

# Welcome to SEAS!

## Admitted Student Visit Day

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### Specialization

### Coordinator

Jennifer Blesh

[jblesh@umich.edu](mailto:jblesh@umich.edu)

### Address

Dana Building

440 Church Street

Ann Arbor, MI 48109

### Website

[seas.umich.edu](http://seas.umich.edu)



# Agenda

01 Specialization Overview

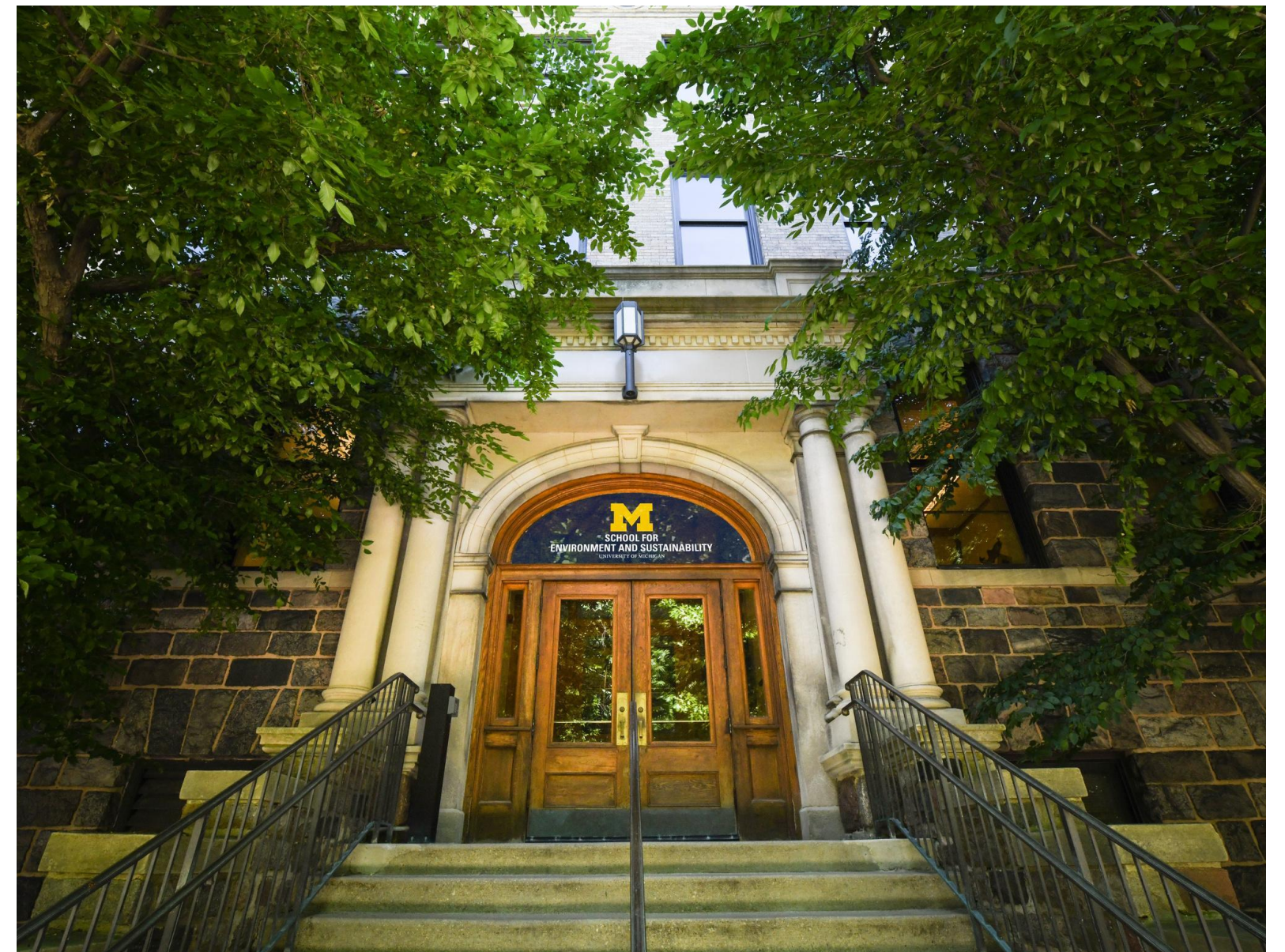
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02 Q & A

