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 faculty: https://ansc.illinois.edu
department website: https://ansc.illinois.edu/admissions/apply
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
email: ansci-gradprog@illinois.edu

Graduate Degree Programs in Animal Sciences

Graduate Majors:
Animal Sciences, MANS C (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>
<td>4</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 564</td>
<td>Molecular Marker Data Analyses</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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<tr>
<td>MCB 450</td>
<td>Introductory Biochemistry</td>
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<td>MCB 501</td>
<td>Advanced Biochemistry</td>
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<tr>
<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 Biol
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 542: Research and Inquiry for Youth
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) 2
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 03/2020