ANIMAL SCIENCES, M.S.

The Animal and Dairy Sciences Department offers one of the most comprehensive animal and dairy science graduate programs in the country. Faculty interests and research funding span diverse areas of focus, with emphases from in vivo and in vitro studies probing biological relationships at a fundamental mechanistic level, to bioinformatics and data analytics studying fundamental biology and development of decision support tools for dairy farm management. The common thread through these varied interests is the motivation to address current practical issues in animal agriculture.

Development of an individual course of study is flexible to meet the needs of students with varied interests. Fundamental training in basic science fields related to the area of interest is required. There are nine program areas for prospective applicants to review and choose from—see website. Minimum admissions requirements of the Graduate School must be met. Specific degree requirements are available from the department.

Graduate students in the department are a mix of domestic students from within and outside of Wisconsin, and international students from multiple countries. This diversity brings a national and global perspective to research, instruction, extension, and cultural understanding. Graduates find employment in academically teaching and research, in professional veterinary or medical degree programs, in industrial research in the food and feed industries, in laboratory research programs with governmental and international agencies, private corporations, and in industrial or institutional management positions requiring a high level of scientific training.

Two paths are available for graduate work leading to the Master of Science degree in Animal and Dairy Sciences. Students who plan to continue for the Ph.D. degree, or who expect to enter fields of work involving research, should take the M.S. degree with a path in research. Students who wish to obtain more specialized training, but are not planning for a research career, may pursue a degree strictly through coursework.

RESEARCH FOCUS AREAS

Students may choose to focus on the areas of: nutrition, rumen microbiology, reproductive physiology–endocrinology, lactational physiology, genetics, animal breeding, animal behavior, muscle biology, meat science, cell biology, animal health, immunity and toxicology, international agriculture or precision agriculture. Considerable opportunity for study exists in joint programs with bacteriology, toxicology, biochemistry, the interdepartmental graduate program in nutritional sciences, genetics, endocrinology, reproductive physiology training program, food science, physiology, agricultural and applied economics, biometry, cellular and molecular biology, pharmaceutical sciences, chemical and biological engineering, bio-engineering, comparative biosciences, and anatomy.

ADMISSIONS

Please consult the table below for key information about this degree program’s admissions requirements. The program may have more detailed admissions requirements, which can be found below the table or on the program’s website.

Graduate admissions is a two-step process between academic programs and the Graduate School. **Applicants must meet** the minimum requirements of the Graduate School as well as the program(s). Once you have researched the graduate program(s) you are interested in, apply online (https://grad.wisc.edu/apply/).

<table>
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<tr>
<th>Requirements</th>
<th>Detail</th>
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<tr>
<td>Fall Deadline</td>
<td>May 1 for international applicants; August 1 for domestic applicants</td>
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<td>Spring Deadline</td>
<td>October 1 for international applicants; December 1 for domestic applicants</td>
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<tr>
<td>Summer Deadline</td>
<td>March 1 for international applicants; May 1 for domestic applicants</td>
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<tr>
<td>GRE (Graduate Record Examinations)</td>
<td>Not required but may be considered if available.</td>
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<tr>
<td>English Proficiency Test</td>
<td>Every applicant whose native language is not English or whose undergraduate instruction was not in English must provide an English proficiency test score and meet the Graduate School minimum requirements (<a href="https://grad.wisc.edu/apply/requirements/#english-proficiency">https://grad.wisc.edu/apply/requirements/#english-proficiency</a>).</td>
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<tr>
<td>Other Test(s) (e.g., GMAT, MCAT)</td>
<td>n/a</td>
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<tr>
<td>Letters of Recommendation Required</td>
<td>3</td>
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Students with satisfactory undergraduate training in any biological science including emphasis on basic science courses will have suitable backgrounds for graduate studies in Animal Sciences. Typically, students admitted to the program have a GPA of 3.2 or higher. Candidates with a lower GPA may be considered for admission under special circumstances.

Documents Required By the Program:

1. Personal statement/reasons for graduate Study: see website. (https://grad.wisc.edu/prospective/prepare/statement/)

2. Three letters of recommendation. The process for letters of recommendation is outlined on this website (https://grad.wisc.edu/admissions/faq/#rec). Letters should be from faculty who are familiar with your academic abilities and goals. Letters from supervisors that provide a character reference are also acceptable. The letters of recommendation should be submitted with the online application.