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03 Small group discussions  
by research topic

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# SEAS

Innovative, Integrated, Justice-Oriented, Entrepreneurial,  
Global

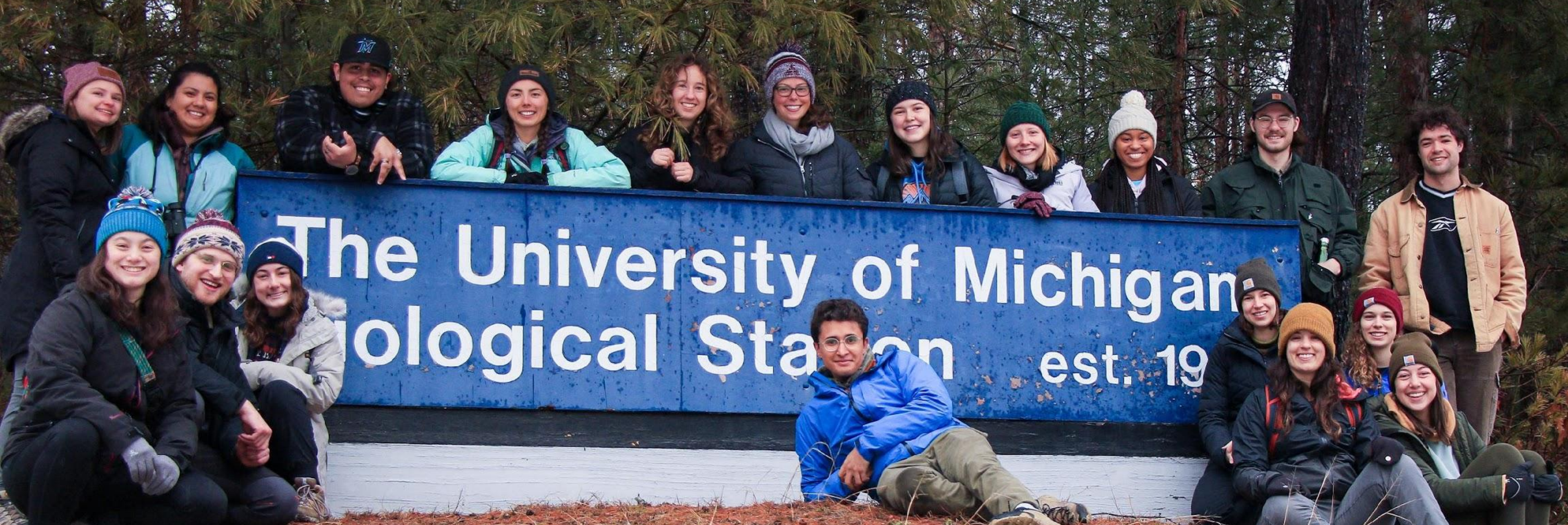
## Mission

At the University of Michigan School for Environment and Sustainability (SEAS), we are at the forefront of building a more sustainable and just world for all by transforming the impact of higher education and reimagining the future. We are advancing action through innovation, research, education and engagement in society, and developing leaders who are empowered to halt the climate crisis and create an environmentally sound future for generations to come.

## Who We Are

Situated within the nation's top public research university, the University of Michigan School for Environment and Sustainability (SEAS) has been a pioneer in environmental education, research, and activism for more than a century.





# Ecosystem Science & Management

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As a student in this interdisciplinary field of study, you will become a change-driven scientist capable of developing novel approaches to the sustainable management of wildlands, protected areas, and aquatic and terrestrial ecosystems.



# Program Goal

Science-based solutions to environmental problems

Develop skills to preserve biodiversity, restore ecosystems, and sustain natural resources in the face of global to local change





# Core Faculty

Biodiversity & ecosystem services, land use change, habitat degradation and restoration, sustainable food systems, soil health, invasive species, drought, conservation, extreme events, water resources, ecosystem change, climate change, stressors/chemicals and ecorisk.



