

MICROBIOLOGY, PHD

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	December 1
Spring Deadline	The program does not admit in the spring.
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

PROGRAM APPLICATION MATERIALS

Note that all application materials are submitted through the UW Graduate School Admissions Office. (<https://grad.wisc.edu/apply/>) See the Microbiology program website (<https://microbiology.wisc.edu/how-to-apply/>) for more information and guidance for the application components.

- Personal statement, also known as "Statement of Purpose".
- An applicant background statement describing how the applicant's background and life experiences have motivated their decision to pursue a graduate degree at the University of Wisconsin.
- An unofficial copy of transcripts from each college or university attended.
- Three or more letters of reference from individuals (faculty, staff, supervisor, mentor) who can comment on the applicant's qualifications. This should include scholarly and academic qualifications, and can also include experiences in teaching, outreach, and community service. Directions for submission will be provided once you have initiated your application.
- A brief resume/CV listing academic awards, scholarships, location and length of research experiences, co-authorship on any publications or presentations at scientific conferences.

This program is a research-intensive program. Therefore, strong letters of recommendation, a well-crafted personal statement, and extensive research experience often aid applicants with below-average grades.

COURSE PREREQUISITES

We have recommended courses based on material that previous students have found valuable for success in the program, both in the lab and in required graduate level coursework. However, we recognize that the backgrounds of many students – and future student career goals – are varied and diverse, and that this diversity is a strength of our program. In the online application process, you will be asked if you have completed the following prerequisites:

Code	Title	Credits
Biology		
Students are recommended to have two semesters of biology, such as the following UW-Madison course equivalents.		
BIOLOGY/BOTANY/ZOOLOGY 151 & BIOLOGY/BOTANY/ZOOLOGY 152	Introductory Biology and Introductory Biology	10
BIOLOGY/ZOOLOGY 101 & BIOLOGY/ZOOLOGY 102 & BIOLOGY/BOTANY 130	Animal Biology and Animal Biology Laboratory and General Botany	10
Genetics		
Students are recommended to have one semester of genetics, such as the following UW-Madison course equivalents.		
MICROBIO 470	Microbial Genetics & Molecular Machines	3
GENETICS 466	Principles of Genetics	3
GENETICS 467 & GENETICS 468	General Genetics 1 and General Genetics 2	6
Chemistry		
Students are recommended to have four semesters of chemistry, including two semesters of organic chemistry with one semester organic chemistry lab component, such as the following UW-Madison course equivalents.		
CHEM 103 & CHEM 104	General Chemistry I and General Chemistry II	9
CHEM 109	Advanced General Chemistry	5
CHEM 115 & CHEM 116	Chemical Principles I and Chemical Principles II	10
CHEM 343 & CHEM 344 & CHEM 345	Organic Chemistry I and Introductory Organic Chemistry Laboratory and Organic Chemistry II	8
Biochemistry		
Students are recommended to have one semester of biochemistry, such as the following UW-Madison course equivalents.		
BIOCHEM 501	Introduction to Biochemistry	3

BIOCHEM 507 & BIOCHEM 508	General Biochemistry I and General Biochemistry II	6-7
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Physics

Students are recommended to have one semester of physics, such as the following UW-Madison course equivalents.

PHYSICS 104	General Physics	4
PHYSICS 202	General Physics	5
PHYSICS 208	General Physics	5

Mathematics

Students are recommended to have two semesters of calculus or one semester each of calculus and statistics, such as the following UW-Madison course equivalents.

MATH 171	Calculus with Algebra and Trigonometry I	5
MATH 217	Calculus with Algebra and Trigonometry II	5
MATH 221	Calculus and Analytic Geometry I	5
STAT 301	Introduction to Statistical Methods	3
STAT 371	Introductory Applied Statistics for the Life Sciences	3

Physics (second semester) or Other Quantitative Reasoning

Students are recommended to have a second semester of physics or other quantitative reasoning course such as physical chemistry, differential equations, or upper-level course in computer programming, bioinformatics or statistics, such as the following UW-Madison course equivalents.

PHYSICS 104	General Physics	4
PHYSICS 202	General Physics	5
PHYSICS 208	General Physics	5
CHEM 561	Physical Chemistry I	3
CHEM 563 & CHEM 665	Physical Chemistry Laboratory I and Biophysical Chemistry	4
MICROBIO 657	Bioinformatics for Microbiologists	3
COMP SCI 319	Data Science Programming I for Research	3
COMP SCI/ B M I 576	Introduction to Bioinformatics	3
STAT 303	R for Statistics I	1
MATH 319	Techniques in Ordinary Differential Equations	3
MATH 320	Linear Algebra and Differential Equations	3

For each prerequisite, please be prepared to enter the course name and number. If you do not have all the recommended coursework, please use the text box in the application system to explain any deficiencies.

We ask that you fill in the course list as appropriate, but more broadly that you include a dedicated section within your personal statement to note how your academic preparation has prepared you for PhD training in microbiology.