FOOD SCIENCE, MS

The graduate program in the Department of Food and Nutritional Sciences ranks among the best of its kind in the United States. Strong faculty research groups exist in food chemistry, food engineering, food microbiology, and health. The master's track in these areas combines an array of in-depth courses with the use of advanced research methods for studying food properties: chemical, physical, physiological, and bioactive characteristics; material properties; microbial control and safety; sensory quality; procedures for the processing, storage, and preservation of foods.

Research areas in which the department has special expertise include chemical attributes of proteins, enzymes, lipids, flavors, bioactive components, and pigments; processes for crystallizing, separating, freezing, and drying; food safety (detection, control, and mechanistic action of pathogenic microorganisms, and undesirable chemicals in food); process optimization and validation of critical processing limits. Commodity foci include dairy products, confectionery products, fruits and vegetables, muscle foods, and fermented products.

Department spaces include Babcock Hall, a building with excellent facilities for instruction and research. Availability of appropriate instruments, equipment, and pilot-plant facilities enables research on the above topics to be conducted in a manner that has impact worldwide.

About 40–50 students from many countries are currently pursuing both the MS and PhD degrees in the areas mentioned above. This includes some graduate students working in programs associated with the Food Research Institute and closely allied departments.

Individuals obtaining advanced degrees in food science will find employment opportunities in academic instruction and research, government research or regulatory programs, and industrial research, development, or quality assurance. Historically, the department's placement record for graduating students has been very good.

ADMISSIONS

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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 *(https://grad.wisc.edu/apply/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/).

Requirements	Detail
Fall Deadline	January 15
Spring Deadline	September 1
Summer Deadline	The program does not admit in the summer.
GRE (Graduate Record Examinations)	Not required.
English Proficiency Test	Refer to the Graduate School: Minimum Requirements for Admission policy: https://policy.wisc.edu/library/UW-1241 (https://policy.wisc.edu/library/UW-1241/).
Other Test(s) (e.g., GMAT, MCAT)	n/a
Letters of Recommendation Required	3

Admitted applicants must meet the Graduate School minimum requirements (https://grad.wisc.edu/apply/requirements/), including completion of a bachelor's degree which typically consists of a satisfactory undergraduate education in fields such as food science, dairy science, chemistry, most biological sciences (e.g., biochemistry, microbiology, nutrition), and engineering (especially chemical and agricultural).

Students will be recommended for admission to the Food Science graduate program if (1) a faculty graduate admission committee has determined the student's application meets all requirements, **and** (2) if a faculty member has funding available. Final admission is determined by the Graduate School.

The faculty graduate admission committee's recommendation for admission is made usually based on the review of the following:

- applicant's online application
- academic record (scanned PDF academic transcripts)
- English proficiency for international degree-seeking applicants. See Graduate School requirements (https://grad.wisc.edu/apply/requirements/) for more information
- recommendation letters (three)
- personal statement (reasons for graduate study) up to two pages double-spaced
- CV or resume
- applicant's particular research interest(s) as indicated in supplemental application

Applicants must submit a formal application to UW-Madison before being considered for admission. The Department of Food Science cannot take any action regarding admission until the application is complete. We do not pre-screen applications, nor do we provide an informal assessment of qualifications based on volunteered documents from individuals prior to application.

Applicants interested in applying for the food science program should look closely at the website (http://www.foodsci.wisc.edu/grad_apply.php) for specific information about the admissions process.

FUNDING

FUNDING

GRADUATE SCHOOL RESOURCES

The Bursar's Office provides information about tuition and fees associated with being a graduate student**.** Resources to help you afford graduate study might include assistantships, fellowships, traineeships, and financial aid. Further funding information is available from the Graduate School. Be sure to check with your program for individual policies and restrictions related to funding.

PROGRAM RESOURCES

We recommend that your application be complete by the application deadlines in order to be considered for funding. Financial assistance is sometimes available to qualified individuals in the form of research assistantships, teaching assistantships, or fellowships. Fellowships are granted to students meeting specific criteria and with outstanding academic records. Research assistantships are awarded by individual professors through funds available to their research programs. Funding is awarded on a competitive basis and renewed annually pending the student's satisfactory progress. (Teaching assistant positions in food science are available only to students who have already been enrolled for at least two semesters.)

Please be advised that you do not need to make a separate application for financial support as your admission application will also serve as an application for assistantships and fellowships.