**Karen Alofs**

Assistant Professor



**Jennifer Blesh**

Associate Professor



**Allen Burton**

Professor



**Drew Gronewold**

Associate Professor



**Inés Ibáñez**

Professor



**Johannes Foufopoulos**

Associate Professor



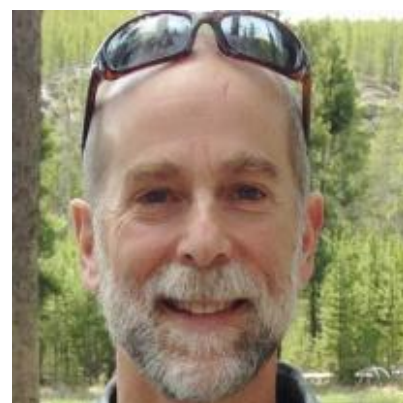
**Silvia Santa Maria Newell**

Director of Michigan Sea Grant, Professor



**Gregory Dick**

CIGLR Director, Professor



**Michael Kost**

Lecturer



**Ivette Perfecto**

Professor



**Brian Weeks**

Assistant Professor



**Donald Zak**

Professor



**Jonathan Overpeck**

Dean, Professor



**Sheila Schueller**

Lecturer & Academic Program Specialist



# Faculty

## Research Scientists/Lecturers

Biodiversity & ecosystem services, land use change, habitat degradation and restoration, sustainable food systems, soil health, invasive species, drought, conservation, extreme events, water resources, ecosystem change, climate change, stressors/chemicals and ecorisk.



**Sara Adlerstein**

Associate Research  
Scientist



**Dmitry Beletsky**

Research Scientist



**Subba Rao**

**Chaganti**

Assistant Research  
Scientist



**Casey Godwin**

Assistant Research  
Scientist



**Brendan O'Neill**

Assistant Research  
Scientist, Lecturer

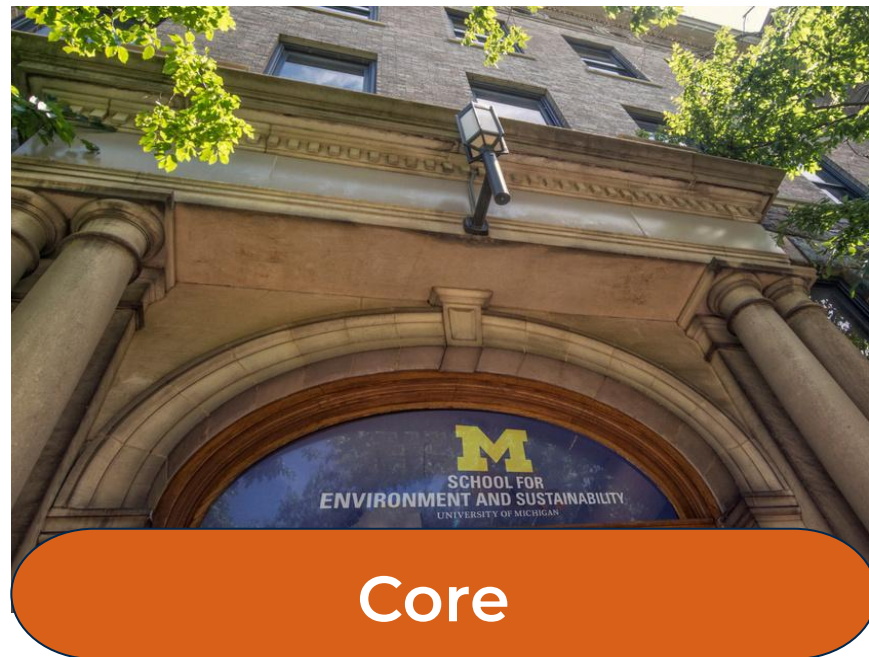


**Stella Cousins**

Assistant Research  
Scientist, Lecturer



# About the Curriculum



## Core

- SEAS Core (2)
- Conservation ecology (4)
- Analytics (1)
- Electives (1+)
- Project, practicum, extra courses, thesis
- 42 credit hr minimum



