

ANIMAL SCIENCES BS-MANSC

for the degree of Bachelor of Science Major in Animal Sciences and Master of Animal Sciences in Animal Science

department website: <https://ansc.illinois.edu/>

department faculty: Animal Sciences Faculty (<https://ansc.illinois.edu/directory/faculty/>)

overview of college admissions & requirements: Agricultural, Consumer & Environmental Sciences (<http://catalog.illinois.edu/schools/aces/academic-units/#text>)

college website: <https://aces.illinois.edu/>

The joint BS/MANSC program in Animal Sciences integrates a baccalaureate (BS) in Animal Sciences preparation with a non-thesis Master of Animal Sciences (MANSC) preparation. Students enrolled in the BS in Animal Sciences program that have completed a minimum of 60 credit hours of degree requirements and that have a minimum GPA of 3.0 are eligible to apply and be admitted to this program. Students that have a GPA above 2.75 may be admitted on probationary status. The Department of Animal Sciences will support the application to the MANSC program of the students in this joint program that have completed the required 126 credit hours towards a BS in Animal Sciences degree (including a minimum of 40 hours of 300- or 400- level courses) and that have a minimum GPA of 3.0. Up to 12 graduate-level (400- or 500-level) credit hours from the BS program will count towards the 32 credit-hour requirement of the MANSC program.

for the degree of Bachelor of Science Major in Animal Sciences and Master of Animal Sciences in Animal Science

The joint BS/MANSC program in Animal Sciences integrates a baccalaureate (BS) in Animal Sciences preparation with a non-thesis Master of Animal Sciences (MANSC) preparation. Students enrolled in the BS in Animal Sciences program that have completed a minimum of 60 credit hours of degree requirements and that have a minimum GPA of 3.0 are eligible to apply and be admitted to this program. Students that have a GPA above 2.75 may be admitted on probationary status.

The Department of Animal Sciences will support the application to the MANSC program of the students in this joint program that have completed the required 126 credit hours towards a BS in Animal Sciences degree (including a minimum of 40 hours of 300- or 400- level courses) and that have a minimum GPA of 3.0. Up to 12 graduate-level (400- or 500-level) credit hours from the BS program will count towards the 32 credit-hour requirement of the MANSC program.

For the Degree of Bachelor of Science Major in Animal Sciences

Code	Title	Hours
Composition I and Speech		
RHET 105	Writing and Research (or equivalent) (see college Composition I requirement)	4
CMN 101	Public Speaking	3
Advanced Composition		
Select from campus approved list.		3-4
Cultural Studies		

Select one course from Western culture, one from non-Western culture, and one from U.S. minority culture from campus approved lists. 9

Foreign Language

Coursework at or above the third level is required for graduation.

Quantitative Reasoning I

Select one of the following: 4-5

MATH 220	Calculus
MATH 221	Calculus I
MATH 234	Calculus for Business I

Quantitative Reasoning II

Select one of the following: 3-4

ACE 261	Applied Statistical Methods
CPSC 241	Intro to Applied Statistics
ECON 202	Economic Statistics I
PSYC 235	Intro to Statistics
STAT 100	Statistics
SOC 280	Intro to Social Statistics

Natural Sciences and Technology

CHEM 102 & CHEM 103	General Chemistry I and General Chemistry Lab I	4
CHEM 104 & CHEM 105	General Chemistry II and General Chemistry Lab II	4
MCB 100 & MCB 101	Introductory Microbiology and Intro Microbiology Laboratory	5

Humanities and the Arts

Courses selected from campus approved list 6

Social Sciences

ECON 102	Microeconomic Principles	3
or ACE 100	Introduction to Applied Microeconomics	

Additional social or behavioral science course; cannot be an economics course. 3-4

ACES Required

ACES 101	Contemporary Issues in ACES	2
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Animal Sciences Required

ANSC 100	Intro to Animal Sciences	4
ANSC 101	Contemporary Animal Issues	3
ANSC 103	Working With Farm Animals	2
ANSC 221	Cells, Metabolism and Genetics	3
ANSC 222	Anatomy and Physiology	3
ANSC 223	Animal Nutrition	3
ANSC 224	Animal Reproduction and Growth	4
ANSC 298	Undergraduate Seminar	1
ANSC 398	UG Experiential Learning ¹	1
ANSC 498	Integrating Animal Sciences	2

Other Requirements

Requirement

The required 126 hours for the B.S. degree must include a minimum of 40 hours of 300- and 400-level courses

Minimum GPA: 3.0

¹ ANSC 398 only fulfills the degree requirement when taken for a standard letter grade.

