

MICROBIOLOGY, MS

This award is a non-admitting degree for PhD students in Microbiology (<https://guide.wisc.edu/graduate/bacteriology/microbiology-phd/#text>) who have completed appropriate coursework but leave the program prior to completion of the doctorate degree requirements.

ADMISSIONS

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This master's program is offered for work leading to the PhD. Students may not apply directly for the master's, and should instead see the admissions information for the PhD (<https://guide.wisc.edu/graduate/bacteriology/microbiology-phd/>).

FUNDING

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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.

REQUIREMENTS

MINIMUM GRADUATE SCHOOL REQUIREMENTS

Review the Graduate School minimum degree requirements (<https://guide.wisc.edu/graduate/#requirements-text>) and policies (<https://guide.wisc.edu/graduate/#policies-text>), 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	n/a
Language Requirements	n/a

REQUIRED COURSES

Students can only earn the MS in Microbiology on the path to the PhD.

Code	Title	Credits
Topics		
Students must complete the following courses.		
MICROBIO 810	Current Issues in Microbiology	1
MICROBIO 811	Advanced Problems in Microbiology	1
Electives		
Students must complete at least 9 credits or three courses from the following list.		9
GENETICS/ BIOCHEM/ MD GENET 620	Eukaryotic Molecular Biology	
GENETICS 885	Advanced Genomic and Proteomic Analysis	
MICROBIO 526	Physiology of Microorganisms	
GENETICS/ BIOCHEM/ MICROBIO 612	Prokaryotic Molecular Biology	
MICROBIO 626	Microbial and Cellular Metabolomics	
MICROBIO 657	Bioinformatics for Microbiologists	
MICROBIO/ BMOLCHEM 668	Microbiology at Atomic Resolution	
MICROBIO 710	Microbial Symbiosis	

M M & I/PATH- BIO 528	Immunology	
M M & I 740	Mechanisms of Microbial Pathogenesis	
M M & I/PATH- BIO 750	Host-Parasite Relationships in Vertebrate Viral Disease	
M M & I 760	Quantitative Systems Biology and Disease	
ONCOLOGY/ M M & I/ PL PATH 640	General Virology-Multiplication of Viruses	
PL PATH/ BOTANY/ GENETICS/ M M & I 655	Biology and Genetics of Fungi	
Seminar		
Students must enroll for the program's seminar during their first three years. Students are expected to present during their third year when enrolled in the seminar as well as in their fourth year of the program, although they may not be enrolled.		4
MICROBIO 731	Seminar	
or M M & I 901	Seminar	
Breadth		
Students take at least 10 credits in either an external or distributed doctoral minor or a graduate/professional certificate.		10
Research		
Students must complete enough credits of 990 to meet the total minimum credit requirement. Credits of 990 in subjects outside of MICROBIO and M M & I are acceptable with advisor approval.		5
M M & I 990	Research and Thesis	
or MICROBIO 990 Research		
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

For well-prepared advanced students, the program may accept prior graduate coursework from other institutions toward the minimum graduate degree credit and minimum graduate coursework (50%) requirement. The minimum graduate residence credit requirement can be satisfied only with courses taken as a graduate student at UW-Madison. Coursework earned

more than ten years prior to admission to the master's degree may not be used to satisfy requirements.

Undergraduate Credits Earned at Other Institutions or UW-Madison

For well-prepared advanced students, the program may decide to accept up to 6 credits numbered 300 or above completed at UW-Madison toward fulfillment of minimum degree and minor credit requirements. This work would not be allowed to count toward the 50% graduate coursework minimum unless taken in coursework numbered 700 or above. Coursework earned more than ten years prior to admission to the master's degree may not be used to satisfy requirements. Undergraduate credits earned at institutions other than UW-Madison may not count toward program degree 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

The program may decide to accept up to 15 University Special student credits as fulfillment graduate degree, or minor credit requirements on occasion as an exception (on a case-by-case basis). UW-Madison coursework taken as a University Special student would not be allowed to count toward the 50% graduate coursework minimum unless taken in coursework numbered 700 or above or are taken to meet the requirements of a capstone certificate and has the "Grad 50%" attribute. Coursework earned more than ten years prior to admission to the master's degree may not be used to satisfy requirements.

PROBATION

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

ADVISOR / COMMITTEE

Every graduate student is required to have an advisor. To ensure that students are making satisfactory progress toward a degree, the Graduate School expects them to meet with their advisor on a regular basis.

An advisor generally serves as the thesis advisor. In many cases, an advisor is assigned to incoming students. Students can be suspended from the Graduate School if they do not have an advisor. An advisor is a faculty member, or sometimes a committee, from the major department responsible for providing advice regarding graduate studies.

A committee often accomplishes advising for the students in the early stages of their studies. A student's committee is required to have five faculty members, two of which must hold appointments in either Bacteriology or Medical Microbiology and Immunology.

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://employeeabilities.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)

The MDTP will follow the College of Agricultural and Life Sciences Grievance Policy. For clarity, the MDTP program director, vice-director and/or the program coordinator shall serve as grievance advisors. The grievance advisor will refer complaints to the MDTP Steering Committee.

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

We offer funding to all students in the program through fellowships, trainees and research assistantships.

PROFESSIONAL DEVELOPMENT

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.

LEARNING OUTCOMES

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1. Demonstrate a scientific understanding of the field of microbiology and/or immunology.
2. Identify and utilize scientific methodologies and practices appropriate to the field of study.
3. Articulate scientific theories, methodologies and research approaches in microbiology and/or immunology.
4. Identify sources and assemble evidence pertaining to questions or challenges in the field of microbiology and/or immunology.
5. Evaluate and synthesize information pertaining to questions or challenges in the field of microbiology and/or immunology.
6. Communicate clearly in ways appropriate to the field of scientific study.
7. Recognize, understand and apply principles of ethical and professional conduct appropriate to the field of study.
8. Understand and apply principles of laboratory safety in the field of study.