

Executive Summary
WSU Five-Year Program Review Self-Study Fall 2022

Department of Zoology
Dr. Ron Meyers, chair

The zoology department offers a BS degree, a minor, and participates in an interdisciplinary AS in Biology (along with the Departments of Botany and Microbiology).

The BS in Zoology is designed around courses rather than credits, and consists of eight required zoology classes (28 credits), four required upper-level elective classes (12-16 credits), Experience in Zoology (2 credits taken from 10 options), and additional classes outside of the department. These include one year of General Chemistry (10 credits), one Physics class (3 or 5 credits), one Math class (3/4/5 credits), one Statistics class (3 credits), and four classes (“Elective Support Classes”) taken from a list of 30 classes across eight departments (see major advising sheet in the Self Study appendix). In 2020, the Department removed a required minor; students can select their additional classes among the 30 support classes to help focus specific classes that apply to career plans. Students may, and do continue to select a minor program but one is no longer required.

The Zoology Department has a one-year sequence of introductory classes (Zool 1110: Principles of Zoology, and Zool 2220: Diversity of Animals). The former is a prerequisite for the latter. Once these are completed, students can take most of the upper-level classes. These include required classes in Evolution, Genetics, Ecology, Cell Biology, Comparative Physiology, and a (variable-topic) Seminar, which are offered every Fall and Spring semesters. Students are also required to take four elective classes, which are mostly offered in an alternate Spring/Fall rotation. These courses include regular offerings of our “ology” series of classes, including Mammalogy, Ornithology, Herpetology, Ichthyology, Entomology, and Parasitology. Other specialty classes include Animal Behavior, Marine Ecology, Aquatic Ecology, Wildlife Ecology and Management, Zoogeography and Conservation Biology. Our classes that may be of interest for more pre-professionally-oriented students include: Histology, Embryology, Biology of Cancer, Endocrinology, Comparative Anatomy, Advanced Human Physiology, and Research Applications in Genetics. A variable-title “Topics in Zoology” is also offered regularly and makes it possible for faculty to design new specialty courses that can eventually be converted into new classes.

The Department offers a minor in Zoology, that has three required classes (Zool 1110, 2220 & 3720) and eight additional credits above the 2000-level (see minor advising sheet in the Self Study appendix).

The Department of Zoology includes 13 full-time faculty, a professional staff person (Laboratory Manager) a full-time classified staff member (Administrative Assistant), and a variety of student workers who help out with lab preparation, education outreach, and Teaching assistants. Each has excellent credentials and is responsible for diverse, critical activities.

The department faculty work closely with students, especially in the laboratories, as well as in independent research. The department has a long history of successful mentoring of undergraduates in research, grant-writing, presenting at conferences, and writing manuscripts (see lists in Program Review). This can take the form of students enrolling in Readings in Zoology (Zool 4830) and Problems in Zoology (Zool 4800), in which students are guided in the formal reading of scientific literature and research. Often, faculty will begin students in Readings to establish a base knowledge of relevant literature, and then subsequently move the students into Problems where they begin to conduct original research. Dedicated students often move on to a capstone Thesis (Zool 4970), which requires a proposal, a thesis committee, document, (the Thesis) and oral presentation.

Scholarship is strong in the Department of Zoology. All faculty are actively engaged in research activities, especially research with undergraduate students. During the review period, Zoology faculty published 50 papers. Seven of these papers had undergraduate students as co-authors.

The Zoology Department has long utilized high-impact educational practices, including, but not limited to undergraduate research. The table on pages 26 & 27 of the Self Study report shows the breadth of the HIEEs within the department's curriculum.

The variety of classes in the Zoology department provides the opportunity for students to learn and master a number of classic and modern laboratory skills. These are quite diverse and are elaborated in the table below. Hands-on techniques require repeated exposure and training to facilitate both muscle memory and time-sensitive practices. Techniques are all introduced in the introductory sequence of Zool 1110 and 2220 and are then repeated and expanded upon in the upper-level required and elective classes. A table of current lab skills can be found on page 28 of the Self Study report.

Advising: The Department of Zoology takes advising of students very seriously, and requires mandatory advising prior to students declaring the major. In addition, the chair solicits meeting with students each semester prior to registration to maximize efficiency of semester planning. Further, we utilize topic-specific advising (e.g., pre-professional, re-graduate school, pre-wildlife, etc) to give students the best possible advice as they prepare their schedules and plan for their next step in their careers.

Department faculty and staff members support regional primary and secondary schools, as well as engage in many professional organizations with links to biology and education. The list on pages 35-37 summarizes many interactions with schools.

The Zoology Department assesses all of our General education and major's classes each semester. Our threshold is at 72% and all of our classes exceed this threshold for most of the learning outcomes.