

BIOLOGY

Dual-Titles

DUAL-TITLE PH.D. IN Biology AND Microbiome Sciences

Requirements listed here are in addition to requirements listed in GCAC-208 Dual-Title Graduate Degree Programs (<http://gradschool.psu.edu/graduate-education-policies/gcac/gcac-200/gcac-208-dual-title-graduate-degree-programs/>).

Biology Ph.D. students with research and educational interests in Microbiome Sciences may apply for admission to the Microbiome Sciences Dual-Title Degree Program ([https://plantpath.psu.edu/graduate/dual-title/microbiome/#:~:text=Microbiome%20sciences%20refers%20to%20a,and%20its%20environment%20\(microbiome\)](https://plantpath.psu.edu/graduate/dual-title/microbiome/#:~:text=Microbiome%20sciences%20refers%20to%20a,and%20its%20environment%20(microbiome))). Students must first apply and be admitted to the Biology graduate program and The Graduate School before applying for admission to the dual-title program. To apply, a student should send to the MBIOM Graduate Program Advisor (microbiomesciDT@psu.edu) a written personal statement that explains their interest in Microbiome Sciences; the career goals they hope to work toward by attaining the dual-title degree; and describe actual or potential research objectives that integrate microbiome sciences. This statement should be signed by their major adviser or dissertation adviser, if assigned. Students should also send the MBIOM Graduate Program Advisor their undergraduate and graduate transcripts for review by the MBIOM Faculty-in-Charge, who will notify the Graduate School and student about the enrollment decision.

The result of the BIOL qualifying examination serves to qualify the student's entrance to the MBIOM dual-title program. The application for the dual-title degree program may be completed after the qualifying examination in the major program, as long as the application takes place before the end of the fourth semester.

To obtain this dual-title, students must satisfy the degree requirements for the Ph.D. in Biology, listed in the BIOL Degree Requirements section. In addition, students must complete the degree requirements for the MBIOM dual-title, listed on the Microbiome Sciences Bulletin page ([https://plantpath.psu.edu/graduate/dual-title/microbiome/#:~:text=Microbiome%20sciences%20refers%20to%20a,and%20its%20environment%20\(microbiome\)](https://plantpath.psu.edu/graduate/dual-title/microbiome/#:~:text=Microbiome%20sciences%20refers%20to%20a,and%20its%20environment%20(microbiome))). Students must complete a total of 15 credits including 2 credits of MBIOM 550 (<https://bulletins.psu.edu/university-course-descriptions/graduate/mbiom/>) and at least 13 credits chosen in consultation with the adviser from an approved list of courses, with at least 3 credits in each of the following areas: Microbial Sciences, Ecology and Evolution, and Bioinformatics and Research Tools. Eight of the 15 total credits must be taken at the 500-level. No more than six of the 15 total credits can be offered by the BIOL program.

In addition to the general Graduate Council requirements for Ph.D. committees (<https://gradschool.psu.edu/graduate-education-policies/gcac/gcac-600/gcac-602-phd-committee-formation/>), the Ph.D. committee of a Biology and Microbiome Sciences dual-title Ph.D. student must include at least one member of the Microbiome Sciences Graduate Faculty. Faculty members who hold appointments in both programs' Graduate Faculty may serve in a combined role. If the chair of the Ph.D. committee is not also a member of the Graduate Faculty in Microbiome Sciences, the member of the committee representing Microbiome Sciences must be appointed as co-chair. The Microbiome Sciences representative on the student's Ph.D. committee will develop questions for and participate in the evaluation of the comprehensive examination.

Students in the dual-title program are required to write and orally defend a dissertation on a topic that is approved in advance by their Ph.D. committee and reflects their original research and education in Biology and Microbiome Sciences. Upon completion of the doctoral dissertation, the candidate must pass a final oral examination (the dissertation defense) to earn the Ph.D. degree. The dissertation must be accepted by the Ph.D. committee, the head of the graduate program, and the Graduate School