COMPUTER SCIENCE & ANIMAL SCIENCES, BS & ANIMAL SCIENCE, MANSC

for the degree of Bachelor of Science in Computer Science & Animal Sciences and the Master of Animal Sciences in Animal Science

animal sciences department information: https://ansc.illinois.edu/  
computer science degree information: https://cs.illinois.edu/academics/undergraduate/degree-program-options/cs-x-degree-programs#requirements

overview of college admissions & requirements: Agricultural, Consumer & Environmental Sciences (http://catalog.illinois.edu/schools/aces/academic-units/#text)  
college websites: https://aces.illinois.edu and https://engineering.illinois.edu  
computer science email: undergrad@cs.illinois.edu  
academic@cs.illinois.edu  
animal sciences email: ANSCadvising@illinois.edu

Please see the Computer Science advisor in 1210 Siebel Center, as well as the Animal Sciences Undergraduate Curriculum Coordinator, Dr. David Miller, 116 Animal Sciences Lab.

for the degree of Bachelor of Science in Computer Science & Animal Sciences and the Master of Animal Sciences in Animal Science

The joint BS (CS+ANSC)/MANSC program integrates a baccalaureate degree (BS) preparation in Computer Sciences and Animal Sciences (CS+ANSC) with a non-thesis Master of Animal Sciences (MANSC) preparation. Students enrolled in the BS (CS+ANSC) program that have completed at least 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 (CS+ANSC) degree (including 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 Computer Science & Animal Sciences

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>RHET</td>
<td>Writing and Research</td>
<td>6-7</td>
</tr>
<tr>
<td>&amp; CMN 101</td>
<td>and Public Speaking</td>
<td></td>
</tr>
<tr>
<td>CMN 111</td>
<td>Oral &amp; Written Comm I</td>
<td></td>
</tr>
<tr>
<td>&amp; CMN 112</td>
<td>and Oral &amp; Written Comm II</td>
<td></td>
</tr>
<tr>
<td>Advanced Composition (students select from Gen Ed List)</td>
<td>3-4</td>
<td></td>
</tr>
</tbody>
</table>

Natural Sciences and Technology

- CHEM 102 General Chemistry I  
- CHEM 103 and General Chemistry Lab I  
- CHEM 104 General Chemistry II  
- CHEM 105 and General Chemistry Lab II

Humanities and the Arts (students select from Gen Ed List)

Social and Behavioral Sciences

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

Mathematical Foundations (fulfills Quantitative Reasoning I & II)

Computer Sciences Core

- CS 100 Freshman Orientation  
- CS 125 Introduction to Computer Science  
- CS 126 Software Design Studio  
- CS 173 Discrete Structures  
- CS 225 Data Structures  
- CS 374 Introduction to Algorithms & Models of Computation  
- CS 357 Numerical Methods I  
- or CS 421 Programming Languages & Compilers

Computer Science Technical Track (two options)

- CS 233 Computer Architecture  
- & CS 241 and System Programming

OR

- CS 240 Introduction to Computer Systems  
- & Two CS 400 Any two (2) 400-level CS courses except CS 491

Animal Sciences Core

- ANSC 100 Intro to Animal Sciences  
- ANSC 221 Cells, Metabolism and Genetics  
- ANSC 222 Anatomy and Physiology  
- ANSC 223 Animal Nutrition  
- ANSC 224 Animal Reproduction and Growth  
- ANSC 398 UG Experiential Learning  
- ANSC 498 Integrating Animal Sciences

Applied Animal Sciences Courses (choose 3)

- 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

Information listed in this catalog is current as of 09/2021
ANSC 219  Meat Technology
ANSC 250  Companion Animals in Society
ANSC 301  Food Animal Production, Management, and Evaluation
ANSC 305  Human Animal Interactions
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  Adn Reproductive Management
ANSC 440  ANSC Leaders & Entrepreneurs
Basic Animal Sciences Courses (choose 3)  9
ANSC 251  Epidemics and Infectious Diseases
ANSC 306  Equine Science
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 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
Total Hours  126

Other Requirements

Requirement
The required 126 hours must include a minimum of 40 hours of 300- and 400-level courses.

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>ANSC 590</td>
<td>Animal Sciences Seminar ¹</td>
<td>2</td>
</tr>
<tr>
<td>or ANSC 591</td>
<td>Grad Bioinformatics Seminar ²</td>
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</tr>
<tr>
<td>ANSC 440</td>
<td>Applied Statistical Methods I ¹</td>
<td>3-4</td>
</tr>
<tr>
<td>or ANSC 445</td>
<td>Statistical Methods ³</td>
<td></td>
</tr>
<tr>
<td>or ANSC 448</td>
<td>Math Modeling in Life Sciences ³</td>
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<tr>
<td>or ANSC 449</td>
<td>Biological Modeling ³</td>
<td></td>
</tr>
<tr>
<td>Elective 400- or 500-level ANSC courses (excludes ANSC 590, ANSC 591, ANSC 593) ²</td>
<td>18 to 19</td>
<td></td>
</tr>
<tr>
<td>ANSC 593</td>
<td>Res Studies in Animal Sciences ³</td>
<td>8</td>
</tr>
</tbody>
</table>

Total Hours  32

Other Requirements

Requirement
Other Requirements and conditions may overlap
Minimum Hours Overall Required Within the Unit: 12
A maximum of 12 graduate-level credit hours from the B.S. degree will count towards the MANSC degree
Minimum 500-level Hours Required Overall: 12
Minimum GPA: 3.0

¹ Equivalent course requires departmental approval
² In consultation with their Animal Sciences faculty advisor, students will select courses that support the individual research studies project and strengthen career opportunities.
The individual research studies project or internship experience and a written report will fulfill the ANSC 593 (Research Studies in Animal Sciences) capstone project requirement. The project or internship and the written product will be supervised by the Animal Sciences faculty mentor and provide evidence that the student can understand and apply the scientific method, interpret scientific information; and effectively communicate scientific information in a field of animal sciences.