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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHET 105</td>
<td>Writing and Research (or equivalent) (see college Composition I requirement)</td>
<td>4</td>
</tr>
<tr>
<td>CMN 101</td>
<td>Public Speaking</td>
<td>3</td>
</tr>
</tbody>
</table>

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.

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHEM 102</td>
<td>General Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 103</td>
<td>and General Chemistry Lab I</td>
<td></td>
</tr>
<tr>
<td>CHEM 104</td>
<td>General Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>CHEM 105</td>
<td>and General Chemistry Lab II</td>
<td></td>
</tr>
<tr>
<td>MCB 100</td>
<td>Introductory Microbiology</td>
<td>5</td>
</tr>
<tr>
<td>MCB 101</td>
<td>and Intro Microbiology Laboratory</td>
<td></td>
</tr>
</tbody>
</table>

Humanities and the Arts
Courses selected from campus approved list 6

Social Sciences

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ECON 102</td>
<td>Microeconomic Principles</td>
<td>3</td>
</tr>
<tr>
<td>or ACE 100</td>
<td>Introduction to Applied Microeconomics</td>
<td></td>
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</tbody>
</table>

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

ACES Required

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACES 101</td>
<td>Contemporary Issues in ACES</td>
<td>2</td>
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Animal Sciences Required

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC 100</td>
<td>Intro to Animal Sciences</td>
<td>4</td>
</tr>
<tr>
<td>ANSC 101</td>
<td>Contemporary Animal Issues</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 103</td>
<td>Working With Farm Animals</td>
<td>2</td>
</tr>
<tr>
<td>ANSC 221</td>
<td>Cells, Metabolism and Genetics</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 222</td>
<td>Anatomy and Physiology</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 223</td>
<td>Animal Nutrition</td>
<td>3</td>
</tr>
<tr>
<td>ANSC 224</td>
<td>Animal Reproduction and Growth</td>
<td>4</td>
</tr>
<tr>
<td>ANSC 298</td>
<td>Undergraduate Seminar</td>
<td>1</td>
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<tr>
<td>ANSC 398</td>
<td>UG Experiential Learning</td>
<td>1</td>
</tr>
<tr>
<td>ANSC 498</td>
<td>Integrating Animal Sciences</td>
<td>2</td>
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</tbody>
</table>

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

Information listed in this catalog is current as of 06/2020
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:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td></td>
<td><strong>Companion Animal and Equine Science Concentration</strong></td>
<td></td>
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<tr>
<td></td>
<td><strong>Required</strong></td>
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<tr>
<td></td>
<td>Choose one group:</td>
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<tr>
<td></td>
<td>ANSC 250 Companion Animals in Society &amp; ANSC 307</td>
<td>6</td>
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<tr>
<td></td>
<td>or</td>
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<tr>
<td></td>
<td>ANSC 206 Horse Management &amp; ANSC 306 and Equine Science</td>
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<tr>
<td></td>
<td>Select two of the following Applied Sciences courses:</td>
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</tr>
<tr>
<td></td>
<td>ANSC 201 Principles of Dairy Production</td>
<td></td>
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<tr>
<td></td>
<td>ANSC 204 Intro Dairy Cattle Evaluation</td>
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<tr>
<td></td>
<td>ANSC 205 World Animal Resources</td>
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<td></td>
<td>ANSC 206 Horse Management</td>
<td></td>
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<td></td>
<td>ANSC 211 Breeding Animal Evaluation</td>
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<td></td>
<td>ANSC 219 Meat Technology</td>
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<tr>
<td></td>
<td>ANSC 250 Companion Animals in Society</td>
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<tr>
<td></td>
<td>ANSC 301 Food Animal Production, Management, and Evaluation</td>
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<td></td>
<td>ANSC 305 Human Animal Interactions</td>
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<td></td>
<td>ANSC 306 Equine Science</td>
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<tr>
<td></td>
<td>ANSC 307 Companion Animal Management</td>
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<tr>
<td></td>
<td>ANSC 309 Meat Production and Marketing</td>
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<td></td>
<td>ANSC 310 Meat Selection and Grading</td>
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<td></td>
<td>ANSC 312 Advanced Livestock Evaluation</td>
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<td></td>
<td>ANSC 313 Horse Appraisal</td>
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<td></td>
<td>ANSC 314 Adv Dairy Cattle Evaluation</td>
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<tr>
<td></td>
<td>ANSC 322 Livestock Feeds and Feeding</td>
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<td></td>
<td>ANSC 370 Companion Animal Policy</td>
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<td></td>
<td>ANSC 400 Dairy Herd Management</td>
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<td></td>
<td>ANSC 401 Beef Production</td>
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<td></td>
<td>ANSC 402 Sheep Production</td>
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<tr>
<td></td>
<td>ANSC 403 Pork Production</td>
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<tr>
<td></td>
<td>ANSC 404 Poultry Science</td>
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<td></td>
<td>ANSC 405 Advanced Dairy Management</td>
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<td></td>
<td>ANSC 407 Animal Shelter Management</td>
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<td></td>
<td>ANSC 424 Pet Food &amp; Feed Manufacturing</td>
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<td></td>
<td>ANSC 435 Milk Quality and Udder Health</td>
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<td></td>
<td>ANSC 437 Adv Reproductive Management</td>
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<tr>
<td></td>
<td>ANSC 471 ANSC Leaders &amp; Entrepreneurs</td>
<td></td>
</tr>
</tbody>
</table>

