The School of Freshwater Sciences at UWM

The UWM School of Freshwater Sciences is the only graduate school in the United States dedicated to the study of freshwater, equipping future scientists and professionals with the expertise needed to address the critical challenges facing our freshwater resources.

From the shores of Lake Michigan, we study the largest freshwater system on Earth, as well as urban rivers, storm- and wastewater infrastructure, groundwater and inland lakes, aquaculture and fisheries, robotic systems, human and environmental health, and interdisciplinary solutions to freshwater conflicts. Our research-rich environment gives students the chance to engage in cutting-edge science with some of the best freshwater experts in the world.
Fresh Water, Fresh Opportunities

- **Explore freshwater systems and develop methods for preservation and management.** Study the impacts of climate change, human activity, and invasive species on the Great Lakes and freshwater systems worldwide.

- **Improve water safety through cutting-edge research.** Track the presence and source pathogens and determine the impacts of contaminants on human and ecosystem health.

- **Manage, replace and restore the Great Lakes’ commercial and recreational fisheries.** Create and implement innovative food technologies to spawn a new urban aquaculture industry.

- **Generate strong policy from great science.** Foster collaborative interactions between scientists and decision makers to create sustainable freshwater policy.

- **Drive new technologies in water research and management.** Collaborate with scientists, engineers and industry to develop cutting edge sensor, genomic, robotic, and aquaculture technologies.
Choose Your Freshwater Experience

Research Emphasis

**PhD in Freshwater Sciences**

**MS in Freshwater Sciences and Technology—Thesis Track**

Students in these programs work closely with world-renowned faculty to conduct original research, communicate science to external stakeholders, and gain broad knowledge to facilitate interdisciplinary approaches to address today’s most challenging water issues. Completing a thesis or dissertation conveys extensive and distinctive knowledge in a specific scientific discipline.

Careers

**What can you do with a degree in Freshwater Sciences?**

- Academia and Research
- Aquaculture
- Environmental Advocacy
- Environmental Consulting
- Environmental and Public Health
- Fisheries
- Water Policy and Management
- Water Resource Planning
- Water Technology Development
**Professional Emphasis**

**MS in Freshwater Sciences and Technology—Professional Science Track**
The world needs professionals who understand the scientifically complex issues surrounding water and possess the business acumen to implement solutions. The Professional Science track offers a robust science curriculum augmented by professional business courses. Research-based internships and group projects provide practical application of knowledge and expand your professional networks. Learn the science and policy of water and how to communicate this information to diverse audiences to influence behavior and policy.

**Undergraduate Certificate in Applied Urban Aquaculture**
Intensive urban aquaculture is an innovative process that allows freshwater fish to be grown in repurposed urban buildings. Our researchers developed state-of-the-art techniques that use green technology and water reuse to fuel the continued advancement of science and technology supporting commercial aquaculture development. This five-course certificate offers specialized training and prepares you to join the emerging aquaculture industry.
Great Lakes Genomics Center
The nation’s first research center solely dedicated to the application of groundbreaking genomic and molecular tools to issues of freshwater management, protection, restoration, and preservation.

Center for Water Policy
Dedicated to developing science-based, socially equitable and economically sound policies that protect, conserve, and restore freshwater sources for sustained human and ecosystem health.

Great Lakes Aquaculture Center
Advancing innovative aquaculture technologies to spawn a new industry in the heart of the nation’s urban environments and provide clean, nutritious food.

Core Equipment Resource Labs
These six laboratories and support facilities house specialized equipment capable of detecting even the most dilute materials as you study the presence, fate, and impacts of nutrient, organic, and inorganic contaminants.

Toxicology Labs
The UWM College of Letters & Science and the Schools of Public Health and Freshwater Sciences have one of the top zebra fish research clusters in the nation, studying toxicology and human development via animal models.

Robotics Lab
Faculty and students design and build autonomous and remotely operated robots to enhance freshwater research and management.

Quarantine and Pathogen Labs
Our new research facilities provide unique capabilities to quarantine wild specimens and pathogens for study.

Global Water Center
Housing water industry partners and UWM’s Water Technology Accelerator, the Water Council’s Center offers opportunities to collaborate with industry professionals and participate in commercialization projects.

Research Fleet
The school operates and maintains the research vessel Neeskay, watercraft, remotely operated vehicles, and a buoy-based lake-observation system.
The Great Lakes and the urban environment are your laboratories

For over 40 years, UWM has maintained the largest academic research institute on the Great Lakes. From the shores of Lake Michigan, study the largest freshwater system on the Earth’s surface, as well as urban rivers, storm- and wastewater infrastructure, groundwater and inland lakes, aquaculture and fisheries, water robotics, and human and environmental health. The School of Freshwater Sciences offers the ideal location to study water in all its complexities.

The School’s Great Lakes Research Facility on Milwaukee’s Inner Harbor will be your port of call as you pursue your academic, research, and career goals. A new $53 million building provides the School’s faculty, scientists, and students state-of-the-art lab space and access to some of the most powerful analytical tools available. Combined with the School’s legacy building, the School of Freshwater Sciences now offers over 200,000 square feet of research and classroom space with direct access to Lake Michigan and the Great Lakes.
As Wisconsin’s only public urban research university, UWM has established an international reputation for excellence in research, community engagement, teaching and entrepreneurism.

The University thrives in the economic and cultural heart of Wisconsin, where our 28,000 students, 187 degree programs and 1,700 scientists, educators and innovators from around the world contribute to the economic revitalization of southeastern Wisconsin.

For our students, career preparation begins with a strong academic foundation and is strengthened by relationships with major employers and professional networks in our vibrant hometown of Milwaukee. Career counseling, academic and tutoring resources are available to students at every stage of their academic careers.

Campus life is enriched by University residences with programming and housing for 4,200+ students, 15 Division I NCAA sports, 300+ student clubs and organizations, and a calendar of arts, entertainment and cultural events that make UWM known as a lively, diverse, dynamic academic institution.
Graduated with MS in Freshwater Sciences and Technology, Professional Science track

Interned at Milwaukee Metropolitan Sewerage District

Employed as Project Manager, Planning, Research and Sustainability at Milwaukee Metropolitan Sewerage District

“I chose Milwaukee because it’s becoming known as the world’s freshwater hub. There are so many businesses, academic, government agencies all here together to work on our freshwater resources. The biggest classroom we have is right next to the school: Lake Michigan.”

- Lisa Sasso

View my story and many more at IAMUWM.UWM.EDU

freshwater.uwm.edu
Explore your future in one of the world’s only schools dedicated to freshwater preservation, policy, quality, and technology.

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