3. Official transcripts or academic records from each institution attended. These can be scanned and included with the electronic application. Original official transcripts will be required by the Graduate School if a department recommends applicant for admission.

The Graduate School Checklist outlines what you must include in your electronic application—see website. (https://grad.wisc.edu/admissions/process/)

International students should apply as early as possible. If you are admitted, extra time will be needed to process visa documents.

Faculty Review of Completed Applications:

It is recommended that applicants contact departmental faculty directly to determine openings in the lab and an interest in their area of research. Students are admitted to the program if a faculty member agrees to...
accept the candidate into their research group and to provide laboratory/ desk space and research support, and upon the approval of the Graduate School. The faculty member also decides whether to offer an assistantship to the candidate. If a faculty member is interested in a completed application, the applicant will be contacted by them personally.

If a faculty member is interested in accepting an applicant, a recommendation for admission will be sent to the Graduate School. The Graduate School will make the final determination for admission. Our graduate faculty have approximately two weeks prior to the start of the semester to recommend domestic students and approximately six weeks prior to the start of the semester to recommend international students.

**FUNDING**

**GRADUATE SCHOOL RESOURCES**

Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information (https://grad.wisc.edu/funding/) is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

**PROGRAM RESOURCES**

Financial assistance may be available to qualified individuals in the form of research assistantships, teaching assistantships, or fellowships. Funding does not come directly from the department, but from the faculty member agreeing to advise the new student. Therefore, students join labs directly instead of doing rotations. Funding is awarded on a competitive basis and may be renewed annually pending satisfactory progress. Terms of these appointments are defined in the letter of offer to the student.

**REQUIREMENTS**

**MINIMUM GRADUATE SCHOOL REQUIREMENTS**

Review the Graduate School minimum academic progress and degree requirements (http://guide.wisc.edu/graduate/policiesandrequirements/text), in addition to the program requirements listed below.

**MAJOR REQUIREMENTS**

<table>
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<th>Mode of Instruction Definitions</th>
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<tr>
<td><strong>Accelerated</strong>: Accelerated programs are offered at a fast pace that condenses the time to completion. Students typically take enough credits aimed at completing the program in a year or two.</td>
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<tr>
<td><strong>Evening/Weekend</strong>: Courses meet on the UW–Madison campus only in evenings and/or on weekends to accommodate typical business schedules. Students have the advantages of face-to-face courses with the flexibility to keep work and other life commitments.</td>
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**CURRICULAR REQUIREMENTS**

**Face-to-Face**: Courses typically meet during weekdays on the UW-Madison Campus.

**Hybrid**: These programs combine face-to-face and online learning formats. Contact the program for more specific information.

**Online**: These programs are offered 100% online. Some programs may require an on-campus orientation or residency experience, but the courses will be facilitated in an online format.

**REQUIRED COURSES**

Students will work with their committee to design a program of coursework that best meets the individual student’s needs and interests. The resulting program of coursework must satisfy the departmental requirements as well as the requirements specified by the Graduate School.

**Seminar Requirement**

The Animal and Dairy Sciences Graduate seminar (DY SCI 900) features outside speakers, UW Faculty, and graduate students in the department presenting their research or defending their thesis. This course is offered during the fall and spring semesters. Attendance is required at this
the committee signs the Mentor and Examination Committee form, the
Graduate Studies must approve of all members on this committee. Once
The graduate student formally requests the participation of the faculty
other scientist, as approved by the Research and Graduate Education
another faculty member from within or outside of the department or
committee members must be tenure-track faculty in the Department
consists of a minimum of three faculty members. At least two of the
Students are admitted to this degree program by their major professor.
ADVISOR / COMMITTEE

POLICIES

GRADUATE SCHOOL POLICIES
The Graduate School’s Academic Policies and Procedures (https://
grad.wisc.edu/acadpolicy/) provide essential information regarding
general university policies. Program authority to set degree policies
beyond the minimum required by the Graduate School lies with the degree
program faculty. Policies set by the academic degree program can be
found below.