Select two of the following Basic Sciences courses: 6

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ANSC 251 Epidemics and Infectious Diseases</td>
<td></td>
<td></td>
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<tr>
<td>ANSC 331 Biology of Reproduction</td>
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<td></td>
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<tr>
<td>ANSC 350 Cellular Metabolism in Animals</td>
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<td></td>
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<tr>
<td>ANSC 363 Behavior of Domestic Animals</td>
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<td></td>
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<tr>
<td>ANSC 366 Animal Behavior</td>
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</tr>
</tbody>
</table>

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 Indus
ANSC 452 Animal Growth and Development
ANSC 453 Stem Cell Biology
ANSC 467 Applied Animal Ecology
ANSC 509 Muscle Biology
ANSC 510 Science of Animal Well-Being
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.

Information listed in this catalog is current as of 06/2020
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 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 421  Minerals and Vitamins
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:

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 444  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  Science of Animal Well-Being
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.

Total Hours 126

Code   Title
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
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ANSC 403  Pork Production
ANSC 404  Poultry Science
ANSC 407  Animal Shelter Management
ANSC 424  Pet Food & Feed Manufacturing
ANSC 421  Minerals and Vitamins
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

Information listed in this catalog is current as of 06/2020
Animal Sciences BS-MANSC

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
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ANSC 445 Statistical Methods
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ANSC 449 Biological Modeling
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ANSC 523 Techniques in Animal Nutrition
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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.

Total Hours 126

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

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

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<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANSC 590</td>
<td>Animal Sciences Seminar</td>
<td>2</td>
</tr>
<tr>
<td>ANSC 440</td>
<td>Applied Statistical Methods I</td>
<td>4</td>
</tr>
<tr>
<td>or ANSC 445</td>
<td>Statistical Methods</td>
<td></td>
</tr>
</tbody>
</table>

500-level courses (excludes ANSC 590, ANSC 592, ANSC 593)

400- or 500-level ANSC courses (excludes ANSC 590, ANSC 592, ANSC 593, ANSC 440, ANSC 445)

Other graduate-level electives (excludes ANSC 590, ANSC 592, ANSC 593, ANSC 440, ANSC 445)

ANSC 592 Adv Topics in Animal Science or ANSC 593 Res Studies in Animal Sciences

Total Hours 32

Other Requirements

Requirement

Other Requirements and conditions may overlap
A maximum of 12 graduate-level credit hours from the B.S. degree will count towards the MANSC degree

Minimum GPA: 3.0

Information listed in this catalog is current as of 06/2020