

# Microbiology

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## 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/) (<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 100

Please refer to the department website for more information on 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.

**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.

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. Annual review of the student's progress is required.

## Examinations

**Qualifying Exam:** Two preliminary examinations must be completed successfully before advancement to candidacy for the doctoral degree. The first examines fundamental areas of knowledge that will be essential for success as a doctoral candidate. The second requires the student to write a research proposal targeted at a program administered by NIH, NSF, or NIFA and defend the proposal in an oral examination. After successful completion of the comprehensive written and oral preliminary examinations, the student will be formally admitted to candidacy for the Doctor of Philosophy degree.

**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.