

The Master's of Science in Biology

The Master's of Science in Biology at Portland State University provides training for students who wish to obtain skills for the design, implementation, analysis, and interpretation of experiments. Students are expected to become familiar with the primary literature, concepts, and major research questions within their area of research in biology. The Biology Masters at PSU is appropriate for students wishing to pursue teaching opportunities at community colleges, opportunities as skilled participants in research and related fields at colleges and universities, industry, with state and federal agencies, and private organizations.

All tenured and tenure-track faculty members participate in this program and prospective students are required to make a specific association with a faculty member to be admitted to the program. Research opportunities for graduate students are extensive, and include the breadth of research interests covered by the PSU biology faculty. Students may also choose to have qualifying individuals from local organizations, regional colleges and universities, and federal agencies as external committee members. All students are required to take a minimum of 45 credits of graduate-level courses, this includes three specific courses, Graduate Research Prospectus, Graduate Grant Writing, and Scientific Ethics, which are designed to help the student prepare a proposal for their Master's research and learn how to seek funding. Additional courses may be required by the student's committee or by the Graduate Affairs Committee. Successful completion of a thesis based on original research conducted by the student, an oral presentation of results, and a final oral examination are required for the Master's of Science in Biology.

The Masters of Science in Teaching

The Master's of Science in Biology at Portland State University provides training for students who wish to improve their teaching skills in biology, and to become more familiar with the process of knowledge acquisition and learning through science. Students are expected to become familiar with the literature, concepts, and pedagogical methods within their area of teaching and learning in biology. The Biology Masters of Science in Teaching at PSU is appropriate for students wishing to pursue teaching opportunities at secondary and post-secondary institutions, and education programs in biology-related fields with industry, or with public and private state and federal agencies and organizations.

This program is offered in conjunction with the School of Education and emphasizes further strengthening of a biology background combined with education classes. Students are offered the opportunity to participate in outreach programs working with local, regional, and state K-12 teachers and classroom situations. All students are required to take a minimum of 45 credits of graduate-level courses,

with a minimum of 24 credits in Biology, and a minimum of nine credits in Education. Successful completion of a Curriculum Development project, a final written exam, and a final oral examination are required for the Masters of Science in Teaching.

The Ph.D. in Biology

The Biology Ph.D. program at Portland State University provides training for students who wish to obtain skills for the development of research programs that include the design, implementation, analysis, and interpretation of experiments that are relevant to a specific research goal. Students are expected to become fluent with the primary literature, concepts, and major research questions within their area of expertise in biology. The Biology Ph.D. at PSU is appropriate for students wishing to pursue academic research and teaching opportunities at colleges and universities, or research and policy implementation opportunities in industry, private organizations, or with state and federal agencies.

All tenured and tenure-track faculty members participate in this program and prospective students are required to make a specific association with a faculty member to be admitted to the program. Research opportunities for graduate students are extensive, and include the breadth of research interests covered by the PSU biology faculty. Students may also choose to have qualifying individuals from local organizations, regional colleges and universities, and federal agencies as external committee members. All students are required to take a minimum of 42 credits of graduate-level courses, this includes three specific courses, Graduate Research Prospectus, Graduate Grant Writing, and Scientific Ethics, which are designed to help the student prepare a proposal for their research and learn how to seek funding. Additional courses may be required by the student's committee or by the Graduate Affairs Committee. Students are expected pass a preliminary qualifying exam at the beginning of their second year, pass a proposal defense by the end of their second year, to successfully complete the research and writing required for completion of a dissertation, to make oral presentations of their results, and to pass a final oral examination administered by their committee.