

Animal Science Major

Biotechnology Emphasis

FOUNDATION COURSES

___ ApEc	1101	Principles of Microeconomics (3)	F, S
___ Biol	1009	General Biology (4)	F, S, SS
___ Math	1031	College Algebra (3)	F, S, SS
___ <i>or</i> Math	1142	Short Calculus (4)	F, S, SS
___ <i>or</i> Math	1271	Calculus I &/or Math 1272 (4)	F, S, SS
___ <i>or</i> Math	1281	Calculus I &/or Math 1282 (4)	F, S
___ Rhet	1101	Writing to Inform (4)	F, S
___ Rhet	1223	Oral Presentations (3)	F, S, SS
___ Rhet	3562	Technical & Prof Writing (4)	F, S, SS

(This class counts as two upper division writing intensive courses)

PROFESSIONAL COURSES

___ AnSc	1001	Orientation to Animal Science (1)	F
___ AnSc	1101	Introductory Animal Science (4)	S
___ AnSc	2211	Biometrics for Livestock (3)	S
___ AnSc	2401	Animal Nutrition (3)	F
___ AnSc	3221	Animal Breeding (4)	F
___ AnSc	3301	Systemic Physiology (4)	F
___ AnSc	4096	Prof Ext Program: Internship (3)	F, S, SS
___ <i>or</i> Agri	4009	Undergrad Research Thesis (6)	F, S, SS

Required Coursework

Students in the Science/Pre-Vet emphasis must choose either the Basic Science or Biotechnology option of study.

___ BioC	3021	Biochemistry (3)	F, S
___ Chem	1021	Chemistry Principles I (4)	F, S, SS
___ Chem	1022	Chemistry Principles II (4)	F, S, SS
___ Chem	2301	Organic Chemistry I (3)	F, S, SS
___ Chem	2311	Organic Chemistry Lab (4)	F, S, S

(prereq 2302 or concurrent enrollment, may take 2302 S-N)

___ Biol	4003	Genetics-Biotech Option (3)	F, S
___ Phys	1101	Introductory College Physics I (4)	F, S, SS
___ Phys	1102	Introductory College Physics II (4)	F, S
___ <i>or</i> Phys	1201	Intro Physics: Pre-Med & Bio II (5)	F, S, SS
___ Phys	1202	Intro Physics: Pre-Med & Bio II (5)	F, S, SS
___ VBS	2032	Microbiology with Lab (4)	F, S, SS

Basic Science Option

Choose 12 Credits (at least 6 credits must be 3xxx or higher)

___ Agri	1501	Biotech, People & Envir (3)	S
___ AnSc	1011	Domestic Animals & Society(3)	F
___ AnSc	1403	Comp Animal Nutrition & Care (3)	S
___ AnSc	3203W	Envir, Global Food Prod (3)	S
___ AnSc	3305	Repro Biol in Health & Disease (4)	F
___ AnSc	3509	Animal Biotechnology (3)	S
___ AnSc	3511	Animal Growth & Development (3)	S
___ AnSc	4011	Dairy Cattle Breeding (3)	S

___ AnSc	4401	Swine Nutrition (3)	S
___ AnSc	4403	Ruminant Nutrition (4)	S
___ Ent	4281	Veterinary Entomology (3)	F
___ VPM	3502	Animal Health & Disease (3)	

Any AnSc course not used to fulfill other requirements

Choose 1 Course:

___ AnSc	4102	Equine Mgmt (3)	S
___ AnSc	4601	Pork Prod Systems Mgmt (4)	S
___ AnSc	4602	Sheep Prod Systems Mgmt (4)	F
___ AnSc	4603	Beef Prod Systems Mgmt (4)	F
___ AnSc	4604	Dairy Prod Systems Mgmt (4)	S
___ AnSc	4605	Poultry Prod Systems Mgmt (4)	F
___ VCS	4606	Small Animal Mgmt (3)	S

Biotechnology Option

1 semester of Calculus required)

___ Agri	1501	Biotech, People & Envir (3)	S
___ AnSc	3509	Animal Biotechnology (3)	S
___ Biol	4003	Genetics (3)	F, S

Choose 11 Credits (at least 2 with a laboratory)