MAJOR-SPECIFIC POLICIES

PRIOR COURSEWORK
Graduate Work from Other Institutions
This program follows the Graduate School’s policy for Satisfying
Requirements with Prior Graduate Coursework from Other Institutions.
(https://policy.wisc.edu/library/UW-1216/)

UW–Madison Undergraduate
This program follows the Graduate School’s policy for Satisfying
Requirements with Undergraduate Course from Undergraduate Career at UW–
Madison (https://policy.wisc.edu/library/UW-1216/).

UW–Madison University Special
This program follows the Graduate School’s policy for Transfer from UW–
Madison University Special Student Career at UW–Madison (https://
policy.wisc.edu/library/UW-1216/).

PROBATION
This program follows the Graduate School’s Probation policy (https://
policy.wisc.edu/library/UW-1217/).

ADVISOR / COMMITTEE
Students are admitted to this degree program by their major professor.
Following enrollment, the student and major professor determine
members for their Mentor and Examination Committee. The committee
consists of a minimum of three faculty members. At least two of the
committee members must be tenure-track faculty in the Department
of Animal and Dairy Sciences. The other committee member can be
another faculty member from within or outside of the department or
other scientist, as approved by the Research and Graduate Education
Committee.

The graduate student formally requests the participation of the faculty
on the committee. The student, major professor, and the Director of
Graduate Studies must approve of all members on this committee. Once
the committee signs the Mentor and Examination Committee form, the

student must turn in the signed copy to the Graduate Program Manager
for review. The Graduate Program Manager will submit the form for review
and approval by the Director of Graduate Studies. Changes to a Mentor
and Examination Committee must be submitted in writing to the Graduate
Program Manager for approval by the Director of Graduate Studies.
Students should meet with their committee at least once per year.

Students must meet with their Mentor and Examination Committee
to plan their graduate curriculum and research program. During
the first semester the student submits their Plan of Study (https://
andysci.wisc.edu/wp-content/uploads/sites/263/2020/10/Fillable-
PDF-MS-Requirements-for-degree-in-research-ADS.pdf) form to the
Graduate Program Manager to obtain departmental approval from the
Director of Graduate Studies.

The final thesis exam involves an oral defense of the research topic and
general knowledge of animal nutrition, endocrinology & reproductive
physiology, genetics and animal breeding, or meat science and muscle
biology. All degree candidates must complete a satisfactory thesis.
Instructions on preparing a master’s thesis can be found on the UW
Graduate School website, https://grad.wisc.edu/current-students/
masters-guide/.

At the completion of the degree program, the candidate will take a final
examination administered by the Mentor and Examination Committee. The
examination will be oral and includes questions relating to the candidate’s
graduate course program. The candidate will also be expected to defend
the thesis.

CREDITS PER TERM ALLOWED
15 credits

TIME LIMITS
Completing the M.S. degree in the Animal Sciences in the Department of
Animal and Dairy Sciences at the University of Wisconsin-Madison requires
successful completion of the following items. These must be completed in
a timely fashion, or the student will not be allowed to continue registration.
Working closely with your advisor and committee is essential for the
successful completion of an M.S. Please note that minimum requirements
are provided, however successful completion of the M.S. degree also
requires making a research contribution to the scientific literature.

• Select the Graduate Program and form a M.S. mentor Committee (by
the end of 1st semester).
• Meet with your M.S. Committee and approve the Plan of Study
Fillable-PDF-MS-Requirements-for-degree-in-research-ADS.pdf) (by
the end of 2nd Semester)
• Complete Coursework and M.S. research (documentation of
completion is required before M.S. defense)
• Final Defense and Examination.

Master’s degree students who have been absent for five or more
consecutive years lose all credits that they have earned before their
absence. Individual programs may count the coursework students
completed prior to their absence for meeting program requirements; that
coursework may not count toward Graduate School credit requirements.

GRIEVANCES AND APPEALS
These resources may be helpful in addressing your concerns:
To ensure a prompt and fair hearing of any complaint, and to protect breakdowns and be easily resolved; others may require formal action. Some complaints may arise from misunderstandings or communication right to complain about the treatment and to receive a prompt hearing. In the College of Agricultural and Life Sciences (CALS), any student who outside CALS, the student should seek the advice of the dean or director of that unit to determine how to proceed.

