

Microbiology

Department Information

- **Department Head:**
John McEvoy, Ph.D.
- **Graduate Coordinator:**
Danielle Condry, Ph.D.
- **Department Location:**
Van Es Hall
- **Department Phone:**
(701) 231-7512
- **Department Web Site:**
www.ndsu.edu/microbiology/ (<http://www.ndsu.edu/microbiology/>)
- **Application Deadline:**
January 15 for fall
- **Credential Offered:**
Ph.D., M.S.
- **English Proficiency Requirements:**
TOEFL iBT 71, IELTS 6; Duolingo 105

Please refer to the department website for more information on the requirements for this program.

M.S. in Microbiology

The master's program requires completing a minimum of 30 semester credits with an overall GPA of 3.0 or better. Students are required to select from a list of core courses for eight to nine didactic credits toward their degree, as well as enroll in 1 credit of the following: Intro to Graduate Research, Scientific Integrity, and Journal Club (first year) and Seminar and Annual Review (second year).

Plan A Thesis-based M.S.: Of the 30 credits, 16 credits must be in didactic graduate courses. Thesis-based master's students can apply 6 to 10 credits MICR 798 Master's Thesis research towards the degree. This degree in microbiology requires a research-based thesis, a public seminar of the thesis research, and a final oral defense of the thesis.

Plan B Comprehensive Paper-based M.S.: Of the 30 credits, 21 credits must be in didactic graduate courses. Plan B (Paper-based) M.S. students can apply 2 to 4 MICR 797 Master's Paper based research credits towards the degree. This degree in microbiology requires the writing and presentation of a thoroughly researched paper to the student's committee.

Students with inadequate undergraduate training in microbiology will be required to complete undergraduate courses in microbiology in addition to the required minimum 30 semester credits.

Examinations

Thesis-based Examination: The final examination will be an oral defense of the student's research results. The student's research supervisory (thesis) committee will administer the exam after a public presentation of the work.

Comprehensive Paper-based Examination: M.S. students in this option will produce an in-depth research paper on a specific topic in Microbiology and present a summary of their paper. The paper will be reviewed by the student's supervisory committee and approved when completed.

Ph.D. in Microbiology

The Ph.D. program is based on defined training outcomes. Degree requirements are in agreement with NDSU Graduate School requirements. The student and major adviser will prepare a plan of study by the end of the first year in residence. The Graduate School requires the plan of study for the Ph.D. degree to include no less than 90 semester graduate credits (60 credits for students matriculating with a master's degree). An overall GPA of 3.0 or higher must be maintained. An annual review of the student's progress is required. Students must complete the following: Intro to Graduate Research, Scientific Integrity, and Journal Club in the first year and Journal Club, Seminar, and Annual Review in all subsequent years of the program.

Examinations

Qualifying Exam: The first exam in the PhD Program examines fundamental areas of knowledge in microbiology that will be essential for success as a doctoral candidate. Successful completion of the qualifying exam allows the student to move on to the preliminary exam. This exam can be completed in years 1 or 2 of the program.

Preliminary Exam: The second exam requires the student to write a research proposal in alignment with a program administered by NIH, NSF, or NIFA and defend the proposal in an oral examination. After successfully completing the written and oral preliminary examination, the student will be formally admitted to candidacy for the Doctor of Philosophy Degree. This exam is typically completed in years 2-3 of the program.

Final Exam: The final examination will be an oral defense of the student's research results. The student's research supervisory committee will administer the exam after a public presentation of the work.