

# Fisheries Biology, MS, PhD

**Specialization(s):** Conservation Biology; Fisheries Management

**Department:** Watershed Sciences Department

**College:** S.J. & Jessie E. Quinney College of Natural Resources

## Overview

### About This Degree

Utah State University is the only university in the state with a college devoted to the study of natural resources, and the fisheries biology program is one of the few programs in the nation where students have the opportunity to focus on freshwater fish populations. Students in the fisheries biology program study river, lake, and wetland ecosystems. The program highlights the ecology of freshwater systems, management of important fisheries, restoration of stream, riparian, and wetland areas, and the monitoring and protection of plant and animal populations in lakes and rivers. Each student has an individualized plan of study created for them by their graduate committee, and students are able to take courses in other departments on campus, such as biology and civil and environmental engineering. This allows students to gain a broad education in areas related to fish populations and aquatic ecosystems.

## Career Options

Graduates in fisheries biology can pursue the following careers:

- Fish hatchery biologist
- Fisheries biologist
- Endangered species coordinator
- Marine biologist
- Restoration ecologist
- Research scientist
- Fisheries manager

## What it takes

### Admissions Requirements

Students must have a science-based undergraduate degree to be considered.

To be accepted to the program, it is recommended that applicants first contact a specific

faculty member with whom they are interested in working. If the faculty member is accepting graduate students and agrees to work with the student, the student can then apply by completing the following application requirements:

### **Application Requirements:**

- Complete the [online application](#)
- Pay the \$55 application fee
- Score at or above the 40<sup>th</sup> percentile on the GRE
- Have a 3.0 or higher GPA on your last 60 semester or 90 quarter credits
- Provide transcripts of all college/university credits
- Provide three contacts for letters of recommendation

International students have [additional admissions requirements](#).

## **Admissions Deadlines**

The department has the following deadlines:

- Fall semester - June 15
- Spring semester - October 15
- Summer semester - March 15
- Preference for financial assistance will be given to applicants who apply before January 10.

## **Master's Degree Plan Options**

Students can receive the MS by pursuing one of two options:

- In the **Plan A** option, students complete graduate-level coursework and must write a thesis.
- The **Plan B** option requires the production of a paper or creative work of art and is expected to reflect equivalent scholarship standards as a thesis.

## **Financial Assistance**

Most students are supported by research [assistantships](#) provided by faculty having grants or contracts. There are no separate applications for financial assistance. All applicants accepted into the graduate program before January 10 will be considered for college and university fellowships and other financial assistance for the following year. Only a few fellowships are awarded each year, usually to PhD candidates.

A variety of additional funding opportunities are available, including [scholarships](#), [fellowships](#), [tuition awards](#), and [travel support](#). Additionally, students may be eligible for subsidized [health insurance](#) through qualifying assistantships.

## **Program Requirements**

[Click here](#) to see course requirements for the **Master of Science**.

[Click here](#) to see course requirements for the **Doctor of Philosophy**.

### **PhD Qualifying Exams:**

All PhD students must pass a comprehensive exam. Students take these exams typically the second or third year after most of their coursework is completed. They take a written exam set by their graduate committee, which is usually followed by an oral component where the committee can pose questions to the student regarding the written exam.

## **Contact**

### **Advisor(s)**

**Chris Luecke**

Professor, WATS Department Head

**Office:** NR 210 C

**Phone:** (435) 797-2463

**Email:** [chris.luecke@gmail.com](mailto:chris.luecke@gmail.com)

### **Faculty**

**Patrick Belmont**, PhD, Lehigh University

Assistant Professor

**Area:** Watershed hydrology, sediment dynamics, geomorphology

**Office:** NR 350

**Phone:** (435) 797-3794

**Email:** [patrick.belmont@usu.edu](mailto:patrick.belmont@usu.edu)

**Nicolaas Bouwes**, PhD, Utah State University

Adjunct Assistant Professor

**Area:** Fisheries and aquatic ecology

**Office:** NR 169

**Phone:** (435) 760-0771

**Email:** [nbouwes@gmail.com](mailto:nbouwes@gmail.com)

**Phaedra Budy**, PhD, Utah State University

Associate Professor

**Area:** Fisheries management and conservation

**Office:** NR 134

**Phone:** (435) 797-7564

**Email:** [phaedra.budy@usu.edu](mailto:phaedra.budy@usu.edu)

**Todd Crowl**, PhD, University of Oklahoma  
Professor  
**Area:** Aquatic ecology, conservation biology, river ecology  
**Office:** BNR 175  
**Phone:** (435) 797-2498  
**Email:** [todd.crowl@usu.edu](mailto:todd.crowl@usu.edu)