## Sample Courses

- Ecology of Fishes
- Soil Ecology
- Agroecosystem Management
- Forest Ecology and Management
- Conservation Biology
- Hydrologic Cycle and Water Resource Management
- Wildlife and Society
- Environmental Policy, Politics & Organizations
- Water Policy; Climate Adaptation Policy
- Negotiation & Mediation
- Environmental Economics
- Indigenous Peoples, Rights, and Environmental Justice



# Field-Based Courses

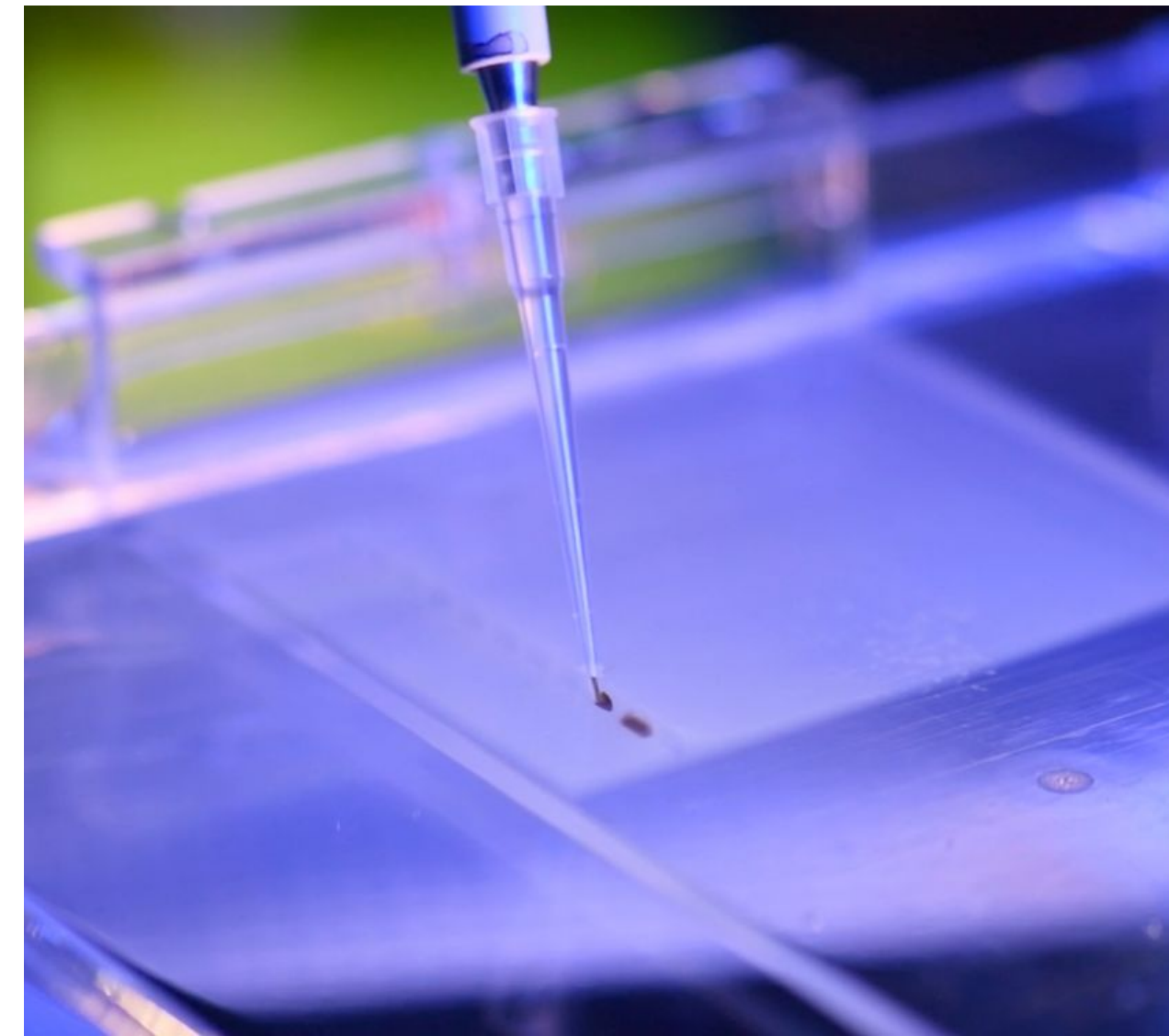
University Biological Station, SEAS Field Properties