1. The student should first talk with the person at whom the complaint is directed. Most issues can be settled at this level. Others may be resolved by established departmental procedures.

2. If the student is unsatisfied, and the complaint involves any unit outside CALS, the student should seek the advice of the dean or director of that unit to determine how to proceed.
   a. If the complaint involves an academic department in CALS the student should proceed in accordance with item 3 below.
   b. If the grievance involves a unit in CALS that is not an academic department, the student should proceed in accordance with item 4 below.

3. The student should contact the department’s grievance advisor within 120 calendar days of the alleged unfair treatment. The departmental administrator can provide this person’s name. The grievance advisor will attempt to resolve the problem informally within 10 working days of receiving the complaint, in discussions with the student and the person at whom the complaint is directed.
   a. If informal mediation fails, the student can submit the grievance in writing to the grievance advisor within 10 working days of the date the student is informed of the failure of the mediation attempt by the grievance advisor. The grievance advisor will provide a copy to the person at whom the grievance is directed.
   b. The grievance advisor will refer the complaint to a department committee that will obtain a written response from the person at whom the complaint is directed, providing a copy to the student. Either party may request a hearing before the committee. The grievance advisor will provide both parties a written decision within 20 working days from the date of receipt of the written complaint.
   c. If the grievance involves the department chairperson, the grievance advisor or a member of the grievance committee, these persons may not participate in the review.
   d. If not satisfied with departmental action, either party has 10 working days from the date of notification of the departmental committee action to file a written appeal to the CALS Equity and Diversity Committee. A subcommittee of this committee will make a preliminary judgement as to whether the case merits further investigation and review. If the subcommittee unanimously determines that the case does not merit further investigation and review, its decision is final. If one or more members of the subcommittee determine that the case does merit further investigation and review, the subcommittee will investigate and seek to resolve the dispute through mediation. If this mediation attempt fails, the subcommittee will bring the case to the full committee. The committee may seek additional information from the parties or hold a hearing. The committee will present a written recommendation to the dean who will provide a final decision within 20 working days of receipt of the committee recommendation.

4. If the alleged unfair treatment occurs in a CALS unit that is not an academic department, the student should, within 120 calendar days of the alleged incident, take his/her grievance directly to the Associate Dean of Academic Affairs. The dean will attempt to resolve the problem informally within 10 working days of receiving the complaint. If this mediation attempt does not succeed the student may file a written complaint with the dean who will refer it to the CALS Equity and Diversity Committee. The committee will seek a written response from the person at whom the complaint is directed, subsequently following other steps delineated in item 3d above.

**OTHER**

The Animal Sciences program has a rolling admission policy. Campus visits are recommended along with direct program faculty contact. Funding may be available for a research assistant position from a faculty member if an applicant meets the faculty member’s research requirements. No applicant will be seriously considered until they have submitted a complete application to the UW-Madison Graduate School with the supporting documentation.
PROFESSIONAL DEVELOPMENT

GRADUATE SCHOOL RESOURCES

Take advantage of the Graduate School’s professional development resources (https://grad.wisc.edu/pd/) to build skills, thrive academically, and launch your career.

PROGRAM RESOURCES

The Animal and Dairy Sciences graduate programs encourage students to develop Individual Development Plans (https://grad.wisc.edu/pd/idp/) in collaboration with their major advisor to facilitate professional development. Besides the extensive opportunities offered across the campus at large, students in the Animal and Dairy Sciences program also benefit from activities and programs provided by the Animal Science Graduate Student Association (ASGSA), a student-led organization for graduate students at UW–Madison who are interested in animal and dairy related science.

LEARNING OUTCOMES

1. Articulates, critiques, or elaborates the theories, research methods, and approaches to inquiry or schools of practice in the field of study.
2. Identifies sources and assembles evidence pertaining to questions or challenges in the field of study.
3. Demonstrates understanding of the primary field of study in a historical, social, and global context.
4. Selects and/or utilizes the most appropriate methodologies and practices.
5. Evaluates or synthesizes information pertaining to questions or challenges in the field of study.
6. Communicates clearly in ways appropriate to the field of study.
7. Recognizes and applies principles of ethical and professional conduct.

PEOPLE

For more information about the faculty and their research interests, please visit the directory (https://andysci.wisc.edu/about-us/faculty-and-staff/).