

## Master's Programs in the Biology Department at Winthrop University

The M.S. in biology program at Winthrop University offers students broad training in biology. Students may concentrate in areas ranging from conservation biology and ecology to molecular biology, bioinformatics, and biomedical research in cancer. Students work closely with graduate faculty advisors who hold PhDs in their areas of specialization and are active researchers. Graduate courses are small (12 students or fewer) allowing for maximum interactions between students and their professors.

Students have a choice of paths including a 2-year traditional thesis-based option and a 2-year non-thesis option. Students interested in continuing on to a Ph.D. or a professional program typically pursue the thesis option, while the non-thesis option works well for full-time, working professionals who seek advancement in their field. An additional 1-year accelerated path to a MS in Biology allows current Winthrop undergraduate students complete both the undergraduate degree in biology and the master's the degree in five years.

### 2-YEAR THESIS OPTION

Thesis students are paired with a faculty advisor at the time of admission with whom they work on a research project. A foundational course, Theory and Method in Biology (BIOL 601), taken in the first semester, prepares students to develop and carry out research. The size of our program allows faculty to work closely with students to help them select courses and develop projects that best fit their interests and career goals. The thesis option provides students with excellent preparation to continue their training in doctoral or professional programs that emphasize a research component.

### 2-YEAR NON-THESIS OPTION

The non-thesis option emphasizes breadth of training, with students taking advanced coursework across the full range of biology subfields. Non-thesis students may opt to carry out a one-semester project with a faculty member to gain research experience. Non-thesis students leave the program well-prepared to continue on to professional schools, to enter biologically-oriented professions in research or government, or to teach at the community college level.

### 1-YEAR ACCELERATED BS – MS OPTION

The above described non-thesis option may be completed in one year by Winthrop biology students. Students who choose the Accelerated BS – MS (4+1) Program complete 9 hours of work for the MS in Biology degree while enrolled in Winthrop's undergraduate Biology program. Students must have a GPA of at least 3.0 prior to enrolling in the 9 hours of graduate level coursework. These courses must be 500-level, taken for graduate credit, and recorded as earning a B or better. **Students interested are encouraged to contact the Biology Graduate Director early in their junior year.**

**Potential 500-level graduate course options for students interested in ecology and conservation biology include:** BIOL 505 (Primate Biology), 507 (Advanced Environmental Biology), 508 (Invertebrate Biology), 510 (Vertebrate Natural History), 511 (Ornithology), 513 (Organic Evolution), 518 (Animal Behavior), 524 (Advanced Botany), 530 (Current Methods in Microscopy), 551 (Conservation Biology), and 552 A/B (Conservation Biology Practicum).

**Potential 500-level graduate course options for students interested in biomedical sciences include:** BIOL 517 (Human Genetics), 519 (Mechanisms of Disease), 522 (Immunology), 526 (Applied Microbiology), 529 (Stem Cell Biology), 530 (Current Methods in Microscopy), 539 (Neuroscience and Disease), 555 (Molecular Biology), and 560 (Bioinformatics).

### ADMISSION REQUIREMENTS

Admission to the Master of Science degree in biology requires the applicant to successfully complete an undergraduate major in biology, or related field, and one year of general chemistry. The candidate must also provide two letters of recommendation, a personal statement, and official GRE scores to determine eligibility for an interview.

Additional requirements for the Accelerated BS – MS in Biology program require that the student submit an intent to pursue form no later than fall of senior year, complete the undergraduate degree in Biology (or related field) within one year of beginning the program, have a 3.0 overall GPA, and official GRE scores above the 50<sup>th</sup> percentile (verbal, quantitative, and writing).

### CONTACT INFORMATION

Graduate Director  
Dr. Kristi M. Westover  
110 Dalton Hall  
[westoverk@winthrop.edu](mailto:westoverk@winthrop.edu)