# Lab-Based Courses

Principles of GIS, Remote Sensing







# M.S. Options

Make your choice first semester

## Project

- Work as interdisciplinary team (3 to 7 students)
- Help client solve a real-world issue
- Report and presentation

## Thesis

- Work primarily individually with Faculty Advisor
- Conduct research to answer a scientific question
- Peer-reviewed publication(s)





# ESM Examples

Make your choice first semester

## Project

- Designing and Implementing Novel Reforestation
- Agroforestry Systems in Nicaragua's Tropical Dry Forest

## Thesis

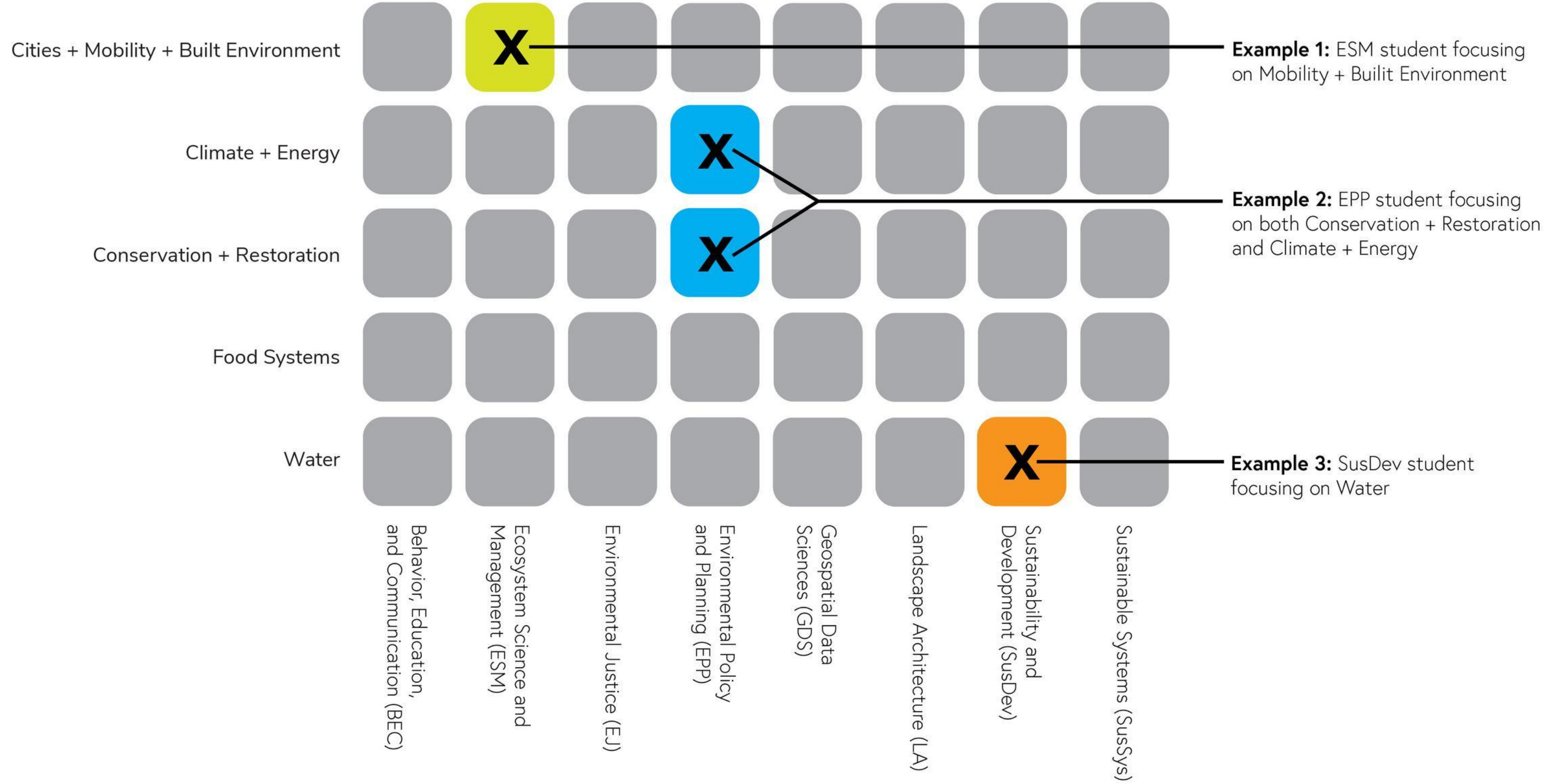
- Plant-mycorrhizal fungi associations along an urbanization gradient: implications for tree seedlings survival (Tonn et al. 2017)