For the Bachelor of Science students must choose one of the concentrations, Companion Animal & Equine Science, Food Animal Production & Management, or Science, Pre-Veterinary & Medical listed below:

Code	Title	Hours
Companion Animal and Equine Science Concentration Required		
Choose one group: ¹		6
ANSC 250 & ANSC 307	Companion Animals in Society and Companion Animal Management	
or		
ANSC 206 & ANSC 306	Horse Management and Equine Science	
Select two of the following Applied Sciences courses: ¹		6
ANSC 201	Principles of Dairy Production	
ANSC 204	Intro Dairy Cattle Evaluation	
ANSC 205	World Animal Resources	
ANSC 206	Horse Management ¹	
ANSC 211	Breeding Animal Evaluation	
ANSC 219	Meat Technology	
ANSC 250	Companion Animals in Society ¹	
ANSC 301	Food Animal Production, Management, and Evaluation	
ANSC 305	Human Animal Interactions	
ANSC 306	Equine Science	
ANSC 307	Companion Animal Management ¹	
ANSC 309	Meat Production and Marketing	
ANSC 310	Meat Selection and Grading	
ANSC 312	Advanced Livestock Evaluation	
ANSC 313	Horse Appraisal	
ANSC 314	Adv Dairy Cattle Evaluation	
ANSC 322	Livestock Feeds and Feeding	
ANSC 370	Companion Animal Policy	
ANSC 400	Dairy Herd Management	
ANSC 401	Beef Production	
ANSC 402	Sheep and Goat Production	
ANSC 403	Pork Production	
ANSC 404	Poultry Science	
ANSC 405	Advanced Dairy Management	
ANSC 407	Animal Shelter Management	
ANSC 424	Pet Food & Feed Manufacturing	
ANSC 435	Milk Quality and Udder Health	
ANSC 437	Adv Reproductive Management	
ANSC 471	ANSC Leaders & Entrepreneurs	
Select two of the following Basic Sciences courses:		6
ANSC 251	Epidemics and Infectious Diseases	
ANSC 331	Biology of Reproduction	
ANSC 350	Cellular Metabolism in Animals	
ANSC 363	Behavior of Domestic Animals	
ANSC 366	Animal Behavior	

ANSC 406	Zoo Animal Conservation Sci	
ANSC 409	Meat Science	
ANSC 420	Ruminant Nutrition	
ANSC 421	Minerals and Vitamins	
ANSC 422	Companion Animal Nutrition	
ANSC 431	Advanced Reproductive Biology	
ANSC 438	Lactation Biology	
ANSC 440	Applied Statistical Methods I	
ANSC 441	Human Genetics	
ANSC 444	Applied Animal Genetics	
ANSC 445	Statistical Methods	
ANSC 446	Population Genetics	
ANSC 447	Advanced Genetics and Genomics	
ANSC 448	Math Modeling in Life Sciences	
ANSC 449	Biological Modeling	
ANSC 450	Comparative Immunobiology	
ANSC 451	Microbes and the Anim Indust	
ANSC 452	Animal Growth and Development	
ANSC 453	Stem Cell Biology	
ANSC 467	Applied Animal Ecology	
ANSC 509	Muscle Biology	
ANSC 510		
ANSC 520	Protein and Energy Nutrition	
ANSC 521	Regulation of Metabolism	
ANSC 522	Advanced Ruminant Nutrition	
ANSC 523	Techniques in Animal Nutrition	
ANSC 524	Nonruminant Nutrition Concepts	
ANSC 525	Topics in Nutrition Research	
ANSC 526	Adv Companion Animal Nutrition	
ANSC 533	Repro Physiology Lab Methods	
ANSC 541	Regression Analysis	
ANSC 542	Applied Bioinformatics	
ANSC 543	Bioinformatics	
ANSC 545	Statistical Genomics	
ANSC 554	Immunobiological Methods	
ANSC 561	Animal Stress Physiology	
Additional elective courses must be completed to yield at least 126 total Hours for graduation.		25-29
Total Hours		126

