Biological Sciences

Department Information

- **Department Chair:**
  Julia H. Bowsher, Ph.D.
- **Graduate Coordinator:**
  Jiha Kim, Ph.D.
- **Department Location:**
  201 Stevens Hall
- **Department Phone:**
  (701) 231-7087
- **Department Email:**
  ndsu.biological.sciences@ndsu.edu
- **Department Web Site:**
  www.ndsu.edu/biology/ (http://www.ndsu.edu/biology/)
- **Application Deadline:**
  Applications must be submitted by January 15 for full consideration for GTA or GRA positions.*
- **Credential Offered:**
  Ph.D., M.S.
- **English Proficiency Requirements:**
  TOEFL ibt 79; IELTS 6.5; Duolingo 105

*Applicants will not be considered without a department faculty member who has agreed to serve as the major adviser. For e-mail addresses of faculty members and additional information about our programs, please visit our web site at http://www.ndsu.edu/biology/.

Program Description

The Department of Biological Sciences offers graduate study leading to Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) degrees. Master of Science degrees are available in Biology and Environmental and Conservation Sciences.

Doctor of Philosophy degrees are available in Biological Sciences, Genomics, Cellular and Molecular Biology, Environmental and Conservation Sciences, and STEM Education. Advanced work may involve specialized training in the following areas: aquatic biology, behavior, biology education research, cell biology, comparative biochemistry and physiology, cancer biology, conservation biology, ecology, endocrinology, developmental biology, evolution, fisheries biology, molecular biology, plant biology, population biology, prairie pothole ecology, evolutionary ecology and wildlife biology.

Student research and academic programs are tailored to individual needs and interests. Interdisciplinary approaches to biological problems are encouraged.

Research Facilities and Equipment

The Department of Biological Sciences occupies approximately 20,000 square feet of floor space in Stevens Hall for research. The NDSU Library has extensive holdings of journals, monographs, books, and other reference materials covering various fields in biology. The library offers full access to online catalogs and databases.

Faculty in the department have research programs ranging from molecular biology to ecosystem ecology and work with a wide variety of organisms across multiple levels of organization, from cellular mechanisms to ecosystem function. Modern equipment is available for conducting research in cell and molecular biology and field ecology and behavior. The department has access to a vascular plant herbarium with 240,000 specimens emphasizing Northern Great Plains flora, a lichen herbarium consisting of about 15,000 specimens with a worldwide representation of taxa, and a vertebrate collection with approximately 10,000 specimens.

The department offers access to a range of equipment and facilities necessary for laboratory research, including greenhouses, animal rooms, growth chambers, tissue culture facilities, ultracentrifuges, spectrophotometers, electrophoresis, light microscopes, gas chromatography, GC-mass spectrometry, and high performance liquid chromatography. Facilities are available for protein and DNA sequencing, oligonucleotide synthesis, interactive laser cytometry, scanning transmission and electron microscopy, and confocal microscopy.