## Practicum

- Individual project
- Conservation and Management Planning for Livingston Land Conservancy



# Themes



# Specializations



# Institute for Global Change Biology



## Mission

- Build community and critical mass
- Train the current and next generation of global change scholars
- Do good science
- Help find solutions to our global crises



## Working Groups

- Pollen-associated health effects in a changing climate
- Global change and migratory birds
- Soil-fungal community responses to climate change
- Effects of human-mediated habitat



## Research Themes

- Biodiversity & Function
- Climate Change & Ecosystem Health
- Climate Change & Human Health
- Natural-Human Systems
- Sustainable Food Systems
- Climate - Ecosystem Feedbacks



## Get Involved

- Spans a range of schools (e.g., SEAS, EEB, ENS, SPH, CLaSP, EES) and institutions (e.g., Michigan, Minnesota, Colorado State)
- Students receive small research grants, travel grants and summer fellowships





# The Great Lakes University



# Research Institute



Cooperative Institute for  
Great Lakes Research

**CIGLR**

*Great Lakes Science for Society*

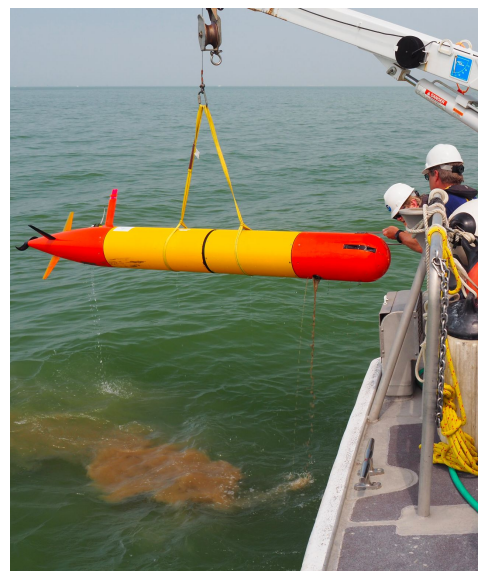


## Research topics

- Climate change
- Hydrodynamics, ice
- Hydrology, water levels
- Harmful algal blooms
- Food web, invasive species
- Oil spills
- Hypoxia

