

# BIOLOGICAL SCIENCES

College of Natural Science and Mathematics  
Department of Biology and Wildlife  
907-474-7671  
[www.bw.uaf.edu](http://www.bw.uaf.edu)

## MS, PhD Degrees

Minimum Requirements for Degrees: MS: 30 credits;  
PhD: 18 thesis credits

UAF biological sciences graduate students have extraordinary opportunities to conduct independent biological research in controlled-experiment or field settings, taking advantage of arctic, alpine and boreal environments near campus or at remote locations.

The department has close connections with the National Science Foundation taiga Long Term Ecological Research site, located about 20 miles from campus. Our students also have access to the tundra LTER site at Toolik Lake, where the UAF Institute of Arctic Biology runs a field station.

Facilities available to graduate students on the Fairbanks campus include small mammal colonies, the Large Animal Research Station, both electron and light microscope laboratories, an imaging laboratory and a greenhouse facility. Students and faculty work on systematic collections in the UA Museum of the North using a variety of approaches from traditional morphology to molecular biology.

The program has strong research emphases in arctic plant ecophysiology, plant-animal coevolution, insect ecology (terrestrial and aquatic), bird and mammal physiological ecology, vertebrate population dynamics, biology of seabirds, molecular evolution and systematics, pollution ecology, wetland ecology, population genetics, ungulate biology and wildlife management.

Advanced degree recipients gain significant teaching experience conducting labs, and a few take primary responsibility for instruction in a course at the undergraduate level. Our graduates have pursued careers in education at the university, community college and secondary levels. Many find professional positions with state and federal resource agencies, with whom the department faculty maintain close contact.

The Department of Biology and Wildlife has approximately 100 graduate students. The atmosphere is informal and students and faculty interact frequently, not only in small-enrollment classes, but also on field trips and in community and social settings.

Research assistantships are available on a competitive basis. Teaching assistantships in department courses provide excellent experience. Competitive fellowships are available through the UAF Graduate School. Applicants interested in graduate assistantships should contact the department for assistantship application forms.

## MS Degree

1. Complete the admission process including the following:
  - a. Submit scores from both the GRE General Test (required) and the GRE Subject Test in Biology (highly recommended).
  - b. If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.
2. Complete the general university requirements (page 202).
3. Complete the MS — with Thesis degree requirements (page 208).
4. As part of the MS degree requirements, complete and pass the departmental written and oral master's comprehensive examination.
5. Minimum credits required .....30

## PhD Degree

### Concentration: Wildlife Biology and Conservation

1. Complete the admission process including the following:
  - a. Submit scores from both the GRE General Test (required) and the GRE Subject Test in Biology (required for applicants holding only a bachelor's degree; highly recommended for applicants who have already earned a master's degree).
  - b. If English is not your native language, submit scores from both the Test of Spoken English and the Test of Written English, as well as TOEFL scores. Requests, including justification, for exceptions to this requirement should be made to the chair of the department.
2. Complete the general university requirements (page 202).
3. Complete the PhD degree requirements (page 207).
4. As part of the PhD degree requirement, complete the following:
  - a. If entering with only a bachelor's degree, complete and pass the departmental written and oral PhD qualifying examination.
  - b. Complete and pass a written and oral comprehensive examination by the graduate advisory committee.
  - c. In this program or in previous post-baccalaureate programs, complete course work at least equivalent to that required for the MS degree.
5. Minimum credits required .....18  
See Wildlife Biology and Conservation.