

Animal Science BS Pre-Vet/Science Emphasis Curriculum Guide

Effective Beginning Fall 2014

Name:	ID:	Term/Year of Program Entry:
Advisor(s):	Minors (if applicable):	Anticipated Graduation Date:

All courses required within the Animal Science major must be taken A-F graded unless only offered as S-N. A grad of C- or higher is required in these courses. Consult an advisor with questions. The listed courses necessary for the Animal Science degree do not account for the University requirement of 120 or more credits necessary for awarding of a bachelor's degree. The student should plan for additional classes or minor(s) to account for the total needed.

This emphasis includes many of the prerequisite requirements for admission to the University of Minnesota Vet School. Be advised that some veterinary schools have prerequisites not required for this bachelor's degree. See your advisor for more information and/or visit:

<http://aavmc.org/Member-Institutions.aspx> Students are encouraged to view requirements of additional schools early in their undergraduate career.

Foundation Courses			
Course & Credits	Term(s) Offered	LE Status* OR College Requirement**	Term Completed/Grade
Biol 1009 General Biology (4)	F, S, SS	Biol	
Comm 1101 Intro. to Public Speaking (3)	F,S,SS	CLE	
Writ 3562W Technical & Professional Writing (4)	F,S,SS	WI (meets both upper level req. in the major)	
Math 1031 College Algebra (3) or Math 1142 Short Calculus (4) or Math 1271 Calculus (4)	F, S, SS F, S, SS F, S, SS	Math Math Math	
Professional Courses			
AnSc 1101 Introductory Animal Science (4)	S		
AnSc 2401 Animal Nutrition (3)	F		
AnSc 3011 Statistics for Animal Scientists (4)	F, S		
AnSc 3221 Animal Breeding (4)	F		
AnSc 3301 Human & Animal Physiology Lecture (3)	F, S		
AnSc 3302 Human & Animal Physiology Lab (1)	F, S		

Choose 1 course or course grouping from:		
Course & Credits	Term(s) Offered	Term Completed/Grade
AnSc 4601 Pork Production Systems Mgmt. (4)	F	
AnSc 4602 Sheep Production Systems Mgmt. (4)	S	
AnSc 4603 Beef Production Systems Mgmt. (4)	F	
AnSc 4604 Dairy Production Systems Mgmt. (4)	S	
VCS 4606 Small Animal Mgmt. (3)	S	
AnSc 2055 Horse Management (2) and AnSc 2056 Horse Management Practicum (2)	F F	
Approved course through the Midwest Poultry Consortium	SS	

Required Coursework for Pre-Vet Students Students in this emphasis must complete all courses below			
Course & Credits	Term(s) Offered	LE Status*	Term Completed/Grade
Chem 1061 Chemistry Principles I Lecture (3) and Chem 1065 Chemistry Principles I Lab (1) <i>Concurrent enrollment required in lecture & lab Chem 1071H and 1075H are acceptable substitutions</i>	F,S,SS F,S,SS	Phys	
Chem 1062 Chemistry Principles II Lecture (3) and Chem 1066 Chemistry Principles II Lab (1) <i>Concurrent enrollment required in lecture & lab Chem 1072H and 1075H are acceptable substitutions</i>	F,S,SS F,S,SS	Phys	
Chem 2301 Organic Chemistry (3)	F,S,SS		
BioC 3021 Biochemistry (3)	F,S,SS		

Select at least (7) credits from the following list (be aware that you may be required to take more of these courses if required by professional school admissions/prerequisites):

Course & Credits	Term(s) Offered	LE Status*	Term Completed/Grade
Chem 2311 Organic Chemistry Lab (4) <i>Chem 2302 [or 2304] (3) is a prerequisite for enrollment. Concurrent enrollment is allowed</i>	F,S,SS F,S,SS		
GCD 3022 Genetics (3)	F,S, SS		
FSCN 2021 Introductory Microbiology (4) or VBS 2032 General Microbiology (5)	F,S F,S		
Phys 1101W Introductory College Physics I (4)	F,S	Phys, WI	
Phys 1102W Introductory College Physics II (4)	S	Phys, WI	

Choose at least (12) credits from the list of "Approved Elective Courses" and/or see an advisor for more information. Classes used here cannot count for other requirements, unless a liberal education core or theme.