## Training opportunities

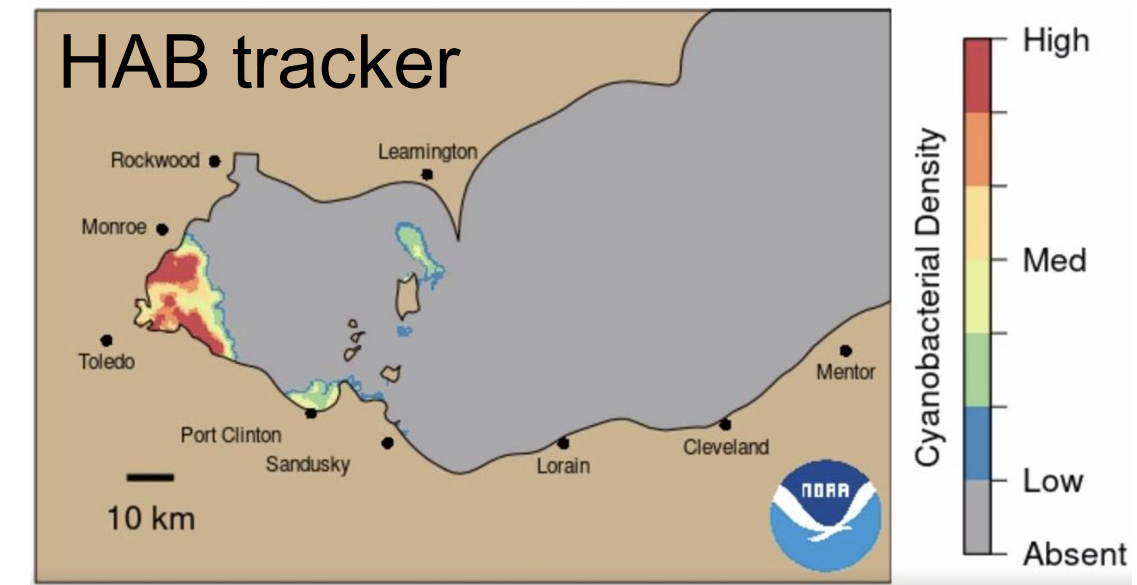
- Coastal & climate modeling
- Lab & field work
- Artificial intelligence & ML
- Interdisciplinary science
- Work with federal agencies, companies, NGOs.
- Research engagement