¹ ANSC 206, 250, 306 and 307 may NOT be used to meet more than one requirement.

Code	Title	Hours
Food Animal Production and Management Concentration Required		
Select four of the following Applied Sciences courses:		12
ANSC 201	Principles of Dairy Production	
ANSC 204	Intro Dairy Cattle Evaluation	
ANSC 205	World Animal Resources	
ANSC 206	Horse Management	
ANSC 211	Breeding Animal Evaluation	
ANSC 219	Meat Technology	

ANSC 250	Companion Animals in Society
ANSC 301	Food Animal Production, Management, and Evaluation
ANSC 305	Human Animal Interactions
ANSC 306	Equine Science
ANSC 307	Companion Animal Management
ANSC 309	Meat Production and Marketing
ANSC 310	Meat Selection and Grading
ANSC 312	Advanced Livestock Evaluation
ANSC 313	Horse Appraisal
ANSC 314	Adv Dairy Cattle Evaluation
ANSC 322	Livestock Feeds and Feeding
ANSC 370	Companion Animal Policy
ANSC 400	Dairy Herd Management
ANSC 401	Beef Production
ANSC 402	Sheep and Goat Production
ANSC 403	Pork Production
ANSC 404	Poultry Science
ANSC 405	Advanced Dairy Management
ANSC 407	Animal Shelter Management
ANSC 424	Pet Food & Feed Manufacturing
ANSC 435	Milk Quality and Udder Health
ANSC 437	Adv Reproductive Management
ANSC 471	ANSC Leaders & Entrepreneurs
Select two of the following Basic Sciences courses: 6	
ANSC 251	Epidemics and Infectious Diseases
ANSC 331	Biology of Reproduction
ANSC 350	Cellular Metabolism in Animals
ANSC 363	Behavior of Domestic Animals
ANSC 366	Animal Behavior
ANSC 406	Zoo Animal Conservation Sci
ANSC 409	Meat Science
ANSC 420	Ruminant Nutrition
ANSC 421	Minerals and Vitamins
ANSC 422	Companion Animal Nutrition
ANSC 431	Advanced Reproductive Biology
ANSC 438	Lactation Biology
ANSC 440	Applied Statistical Methods I
ANSC 441	Human Genetics
ANSC 444	Applied Animal Genetics
ANSC 445	Statistical Methods
ANSC 446	Population Genetics
ANSC 447	Advanced Genetics and Genomics
ANSC 448	Math Modeling in Life Sciences
ANSC 449	Biological Modeling
ANSC 450	Comparative Immunobiology
ANSC 451	Microbes and the Anim Indust
ANSC 452	Animal Growth and Development
ANSC 453	Stem Cell Biology
ANSC 467	Applied Animal Ecology
ANSC 509	Muscle Biology
ANSC 510	

ANSC 520	Protein and Energy Nutrition
ANSC 521	Regulation of Metabolism
ANSC 522	Advanced Ruminant Nutrition
ANSC 523	Techniques in Animal Nutrition
ANSC 524	Nonruminant Nutrition Concepts
ANSC 525	Topics in Nutrition Research
ANSC 526	Adv Companion Animal Nutrition
ANSC 533	Repro Physiology Lab Methods
ANSC 541	Regression Analysis
ANSC 542	Applied Bioinformatics
ANSC 543	Bioinformatics
ANSC 545	Statistical Genomics
ANSC 554	Immunobiological Methods
ANSC 561	Animal Stress Physiology