Course & Credits	Term(s) Offered	LE Status*	Term Completed/Grade

Experiential Learning Requirement

Course & Credits	Term(s) Offered	LE Status*	Term Completed/Grade
AnSc 4096 Professional Internship (3) or AnSc 4009W Undergraduate Research Thesis (6) (registration for 4009W requires a minimum of two semesters with credits split over those semesters)	ALL ALL		

Choose (1) course designated as Interdisciplinary. Classes listed can also meet electives or liberal education core or theme requirements. Select from and/or see advisor for most up to date list:

Course & Credits	Term(s) Offered	LE Status*	Term Completed/Grade
AnSc 3203W Global Food Prod. & the Citizen (3)	S	Envt, WI	
ApEc 3202 An Intro. to the Food System (3)	S		
ApEc 4103 World Food Problems (3)	S	GP	
CFAN 1501 Biotech, People & the Environment (3)	S	TS	
CFAN 3333 Insects, Microbes and Plants (3)	F		
ESPM 1011 Issues in the Environment (3)	F,S	Envt	
ESPM 4021W Problem Solving: Environ. Review (4)	S	WI	
FScN 1102 Food: Safety, Risks, and Technology (3)	F,S	CLE	
FW 2001W Intro to Fish., Wldlfe, & Conserv. Blgy (3)	F	Envt, WI	
Hort 4850 Pollinator Protection (3)	S		
PLPA 2003 Plaques, Famine and Beer (3)	F	HP	

Liberal Education Requirements-University Wide

Liberal Education (LE) courses are required by all students.

The following CORE requirements will not automatically be met by courses within this emphasis. Students should consult the online class schedule to find courses that satisfy the missing areas. Each course must be a minimum of 3 credits. Consult your advisor with questions.

Requirement	Course Title	Term Completed/Grade
Arts/Humanities (AH)		
Literature (Lit)		
Social Science (SSci)		
Historical Perspectives (HP) (suggestion: AnSc 1701)		
University Writing-by placement	Writ 1301 or 1401 or AP or approved transfer course	
(2) Writing Intensive Courses (WI) if not taking Phys 1101W and Phsy 1102W		

The following liberal education theme requirements will not automatically be met by courses within this emphasis. Students are required to select two out of the following three. Consult your advisor with questions.

Diversity & Social Justice (DSJ)		
Global Perspective (GP)		
Environment (Envt)		
Technology & Society (TS)		

Animal Science Elective Courses

Please note that certain courses have prerequisites or require instructor permission for enrollment. Some courses are not offered every semester listed or are on every other year schedule. Consult the online University course guide or see your advisor for the most updated information.

All classes subject to change/cancellation as merited by the department offering the course.

Courses may not count for two areas, unless meeting a liberal education theme or core (designated with *)

Course	Credits	Term	Title of Course
AnSc 1001	(1)	F	Orientation to Animal Science (<i>designed for freshman</i>)
AnSc 1011	(3)	F	Animals and Society*
AnSc 1201	(3)	S	Backyard Chickens: Science, Technology, and Society
AnSc 1403	(3)	S	Companion Animal Nutrition & Care
AnSc 1511	(3)	F	Food Animal Products for Consumers
AnSc 1701	(3)	F	Historical Influence of the Horse on Society*
AnSc 2012	(3)	S	Livestock and Carcass Evaluation
AnSc 2055	(2)	F	Horse Management
AnSc 2056	(2)	F	Horse Management Practicum
AnSc 3007	(3)	S	Equine Nutrition
AnSc 3203W	(3)	S	Environment, Global Food Production & the Citizen*
AnSc 3305	(4)	F	Repro Biology in Health & Disease w/ Lab
AnSc 3307	(1)	F,S	Artificial Insemination Techniques
AnSc 3403	(3)	F	Companion Animal Hot Button Issues
AnSc 3509	(3)	S	Animal Biotechnology
AnSc 3511	(3)	S	Animal Growth and Development
AnSc 3609	(2)	F	Bus. Planning for Livestock Enterprises
AnSc 3801	(3)	S	Livestock Merchandising
AnSc 4011	(3)	S	Dairy Cattle Genetics
AnSc 4305	(2)	S	Companion and Wild Species Reproduction (<i>pre-req of 3305</i>)
AnSc 4401	(3)	F	Swine Nutrition
AnSc 4403	(3)	S	Ruminant Nutrition
AnSc 4404	(2)	F	Applied Dairy Nutrition
AnSc 4601	(4)	F	Pork Production Systems Mgmt w/ Lab
AnSc 4602	(4)	S	Sheep Production Systems Mgmt w/ Lab
AnSc 4603	(4)	F	Beef Production Systems Mgmt w/ Lab
AnSc 4604	(4)	S	Dairy Production Systems Mgmt w/ Lab
AnSc 4613	(2)	F	Advanced Beef Prod Systems Mgmt w/ Lab
AnSc 4614	(4)	S	Advanced Dairy Prod Systems Mgmt w/ Lab
AFEE 2051	(3)	F	Current Technical Competencies
Agro 1103	(4)	F	Crops, Environment & Society w/ Lab*
ApEc 1101	(4)	F,S	Principles of Microeconomics*
ApEc 1251	(3)	F	Principles of Accounting
ApEc 3411	(3)	F	Commodity Marketing
ApEc 3451	(3)	S	Food & Agricultural Sales
ApEc 3811	(3)	F	Principles of Farm Management
CFAN 1501	(3)	S	Biotechnology, People & the Environment*
Ent 3281	(3)	F	Veterinary Entomology
FDSY 2102	(3)	SS	Diversity of Agricultural Production Systems (<i>off-campus</i>)
FScN 1102	(3)	F,S	Food: Safety, Risks and Technology*
FScN 2021	(4)	F,S	Introductory Microbiology w/ Lab
GCD 3022	(3)	F,S, SS	Genetics
SOIL 2125	(4)	F,S	Basic Soil Science w/ Lab*
VBS 2032	(5)	F,S	General Microbiology w/ Lab
VBS 2100	(3)	S	Companion Animal Anatomy w/ Dissection Lab
VCS 4606	(3)	S	Small Animal Management
VPM 3700	(2)	S	Equine Reproduction and Breeding Mgmt