Prospective students are encouraged to search and apply for **external funding sources** (scholarships and fellowships) on their own. (If faculty do not have funding or lab space available, they often do not accept new students into their labs.) Additionally, prospective students are encouraged to apply for graduate assistantship (teaching, research, or project) positions in other UW–Madison departments to potentially defray the costs of their studies. See Graduate School Funding pages (https://grad.wisc.edu/studentfunding/steps/) for more information.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum degree requirements (https://guide.wisc.edu/graduate/#requirementstext) and policies (https://guide.wisc.edu/graduate/#policiestext), in addition to the program requirements listed below.

MAJOR REQUIREMENTS

MODE OF INSTRUCTION

Face to Face	Evening/ Weekend	Online	Hybrid	Accelerated
Yes	No	No	No	No

Mode of Instruction Definitions

Accelerated: 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.

Evening/Weekend: 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.

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.

CURRICULAR REQUIREMENTS

Requirement	Detail
Minimum Credit Requirement	30 credits
Minimum Residence Credit Requirement	16 credits
Minimum Graduate Coursework Requirement	15 credits must be graduate-level coursework. Refer to the Graduate School: Minimum Graduate Coursework (50%) Requirement policy: https://policy.wisc.edu/library/UW-1244 (https://policy.wisc.edu/library/UW-1244/).
Overall Graduate GPA Requirement	3.00 GPA required. Refer to the Graduate School: Grade Point Average (GPA) Requirement policy: https://policy.wisc.edu/library/UW-1203 (https://policy.wisc.edu/library/UW-1203/).
Other Grade Requirements	n/a
Assessments and Examinations	Students are required to have a graduate program advisory committee (GPAC) meeting once each year to monitor progress toward their degree. The presentation for the FOOD SCI 900 Seminar Advanced must be given a semester before or in the semester of the defense. Master's students are required to defend their thesis after they have cleared their record of all Incomplete and Progress grades (other than research and thesis) and submit the final thesis online.
Language Requirements	Food science does not have a foreign language requirement.

REQUIRED COURSES

Code	Title	Credits
Graduate Seminar		
MS students must enroll in seminar for 1 credit each semester they are enrolled in the program.		4
FOOD SCI 900	Seminar Advanced	
Food Science Coursework		
Students must complete two of the following courses:		6
FOOD SCI 611	Chemistry and Technology of Dairy Products	
FOOD SCI/ AN SCI 711	Food Biochemistry	
FOOD SCI 725	Advanced Food Microbiology	
Research Ethics and Responsibility		
PATH-BIO/ COMP BIO 812	Research Ethics and Career Development	2
or PATH 755	Responsible Conduct in Research: Research Ethics, Rigor, Reproducibility and Transparency	

Statistics		
Students must complete one of the following options:		4
F&W ECOL/ STAT 571	Statistical Methods for Bioscience I	
STAT/ F&W ECOL 572	Statistical Methods for Bioscience II	
Or an alternative graduate-level course in statistics numbered 300 and above with the Grad 50% attribute may be completed to fulfill this requirement with approval of the student's advisory committee.		
Electives		
Students take additional credits to reach the 30-credit minimum in consultation with their graduate program committee. These credits may include Research.		14
Total Credits		**30**

POLICIES

GRADUATE SCHOOL POLICIES

The Graduate School's Academic Policies and Procedures (https://grad.wisc.edu/acadpolicy/) serve as the official document of record for Graduate School academic and administrative policies and procedures and are updated continuously. Note some policies redirect to entries in the official UW-Madison Policy Library (https://policy.wisc.edu/). Programs may set more stringent policies than the Graduate School. Policies set by the academic degree program can be found below.

MAJOR-SPECIFIC POLICIES

PRIOR COURSEWORK

Graduate Credits Earned at Other Institutions

Prior graduate-level coursework from other institutions may not transfer toward minimum credit requirements for the major, but may satisfy specific food science course requirements.

Undergraduate Credits Earned at Other Institutions or UW-Madison

Prior coursework as an undergraduate student may not transfer toward minimum credit requirements for the major, but may satisfy specific food science course requirements.

Credits Earned as a Professional Student at UW-Madison (Law, Medicine, Pharmacy, and Veterinary careers)

Refer to the Graduate School: Transfer Credits for Prior Coursework (https://policy.wisc.edu/library/UW-1216/) policy.