Additional elective courses must be completed to yield at least 126 total Hours for graduation. 20-29

Total Hours 126

Code Title Hours
Science, Pre-Veterinary and Medical Concentration Required

Select two of the following Applied Sciences courses: 6

ANSC 201	Principles of Dairy Production
ANSC 204	Intro Dairy Cattle Evaluation
ANSC 205	World Animal Resources
ANSC 206	Horse Management
ANSC 211	Breeding Animal Evaluation
ANSC 219	Meat Technology
ANSC 250	Companion Animals in Society
ANSC 301	Food Animal Production, Management, and Evaluation
ANSC 305	Human Animal Interactions
ANSC 306	Equine Science
ANSC 307	Companion Animal Management
ANSC 309	Meat Production and Marketing
ANSC 310	Meat Selection and Grading
ANSC 312	Advanced Livestock Evaluation
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ANSC 407	Animal Shelter Management
ANSC 424	Pet Food & Feed Manufacturing
ANSC 435	Milk Quality and Udder Health
ANSC 437	Adv Reproductive Management
ANSC 471	ANSC Leaders & Entrepreneurs

Select four of the following Basic Sciences courses: 12

ANSC 251	Epidemics and Infectious Diseases
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ANSC 331	Biology of Reproduction	500-level courses	6
ANSC 350	Cellular Metabolism in Animals	(excludes ANSC 590, ANSC 592, ANSC 593)	
ANSC 363	Behavior of Domestic Animals	400- or 500-level ANSC courses	6
ANSC 366	Animal Behavior	(excludes ANSC 590, ANSC 592, ANSC 593, ANSC 440, ANSC 445)	
ANSC 406	Zoo Animal Conservation Sci	Other graduate-level electives	8
ANSC 409	Meat Science	(excludes ANSC 590, ANSC 592, ANSC 593, ANSC 440, ANSC 445)	
ANSC 420	Ruminant Nutrition	ANSC 592 Adv Topics in Animal Science	6
ANSC 421	Minerals and Vitamins	or ANSC 593 Res Studies in Animal Sciences	
ANSC 422	Companion Animal Nutrition	Total Hours	32
ANSC 431	Advanced Reproductive Biology		
ANSC 438	Lactation Biology		
ANSC 440	Applied Statistical Methods I		
ANSC 441	Human Genetics		
ANSC 444	Applied Animal Genetics		
ANSC 445	Statistical Methods		
ANSC 446	Population Genetics		
ANSC 447	Advanced Genetics and Genomics		
ANSC 448	Math Modeling in Life Sciences		
ANSC 449	Biological Modeling		
ANSC 450	Comparative Immunobiology		
ANSC 451	Microbes and the Anim Indust		
ANSC 452	Animal Growth and Development		
ANSC 453	Stem Cell Biology		
ANSC 467	Applied Animal Ecology		
ANSC 509	Muscle Biology		
ANSC 510			
ANSC 520	Protein and Energy Nutrition		
ANSC 521	Regulation of Metabolism		
ANSC 522	Advanced Ruminant Nutrition		
ANSC 523	Techniques in Animal Nutrition		
ANSC 524	Nonruminant Nutrition Concepts		
ANSC 525	Topics in Nutrition Research		
ANSC 526	Adv Companion Animal Nutrition		
ANSC 533	Repro Physiology Lab Methods		
ANSC 541	Regression Analysis		
ANSC 542	Applied Bioinformatics		
ANSC 543	Bioinformatics		
ANSC 545	Statistical Genomics		
ANSC 554	Immunobiological Methods		
ANSC 561	Animal Stress Physiology		
Additional elective courses must be completed to yield at least 126 total Hours for graduation.		20-29	
Total Hours			126

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For the Degree of Master of Science in Animal Sciences Major in Animal Sciences

Code	Title	Hours
ANSC 590	Animal Sciences Seminar	2
ANSC 440 or ANSC 445	Applied Statistical Methods I Statistical Methods	4