

ANIMAL SCIENCE (MS)

Graduate School

Program Website (<https://cals.cornell.edu/animal-science/degrees-programs/graduate-studies/>)

CIP: 01.0901 | HEGIS: 0104.00 | NYSED: 13020

Graduate Field

Animal Science (<https://catalog.cornell.edu/graduate-school/animal-science/>)

Program Description

Graduate faculty in the Field of Animal Science include members from the Department of Animal Science, Division of Nutritional Sciences, and the College of Veterinary Medicine.

Students training towards MS and PhD degrees in the field develop a unique program applicable to their particular goals under the mentorship of a special committee composed of faculty with the relevant expertise. In addition to doing research, students are encouraged to gain experience in teaching, extension and public outreach.

At least one member of the Special Committee must be a member of the faculty in a department other than that of the chairperson.

Students applying to the Field of Animal Science choose from the following concentrations:

- Animal nutrition
- Animal science
- Physiology of reproduction
- Animal genetics
- Animal genomics

Program Information

- Instruction Mode: In Person
- Location: Ithaca, NY
- Minimum Credits for Degree: 72

Program Requirements

- Minimum Semesters for Degree: 8

Graduate School Milestones

- Responsible Conduct of Research Training: Required
- Open Researcher and Contributor ID (ORCID): Required
- Student Progress Reviews (SPR) begin: First Year
- Masters Exam (M Exam): Spring of second year
- Thesis: Spring of second year

Course Requirements

- Course requirements are determined by the student's Special Committee.
- Enrollment in a GRAD research course or the equivalent field specific research course is expected of all students.

University Graduation Requirements Requirements for All Students

In order to receive a Cornell degree, a student must satisfy academic and non-academic requirements.

Academic Requirements

A student's college determines degree requirements such as residency, number of credits, distribution of credits, and grade averages. It is the student's responsibility to be aware of the specific major, degree, distribution, college, and graduation requirements for completing their chosen program of study. See the individual requirements listed by each college or school or contact the college registrar's office (<https://registrar.cornell.edu/service-resources/college-registrar-directory/>) for more information.

Non-academic Requirements

Conduct Matters. Students must satisfy any outstanding sanctions, penalties or remedies imposed or agreed to under the Student Code of Conduct (Code) or Policy 6.4. Where a formal complaint under the Code or Policy 6.4 is pending, the University will withhold awarding a degree otherwise earned until the adjudication process set forth in those procedures is complete, including the satisfaction of any sanctions, penalties or remedies imposed.

Financial Obligations. Outstanding financial obligations will not impact the awarding of a degree otherwise earned or a student's ability to access their official transcript. However, the University may withhold issuing a diploma until any outstanding financial obligations owing to the University are satisfied.

Learning Outcomes

Students will work toward developing a broad appreciation of the field of animal science while focusing on a specific area of research. They will gain understanding of how the various aspects of the field of animal science are integrated, from unraveling biological mechanisms to understand animal physiology, to applying knowledge to improve animal health and productivity, and to devising management practices to improve the efficiency of animal production systems and animal health. Students will have the opportunity to gain exposure and experience in the practice of outreach and extension to promote communication of advances in animal science and their application in the field. Extensive opportunities are offered to obtain experience in teaching.

Students will develop a unique program applicable to their goals under the mentorship of a special committee composed of faculty with relevant expertise. Common skills essential to becoming an accomplished animal scientist are developed including analyzing the scientific literature to determine the state of knowledge, identifying research questions, designing experiments to test hypotheses using appropriate methodologies, communicating through scientific publications and oral presentations, working collaboratively with other scientists and acquiring skills in teaching and mentorship.

Proficiencies

A candidate for the Master of Science degree will demonstrate expertise within their chosen subdiscipline of animal science and an appreciation for its application within the broader discipline. Their research is expected to contribute new knowledge within their focus area. They

will develop the skills needed to enter the job market or to further their research training in a doctoral program.

At completion of the MS degree, a student should demonstrate the ability to:

- analyze the scientific literature to assess current knowledge in the field.
- develop hypotheses and design experiments.
- continually learn new research techniques to address evolving questions in the field.
- analyze data using appropriate statistical methods.
- maintain adherence to ethical standards in animal and laboratory research.
- communicate science in peer-reviewed publications and oral presentations.
- deliver lectures to academic and non-academic professional audiences and lay audiences to disseminate knowledge in the field.
- serve as a mentor to students and trainees.