Credits Earned as a University Special Student at UW-Madison

Prior coursework taken as a University Special student may not transfer toward minimum credit requirements for the major, but may satisfy specific food science course requirements. In that case, students do not need to take the food science course requirement, but do need to choose, in consultation with their advisor, another course with at least the same number of credits.

PROBATION

Refer to the Graduate School: Probation (https://policy.wisc.edu/library/UW-1217/) policy.

ADVISOR / COMMITTEE

Refer to the Graduate School: Advisor (https://policy.wisc.edu/library/UW-1232/) and Graduate School: Committees (Doctoral/Master's/MFA) (https://policy.wisc.edu/library/UW-1201/) policies.

The student's graduate program advisory committee (GPAC) also is involved in advising of the student in various stages of their studies to monitor and ensure they are making satisfactory progress toward a degree. The GPAC for a MS student consists of a minimum of 3 members of which one member must have a tenure home in the Department of Food Science. Within six months of starting the program, the GPAC is expected to have approved the course-taking.

CREDITS PER TERM ALLOWED

15 credit maximum. Refer to the Graduate School: Maximum Credit Loads and Overload Requests (https://policy.wisc.edu/library/UW-1228/) policy.

TIME LIMITS

Refer to the Graduate School: Time Limits (https://policy.wisc.edu/library/UW-1221/) policy.

GRIEVANCES AND APPEALS

These resources may be helpful in addressing your concerns:

- Bias or Hate Reporting (https://doso.students.wisc.edu/bias-or-hate-reporting/)
- Graduate Assistantship Policies and Procedures (https://hr.wisc.edu/policies/gapp/#grievance-procedure)
- Hostile and Intimidating Behavior Policies and Procedures (https://hr.wisc.edu/hib/)
  - Office of the Provost for Faculty and Staff Affairs (https://facstaff.provost.wisc.edu/)
- Employee Assistance (http://www.eao.wisc.edu/) (for personal counseling and workplace consultation around communication and conflict involving graduate assistants and other employees, post-doctoral students, faculty and staff)
- Employee Disability Resource Office (https://employeedisabilities.wisc.edu/) (for qualified employees or applicants with disabilities to have equal employment opportunities)
- Graduate School (https://grad.wisc.edu/) (for informal advice at any level of review and for official appeals of program/departmental or school/college grievance decisions)
- Office of Compliance (https://compliance.wisc.edu/) (for class harassment and discrimination, including sexual harassment and sexual violence)
- Office Student Assistance and Support (OSAS) (https://osas.wisc.edu/) (for all students to seek grievance assistance and support)
- Office of Student Conduct and Community Standards (https://conduct.students.wisc.edu/) (for conflicts involving students)
- Ombuds Office for Faculty and Staff (http://www.ombuds.wisc.edu/) (for employed graduate students and post-docs, as well as faculty and staff)
- Title IX (https://compliance.wisc.edu/titleix/) (for concerns about discrimination)

College of Agricultural and Life Sciences: Grievance Policy

In the College of Agricultural and Life Sciences (CALS), any student who feels unfairly treated by a member of the CALS faculty or staff has the right to complain about the treatment and to receive a prompt hearing. Some complaints may arise from misunderstandings or communication breakdowns and be easily resolved; others may require formal action. Complaints may concern any matter of perceived unfairness.

To ensure a prompt and fair hearing of any complaint, and to protect the rights of both the person complaining and the person at whom the complaint is directed, the following procedures are used in the College of Agricultural and Life Sciences. Any student, undergraduate or graduate, may use these procedures, except employees whose complaints are covered under other campus policies.

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

Students are admitted by faculty in the department through direct admission.

PROFESSIONAL DEVELOPMENT

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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.

LEARNING OUTCOMES

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1. Understands, articulates, critiques and elaborates core paradigms in Food Science.
2. Recognizes that life-long learning is critical for continued personal and professional development.
3. Complies with principles of ethical and professional conduct.
4. Sources and assembles evidence to address questions or identify gaps in knowledge in the field of food science.
5. Evaluates and synthesizes information to address technical challenges.
6. Selects research methods and practices appropriate to discovery activities.
7. Creates knowledge that contributes to the field of food science.
8. Clearly and effectively communicates technical information in oral and written formats.
9. Works effectively within a team.