**Charles Hawkins**, PhD, Oregon State University  
Professor  
**Area:** Aquatic ecology, stream and riparian ecosystems  
**Office:** BNR 162 D  
**Phone:** (435) 797-2280  
**Email:** [chuck.hawkins@usu.edu](mailto:chuck.hawkins@usu.edu)

**Jiming Jin**, PhD, University of Arizona, Chinese Academy of Sciences  
Assistant Professor  
**Area:** Global climate modeling and analysis  
**Office:** NR 358  
**Phone:** (435) 797-8175  
**Email:** [jiming.jin@usu.edu](mailto:jiming.jin@usu.edu)

**Karin Kettenring**, PhD, University of Minnesota  
Assistant Professor  
**Area:** Wetland ecology, plants and restoration  
**Office:** NR 230  
**Phone:** (435) 797-2546  
**Email:** [karin.kettenring@usu.edu](mailto:karin.kettenring@usu.edu)

**Chris Luecke**, PhD, University of Washington  
Professor, WATS Department Head  
**Area:** Aquatic ecology, fisheries management  
**Office:** NR 210 C  
**Phone:** (435) 797-2463  
**Email:** [chris.luecke@gmail.com](mailto:chris.luecke@gmail.com)

**Nancy Mesner**, MA, MSE, University of Washington  
Assistant Professor  
**Area:** Extension watershed, water quality interactions  
**Office:** NR 104 A  
**Phone:** (435) 797-7541  
**Email:** [nancy.mesner@usu.edu](mailto:nancy.mesner@usu.edu)

**Jack Schmidt**, PhD, Johns Hopkins University  
Professor  
**Area:** Hydrology, fluvial geomorphology, mineral and water development policy

**Office:** BNR 349  
**Phone:** (435) 797-1791  
**Email:** [jack.schmidt@usu.edu](mailto:jack.schmidt@usu.edu)

**Helga Van Miegroet**, PhD, University of Washington – Seattle  
Professor  
**Area:** Wildland soils and biochemistry  
**Office:** BNR 157  
**Phone:** (435) 797-3175  
**Email:** [helga.vanmiegroet@usu.edu](mailto:helga.vanmiegroet@usu.edu)

**Joseph Wheaton**, PhD, University of Southampton  
Assistant Professor  
**Area:** GIS, spatial modeling  
**Office:** NR 360  
**Phone:** (435) 797-2465  
**Email:** [joe.wheaton@usu.edu](mailto:joe.wheaton@usu.edu)

**Wayne Wurtsbaugh**, PhD, University of California – Davis  
Professor  
**Area:** Biogeochemistry, limnology, fish ecology  
**Office:** BNR 106  
**Phone:** (435) 797-2584  
**Email:** [wayne.wurtsbaugh@usu.edu](mailto:wayne.wurtsbaugh@usu.edu)

## Get Involved

### Professional Organizations, Honor Societies, and Clubs

**American Fisheries Society:** AFS is the world's oldest and largest organization dedicated to strengthening the fisheries profession, advancing fisheries science, and conserving fisheries resources.

### Labs, Centers, Research

**Ecology Center:** The Ecology Center is an administrative structure in the university that supports and coordinates ecological research and graduate education in the science of ecology and provides professional information and advice for decision makers considering actions that affect the environment. The Ecology Center at USU has had a string of directors known nationally and worldwide as premier scientists in the field of ecology, and students graduating with a degree in ecology are able to make important contacts with influential faculty that can help them go on to prestigious post-doctoral programs and faculty positions at universities around the world.

**S.J. and Jessie E. Quinney Natural Resources Research Library:** The Quinney Library maintains collections of materials pertaining to natural resources and the environment in a number of formats that support the programs of study and research in the College of Natural Resources and several partnering centers. The library has more than 60,000 items, both print and electronic, as well as videos, images, and more.

**Utah Botanical Center:** The UBC, located in Kaysville, Utah, is home to research and demonstration projects focused on sustainable living in the Intermountain West. Studies of water conservation, horticulture, water quality enhancement, wetland ecology, integrated pest management, urban forestry, agriculture, fish and wildlife, highway enhancement, and storm-water management combine to make the center a living laboratory.

**Utah Water Research Laboratory:** The UWRL works on nearly 250 water-related projects a year and has projects in all of Utah's 29 counties and more than 40 countries. The lab is one of the go-to places that addresses the technical and societal aspects of water-related issues, including quality, quantity, and distribution of water.

**Water Initiative:** Utah State University supports a broad community of students and faculty engaged in water education, research, and outreach. The USU Water Initiative provides an overarching umbrella for the activities of this community aimed at fostering interdisciplinary collaboration and collegial sharing of ideas related to water across the departments and colleges of USU.