BIOINFORMATICS: ANIMAL SCIENCES, MS

for the Master of Science Major in Bioinformatics, Animal Sciences Concentration

department head: Rodney Johnson
graduate program coordinator: Sandra Rodriguez-Zas
department website: https://ansc.illinois.edu
department faculty: https://ansc.illinois.edu/directory/faculty/
overview of grad college admissions & requirements: https://grad.illinois.edu/admissions/apply

college website: https://aces.illinois.edu/
department office: 110 Animal Sciences Laboratory, 1207 West Gregory Drive, Urbana, IL 61801
phone: (217) 333-3131
e-mail: ansci-gradprog@illinois.edu

Graduate Degree Programs in Animal Sciences
Graduate Majors:
Animal Sciences, MANS (http://catalog.illinois.edu/graduate/aces/animal-sciences-mansc/)
Animal Sciences, MS (http://catalog.illinois.edu/graduate/aces/animal-sciences-ms/)
Animal Sciences, PhD (http://catalog.illinois.edu/graduate/aces/animal-sciences-phd/)

Graduate Concentrations:
Bioinformatics: Animal Sciences, MS (p. 1)

for the Master of Science Major in Bioinformatics, Animal Sciences Concentration

For additional details and requirements refer to the department's Graduate Handbook (http://ansci.illinois.edu/grads/degree-requirements/) and the Graduate College Handbook (http://www.grad.illinois.edu/gradhandbook/).

Thesis Option

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
<tr>
<td>ANSC 441</td>
<td>Human Genetics</td>
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<tr>
<td>ANSC 444</td>
<td>Applied Animal Genetics</td>
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<tr>
<td>ANSC 446</td>
<td>Population Genetics</td>
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<tr>
<td>BIOP 401</td>
<td>Introduction to Biophysics</td>
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<tr>
<td>BIOP 550</td>
<td>Biomolecular Physics</td>
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<tr>
<td>CPSC 452</td>
<td>Advanced Plant Genetics</td>
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<tr>
<td>CPSC 466</td>
<td>Genomics for Plant Improvement</td>
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<tr>
<td>CPSC 563</td>
<td>Chromosomes</td>
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<tr>
<td>CPSC 566</td>
<td>Plant Gene Regulation</td>
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<tr>
<td>MCB 400</td>
<td>Cancer Cell Biology</td>
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<td>MCB 450</td>
<td>Introductory Biochemistry</td>
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<tr>
<td>MCB 501</td>
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<td>MCB 502</td>
<td>Advanced Molecular Genetics</td>
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<tr>
<td>ANSC 542</td>
<td>Applied Bioinformatics</td>
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Fundamental Bioinformatics (choose one) 4

ANSC 545  Statistical Genomics
CHBE 571  Bioinformatics
CPSC 567  Bioinformatics & Systems Biology
CS 466   Introduction to Bioinformatics
IB 467   Principles of Systematics
MCB 432  Computing in Molecular Biology

Computer Science and Informatics (choose one) 4
CS 411   Database Systems
CS 466   Introduction to Bioinformatics
CS 473   Algorithms
CPSC 565  Perl & UNIX for Bioinformatics
IS 455   Database Design and Prototyping
IS 507   Data, Statistical Models and Information
STAT 428  Statistical Computing
STAT 440  Statistical Data Management
STAT 448  Advanced Data Analysis
STAT 480  Data Science Foundations
STAT 525  Computational Statistics

Graduate seminar (ANSC 590) enrollment is required every semester (max 2 hours can be applied to the degree)

ANSC 599  Thesis Research (min/max applied toward degree) 8

Electives 14

Total Hours 36

Other Requirements

Requirement
Other Requirements and conditions may overlap
A concentration is required.
Minimum Hours Overall Required Within the Unit: 8
Minimum 500-level Hours Required Overall: 12
A comprehensive oral examination concerning the thesis and other areas of Bioinformatics and Animal Sciences is required.
Thesis Deposit Required: Yes
Minimum GPA: 3.0

Information listed in this catalog is current as of 03/2021