

A research vessel named 'NEESK' is shown on the water. Several students wearing red life jackets are on the deck. One student is operating a piece of equipment suspended from a crane. Another student is looking through binoculars. The vessel has a black hull with a yellow stripe and the name 'NEESK' written on it. In the background, there are city buildings.

# SCHOOL OF FRESHWATER SCIENCES

UNIVERSITY of WISCONSIN  
**UW MILWAUKEE**



POWERFUL  
IDEAS

PROVEN  
RESULTS

# IAMUWM

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**Enrolled** in Freshwater Sciences and Technology MS, Professional Science

**Interns** at Milwaukee Metropolitan Sewerage District

**Graduated** with a BBA in Integrated Science and Business with a Water Resource Emphasis from UW-Whitewater

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*"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

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



**freshwater.uwm.edu**



# The School of Freshwater Sciences at UWM



## Addressing the Worldwide Water Crisis

The UWM School of Freshwater Sciences (SFS) is the only graduate school in the United States dedicated to the study of freshwater. The school is preparing the next generation of freshwater professionals and advancing fundamental and strategic science to inform policy, improve management and promote the health and sustainability of freshwater systems worldwide.

By integrating science, engineering, urban planning, policy and public health to explore approaches to sustainable and equitable use of freshwater systems worldwide, the school provides a collaborative environment to equip the next generation of water experts and leaders with the knowledge, skills and experience they need.

# 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.** Link science to action and develop transformational policies on topics including transboundary water issues, dispute resolution, and adaptive environmental management.
- **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

Our graduate research programs prepare students for careers in academia, government, and industry. These thesis-based programs focus on original research with an emphasis on preparing graduates with strong interdisciplinary skills and expertise in the following areas:

- Freshwater System Dynamics
- Human and Ecosystem Health
- Freshwater Technology
- Economics, Policy and Management of Freshwater

## Original Research

Conduct original research under the direction of international leading scientists to advance water science, technology, and policy.

## Careers

Academia, health departments, regulatory and management agencies, research and development in water technology and industry.

## 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 and a research-based internship to provide practical application of knowledge. Emphasis is on preparing students with strong interdisciplinary skills across all aspects of water and the ability to communicate those skills in a professional setting.

## Internships

Diverse internship opportunities give students practical experience and expand their professional networks.

## Careers

Water technology companies, environmental consulting, energy industry, environmental non-profits, water management and utilities.

# Resources and Centers

## Great Lakes Genomics Center

The nation's first research center solely dedicated to the application of ground-breaking 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.

## Urban Aquaculture Center

Advancing innovative aquaculture technologies to spawn a new industry in the heart of the nation's urban environments to provide clean, nutritious food to the urban core of American cities.

## Children's Environmental Health Sciences Center

Faculty and students collaborate with neighboring institutions—the Medical College of Wisconsin and the Children's Research Institute—to examine the relationship between environmental factors and children's health.

## Toxicology Labs

The UWM College of Letters & Sciences 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 research programs, the Center offers opportunities for students 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.

A \$50 million renovation and expansion, opening Summer 2014, will provide faculty, scientists and students state-of-the-art office and research facilities. The expansion will be home to the Center for Water Policy and Great Lakes Genomics Center, laboratories for researchers and students, teaching labs, quarantine facilities to allow researchers to acquire and study aquatic organisms from natural sources, and a substantial expansion of our aquaculture labs. UWM engineering faculty exploring water technologies and atmospheric scientists studying climate in the same building contributes to the School of Freshwater Sciences' interdisciplinary nature and mission.





## About UWM

Minutes from Lake Michigan, in the economic and cultural heart of Wisconsin, stands UW-Milwaukee—a major research university and engine of development for Southeastern Wisconsin and beyond.

More than 29,000 students, 188 degree programs, and hundreds of scientists, educators and innovators from around the world have shaped UWM's reputation as an international, results-driven, research-intensive university.

Career preparation begins with a strong academic foundation, and is strengthened by university connections to internships, jobs and professional networks that only a vibrant city can offer. 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 1 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.



# freshwater.uwm.edu

For more information about graduate programs and research opportunities that prepare scientists and policymakers to address the evolving global water crisis.



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

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