CAREER OPPORTUNITIES

The number of employment opportunities in the aquatic sciences has increased substantially in recent years because of concerns with surface water, ground water, agricultural chemicals and hazardous wastes.

Governmental employers include federal agencies such as the U.S. Fish & Wildlife Service, U.S. Geological Survey, and Environmental Protection Agency and state agencies such as departments of natural resources and pollution control agencies.

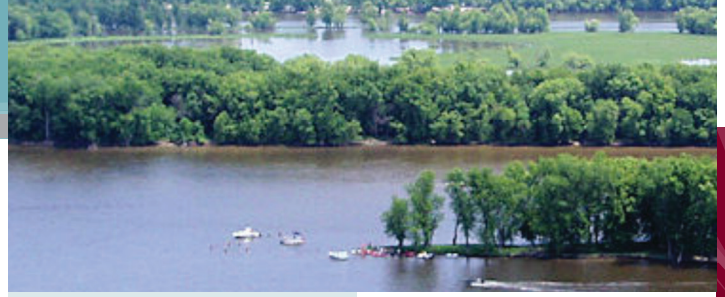
Non-governmental employers include environmental consulting firms, power companies and universities. International agencies such as the Peace Corps and the Food and Agriculture Organization of the United Nations provide opportunities to work abroad, especially in developing countries.

Because of the large amount of aquatic research and management conducted in the La Crosse area, aquatic science students have the opportunity to gain valuable "hands-on experience" through employment and/or internships on research projects with UW-L faculty, governmental agencies (discussed above) and private companies. Students can earn university credit for internships and for conducting their own research projects. These experiences greatly enhance employment and acceptance to graduate schools.

ADVISEMENT

Advising plays an essential role in guiding our students' academic careers. Each aquatic science concentration student will be assigned to the aquatic science adviser (Eric Strauss, Ph.D.). They will individually meet to discuss the most appropriate curriculum to meet the student's needs.

UW-L's Career Services Center actively assists students in preparing for job searches and in locating positions after graduation. www.uwlax.edu/careerservices



FACILITIES

Courses in aquatic science require modern laboratories and equipment. UW-L recently renovated several laboratories in Cowley Hall of Science for offering the aquatic science concentration. In addition, numerous small boats and laboratory and field equipment are available for classes and research.

GEOGRAPHIC SETTING

La Crosse is located on the shores of the Mississippi River and near several other rivers and high-quality coldwater, trout streams. This location provides UW-L with an ideal setting for studying aquatic science. Several courses, such as limnology, move to the outdoors and include field trips to rivers and streams near La Crosse and to the Pigeon Lake Field Station to study natural lakes in northern Wisconsin.

www.uwlax.edu/biology/Biology-Tracks/Aquatic-Sciences/index.html

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Information in this brochure is subject to change. Visit our website for current information — www.uwlax.edu/biology/Biology-Tracks/Aquatic-Sciences/index.html

UNIVERSITY OF WISCONSIN-LA CROSSE

College of Science and Health

UW-LA CROSSE

BIOLOGY MAJOR
AQUATIC SCIENCE CONCENTRATION

www.uwlax.edu/Biology

water ... H_2O

The most critical natural resource on this planet ... a life support system for all animals, plants and microbes ... the major resource issue of the 21st century.

BIOLOGY MAJOR
AQUATIC SCIENCE CONCENTRATION

The University of Wisconsin-La Crosse recognizes and appreciates the importance of water to the competing forces of agriculture, business, recreation, and nature. Consequently, aquatic science is a focus of teaching and research in the Department of Biology. Within the biology major, we offer an aquatic science concentration to prepare students for exciting and challenging careers in the study and management of aquatic resources.

UNIVERSITY of WISCONSIN
LA CROSSE

THE CURRICULUM

Demands for aquatic resources and the stresses being placed on them are constantly increasing and continue to threaten their integrity. For example, the use of freshwater for domestic, industrial and agricultural purposes reduces and alters natural habitats. The discharges of pollutants into our waters threatens the survival of essentially all aquatic organisms.

For these reasons, our faculty specialize in a wide array of disciplines in aquatic sciences, including:

- Aquatic Organismal Biology
- Aquatic Ecology
- Aquatic Microbiology
- Water Quality
- Aquatic Toxicology

For a complete faculty list visit www.uwlax.edu/biology/Biology-Tracks/Aquatic-Sciences/aquafac.html

The **aquatic science concentration** models the mission of the American Society of Limnology and Oceanography. [It is a program] that creates, integrates and communicates knowledge across the full spectrum of aquatic sciences, advances public awareness and education about aquatic resources and research, and promotes scientific stewardship of aquatic resources for the public interest.

The curriculum provides students with a strong background in biology and related areas such as chemistry and mathematics and allows students the flexibility to choose biology electives from a diverse group of aquatic science courses. This blend of coursework along with undergraduate research and internship opportunities prepares students for entry-level employment as well as for advanced graduate education.

Students who pursue a biology major with an aquatic science concentration must complete all the core requirements of the biology major plus a course in microbiology. Limnology, a core requirement, is usually the first aquatic science course taken. It is offered every fall semester and is open for enrollment to sophomores. This core foundation is complemented with electives chosen from the following courses:

- Ichthyology
- Freshwater Invertebrate Zoology
- Aquatic Vascular Plants
- Quantitative Methods in Ecology
- Aquatic Microbial Ecology
- Parasitology
- Environmental Toxicology
- Standard Methods and Quality Assurance of Water Analysis
- Marine Biology
- Stream and Watershed Ecology
- Ecosystem Ecology
- Advanced Aquatic Ecology
- Undergraduate Research

Additional requirements for the aquatic science concentration are a minimum of four courses in chemistry (a minor in chemistry is commonly recommended), and a minimum of two courses in mathematics (including statistics and calculus).

The Department of Geography & Earth Science offers several courses (e.g., Cartography, Geographical Information Systems [GIS], Advanced GIS, Remote Sensing, Soil Geography, and Environmental Hazards and Land Use) that are beneficial to certain areas of aquatic science and can be taken as general electives.

Students who major in microbiology may also choose aquatic science as an area of emphasis by fulfilling their microbiology elective requirements with certain aquatic science courses.

UW-La Crosse has a River Studies Center staffed by a multidisciplinary group of faculty who have active research programs on the Mississippi River and other water resources across the globe. Much of this research is done cooperatively with scientists from the Upper Midwest Environmental Sciences Center, La Crosse Fish Health Center and the Wisconsin Department of Natural Resources — all are located in La Crosse.