___ AnSc	3511	Animal Growth & Development (3)	S
___ AnSc	3305	Repro Biol in Health & Disease (4)	F
___ Biol	4004	Cell Biology (3)	F, S
___ BioC	4025	Laboratory in Biochemistry (2)	F, S
___ BioC	4125	Lab: Molecular & Cellular Bio (3)	S
___ BioC	5001	Biochem, Molecular & Cellular Bio (5)	F
___ GCD	4015	Genetics Laboratory (2)	F
___ GCD	4025	Cell Biology Laboratory (2)	S
___ GCD	4034	Molecular Genetics (3)	S
___ GCD	4143	Human Genetics (3)	S
___ GCD	4151	Molecular Biology of Cancer (3)	F
___ GCD	4161	Developmental Biology (3)	S
___ GCD	5036	Molecular Cell Biology (3)	F
___ MicB	3301	Biology of Microorganisms (5)	F, S
___ MicB	4131	Immunology (3)	F, S
___ MicB	4141W	Bio Genetics & Patho Viruses (3)	S
___ MicB	4151	Molecular & Genetic Micro Dis (3)	S
___ MicB	4235	Virology, Immun & Genetics (3)	S

Liberal Education Requirements

8 Credits

Biological Science with Lab
Physical Science with Lab

6 Credits

Social Sciences, Arts & Humanities

3 Credits

Historical Perspective, Cultural Diversity, International Perspective, Environment, Citizenship & Public Ethics

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ELECTIVE COURSES (CLASSES CANNOT FULFILL REQUIREMENTS IN TWO AREAS)

AnSc 1007	(2)	F	Horse in Your Backyard
AnSc 1011	(3)	F	Animals and Society
AnSc 1021	(1)	S	Avian Sampler
AnSc 1403	(3)	S	Companion Animal Nutrition & Care
AnSc 1511	(3)	F	Food Animal Products for Consumers
AnSc 2012	(3)	S	Livestock and Carcass Evaluation
AnSc 2055	(2)	F	Horse Health Management
AnSc 3007	(3)	S	Equine Nutrition
AnSc 3052	(4)	F	Equine Anatomy & Exercise Physiology
AnSc 3203W	(3)	S	Environment Global Food Production & the Citizen
AnSc 3305	(4)	F	Reproductive Biology in Health & Disease
AnSc 3307	(1)	F,S	Artificial Insemination Techniques
AnSc 3501	(3)	S	Farm Animal Environment
AnSc 3509	(3)	S	Animal Biotechnology
AnSc 3511	(3)	S	Animal Growth and Development
AnSc 3521	(3)	F	Biotech. Appl. in Pharmaceutical Research & Development
AnSc 3609	(2)	F	Animal Production Systems
AnSc 3801	(3)	S	Livestock Merchandising
AnSc 4011	(3)	S	Dairy Cattle Breeding
AnSc 4401	(3)	F	Swine Nutrition
AnSc 4403	(3)	S	Ruminant Nutrition
AnSc 4404	(2)	F	Applied Dairy Nutrition
AnSc 4601	(4)	S	Pork Production Systems Management
AnSc 4602	(4)	S	Sheep Production Systems Management
AnSc 4603	(4)	F	Beef Production Systems Management
AnSc 4604	(4)	S	Dairy Production Systems Management
AnSc 4605	(4)	F	Poultry Production Systems
AnSc 4611	(2)	S	Advanced Pork Prod Systems Management
AnSc 4613	(2)	F	Advanced Beef Prod Systems Management
AnSc 4614	(2)	S	Advanced Dairy Prod Systems Management
CFAN 1501	(3)	S	Biotechnology, People & the Environment
Ent 3281	(3)	F	Veterinary Entomology
VPM 3502	(3)	F	Animal Health and Disease
VPM 3700	(2)	S	Equine Reproduction and Breeding Management
VCS 4600	(3)	F	Small Animal and Equine Behavior
VCS 4606	(3)	S	Small Animal Management

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