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

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<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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<td>CPSC 466</td>
<td>Genomics for Plant Improvement</td>
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<td>CPSC 563</td>
<td>Chromosomes</td>
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<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>
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<td>MCB 501</td>
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<td>MCB 502</td>
<td>Advanced Molecular and Cell Biology</td>
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Fundamental Bioinformatics (choose one) 4

ANSC 542 Applied Bioinformatics

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 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 10/2021