

Microbiology 4998(H)/4999(H): Undergraduate Microbiology Research

Microbiology is an experimental science, and a great way to understand microbiological principles and concepts is to become actively involved in research. The Microbiology Department encourages students to engage in an undergraduate research project in the laboratory of a [Microbiology Department Faculty member](#). Microbiology-related research in the laboratory of an OSU faculty member not in the Department will be considered for 4998 credit on a case-by-case basis following a discussion with the Vice Chair for Undergraduate Studies or the Microbiology Honors Advisor. Undergraduate research experience will benefit you whether you are interested in graduate school, professional school, or getting a microbiology-related job directly after graduation.

Below, we have provided information about academic-credit based research opportunities (e.g. 4998); students can also do research independent of academic credit (e.g. as a volunteer or a work-study student). Please contact the [Microbiology Undergraduate Advisor](#) or the [Undergraduate Honors Advisor](#) if you have questions about these or other programs. Students have the option to enroll in [Microbiology 4999](#) and [Microbiology 4999H](#), which involve a written thesis and an oral defense. We encourage you to explore these opportunities.

A student who is interested in research opportunities should follow these steps:

- Many labs in our Department accept undergraduate students but availability of space and projects for undergraduate research are constantly changing. Students are encouraged to identify ongoing research in the Department that interests them and then email faculty members directly to inquire about available research opportunities.
- It is your best interest to set up your research project a semester ahead of time.
- Undergraduate research is a serious commitment. Faculty members are often most interested in undergraduate researchers who can commit to at least 10h/week for at least one year.
- If the Faculty member agrees to host you in their lab, you should discuss scheduling your research hours, a start date, and the number of credit hours.
- Enroll in 1-3 credit hours of Microbiology 4998(H) or 4999(H). One credit hour is earned per 4 hours per week in a lab. This course is graded S/U by your research advisor. A maximum of 3 h of S/U credit can be applied towards the 9 h of electives required for the Microbiology major. Students pursuing a thesis must have a total of 4 h of credit in Microbiology 4999(H) to graduate with (Honors) Research Distinction.
- If you are currently working in a lab and wish to enroll in M4998/M4999, past research accomplishments/hours cannot retroactively be counted as M4998/M4999 credit.
- Student projects must be research-based; for example, just washing dishes, pouring plates, or entering data into a database does not count as a research project. **If you receive research credit, you cannot be simultaneously paid as a student research assistant.**
- At the end of each credited semester, the student should submit some basic information about their research experience to the Department (submitted here: [micro4998summary](#)). Requested information includes PI name, project title, and a bibliography listing any abstracts, presentations (poster or oral), or publications created as an undergraduate researcher
- After consultation with their Principal Investigator (PI), students will have the option to write about their research project (submitted here: [micro4998summary](#)). Student writing may include the following:
 - **Project summary:** A statement of your topic and central question, a description of any key findings, and the potential impact of your project.
 - **Process and self-evaluation:** Analysis of and reflection about your experience carrying out research; this section could include comments on personal growth, and skills/lessons learned while conducting research.