Midwest Poultry Consortium Summer Courses—Madison, WI (varies; see advisor for more information)

Any CFANS major learning/study abroad course (contact advisor for more information)

Animal Science B.S. Degree Sample Plan

Pre-Vet Emphasis

(this plan uses University of Minnesota Vet School required prerequisites that begin for admissions Fall 2016)

~ Electives listed are for sample purposes only -your actual courses and when taken may differ~

Fall 1		Credits
AnSc 1001	Orientation to Animal Science	1
Chem 1061	Chemistry I Lecture	3
Chem 1065	Chemistry I Lab	1
Math 1031	College Algebra	3
Writ 1301	University Writing	4
Liberal Education*/Required Elective of Choice		<u>3-4</u>
<i>Total Credits Fall 1</i>		<i>15-16</i>

Spring 1		Credits
AnSc 1101	Intro. Animal Science	4
Chem 1062	Chemistry II Lecture	3
Chem 1066	Chemistry II Lab	1
Comm 1101	Public Speaking	3
Liberal Education*/Required Elective of Choice		<u>3-4</u>
<i>Total Credits Spring 1</i>		<i>14-15</i>

Fall 2		Credits
AnSc 2401	Animal Nutrition	3
Biol 1009	General Biology	4
Ent 3281	Veterinary Entomology	3
Liberal Education*/Required Elective of Choice		<u>4-6</u>
<i>Total Credits Fall 2</i>		<i>14-16</i>

Spring 2		Credits
AnSc 3011	Statistics for Animal Scientists	4
AnSc 1403	Comp. Animal Nutrition & Care	3
FSCN 2021	Introductory Microbiology	4
Liberal Education*/Required Elective of Choice		<u>4-6</u>
<i>Total Credits Spring 2</i>		<i>15-17</i>

Fall 3		Credits
AnSc 3301	Human & Animal Phys. Lecture	3
AnSc 3302	Human & Animal Phys. Lab	1
AnSc 3221	Animal Breeding	4
AnSc 4096**	Professional Internship	3
Chem 2301	Organic Chemistry Lecture I	<u>3</u>
<i>Total Credits of Fall 3</i>		<i>14</i>

Spring 3		Credits
CFAN 1501	Biotech, People, Environ.	3
BioC 3021	Biochemistry	3
Writ 3562W	Tech. & Professional Writing	4
Liberal Education*/Required Elective of Choice		<u>4-6</u>
<i>Total Credits Spring 3</i>		<i>14-16</i>

Fall 4		Credits
AnSc 3403	Comp. An. Hot Button Issues	3
GCD 3022	Genetics	3
Phys 1101W	Introductory College Physics I	4
Liberal Education*/Required Elective of Choice		<u>4-6</u>
<i>Total Credits Fall 4</i>		<i>14-16</i>

Spring 4		Credits
Phys 1102W	Introductory College Physics II	4
AnSc 4602	Sheep Prod. Systems Mgmt.	4
Remaining Requirements/Credits as needed		<u>6-8</u>
<i>Total Credits Spring 4</i>		<i>14-15</i>

*The University of MN Vet School requires specific liberal education requirements. Please consult the most recent pre-requisites for more information.

**Actual work for the internship is generally completed over a summer. Credit registration is done during a regular term. Minimum of (3) credits are required; up to (6) credits of internship are allowed.