small Rum & Pseudo Rum/Lab or ANIMSCI 4005 Companion Animal Biology & Behavior or ANIMSCI 4006.01 & 4006.02 Poultry & Avian Mgmt./Lab or ANIMSCI 4007 Dairy Herd Management	4	

Table 3 continued.		
Course(s)	Hours	✓
Production Course 2 Options (one from the following): ANIMSCI 5100 Advanced Growth & Development (3) ANIMSCI 5530 Comparative Animal Nutrient Metabolism (3) MEATSCI 4510 Processed Meats (3) Additional selection from Production Course 1 lecture options Education Abroad ^c Animal Science Judging Experience ^d	3-4	
Major Electives ^e	11	
Total Major Credit Hours	40	

^c Two short-term study abroad experiences include a combination of two courses from ANIMSCI 3797.01 or 3797.03 or 3797.04, or 3797.07 or 5797.05.

^d Participation in two different disciplinary, intercollegiate animal science judging experiences. Requires registration in ANIMSCI 3488 or equivalent.

^e See complete list of options on the CFAES website <https://students.cfaes.ohio-state.edu/academics/undergraduate/majors-and-degrees>

Additional Bachelor's Degree Requirements:

1. A 2.00 cumulative CPHR is required as well as a 2.00 CPHR in the major and minor coursework.
2. Students must complete a minimum of 30 credit hours at The Ohio State University with at least 12 in the department in Columbus offering the major.
3. Applications to graduate must be submitted at least three semesters in advance.