monitoring



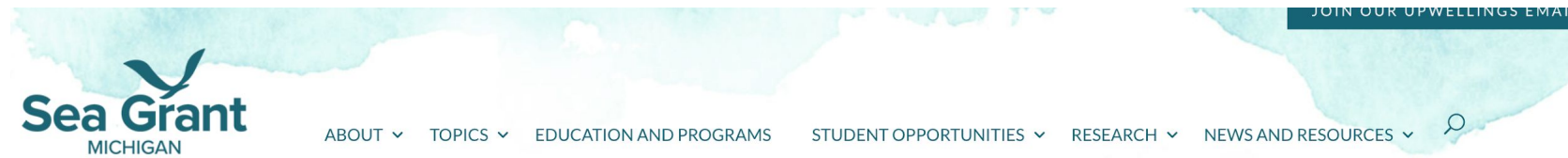
experiments



modeling and forecasting



# Michigan Sea Grant

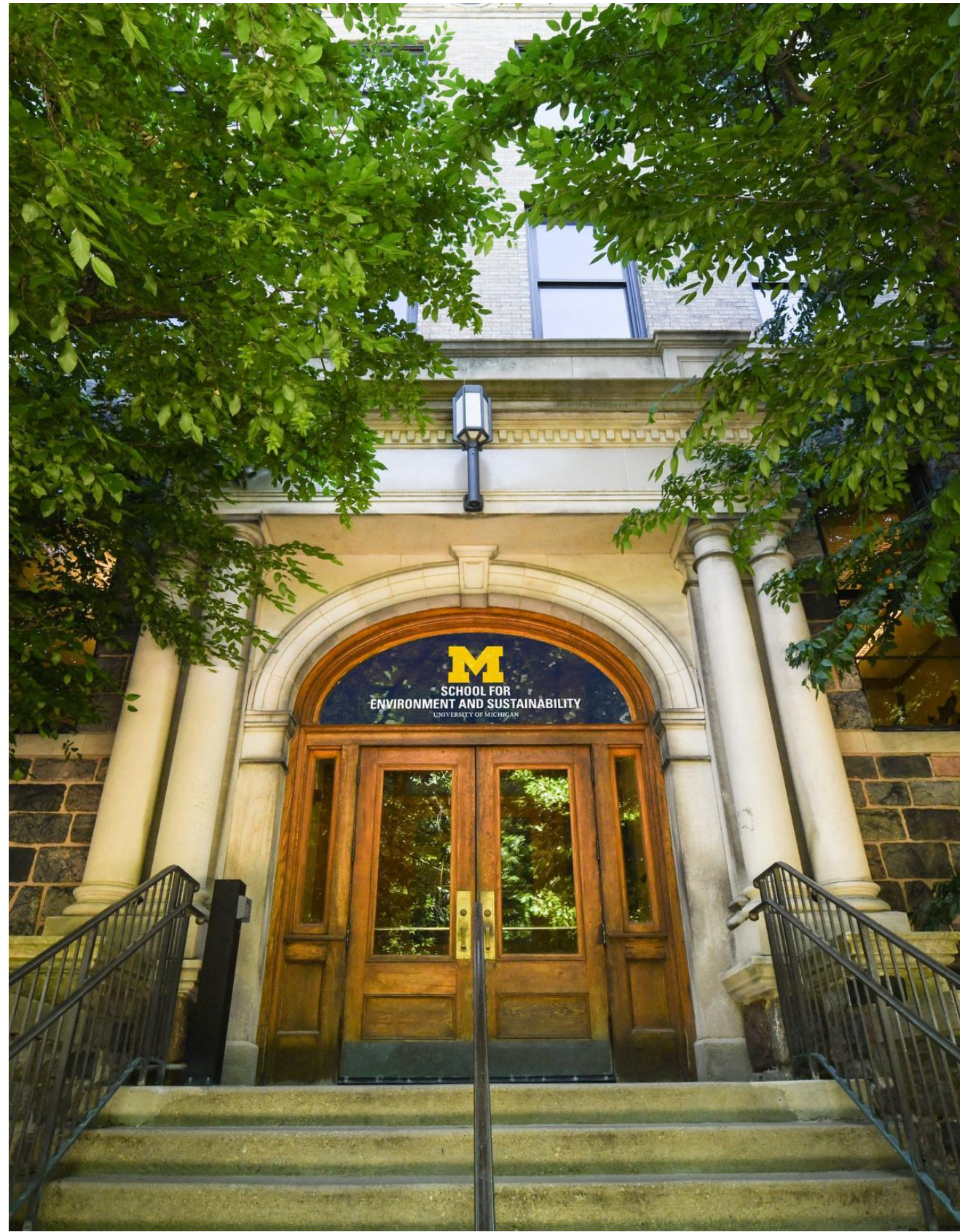


**Dedicated to the protection and sustainable use of the Great Lakes and coastal resources.**

Michigan Sea Grant is a cooperative program of the University of Michigan, Michigan State University, and the National Oceanic and Atmospheric Administration. We fund research, education, and outreach projects designed to foster science-based decisions about the use and conservation of Great Lakes resources.







# Tailoring your Degree Beyond your Specialization

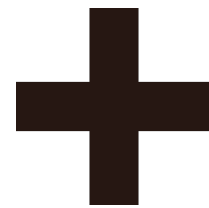
## Certificates

- Sustainable Food Systems certificate
- Spatial Analysis certificate
- Environmental Justice certificate
- Climate Change Solutions certificate



# Dual Degrees

Environment &  
Sustainability  
MS



Master of science in engineering (MSE)

Master of business administration (MBA)

Master of urban and regional planning (MURP)

Master of science in public policy (MPP)

Juris doctor (JD)

Self-initiated dual degrees



# Careers: All Sectors

## Academia

- PhD Programs
- Faculty positions

## For Profits

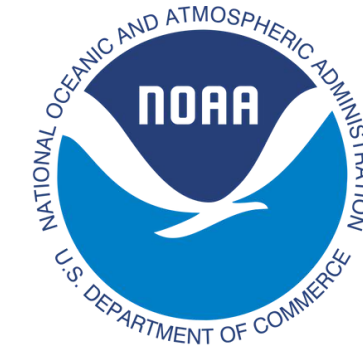
- Businesses
- Consulting firms
- Quantum spatial

## Federal & State Agencies

- NASA
- NOAA
- US EPA
- USFWS
- DOE
- State EPAs
- DNRs
- Local governments

## Non Profits

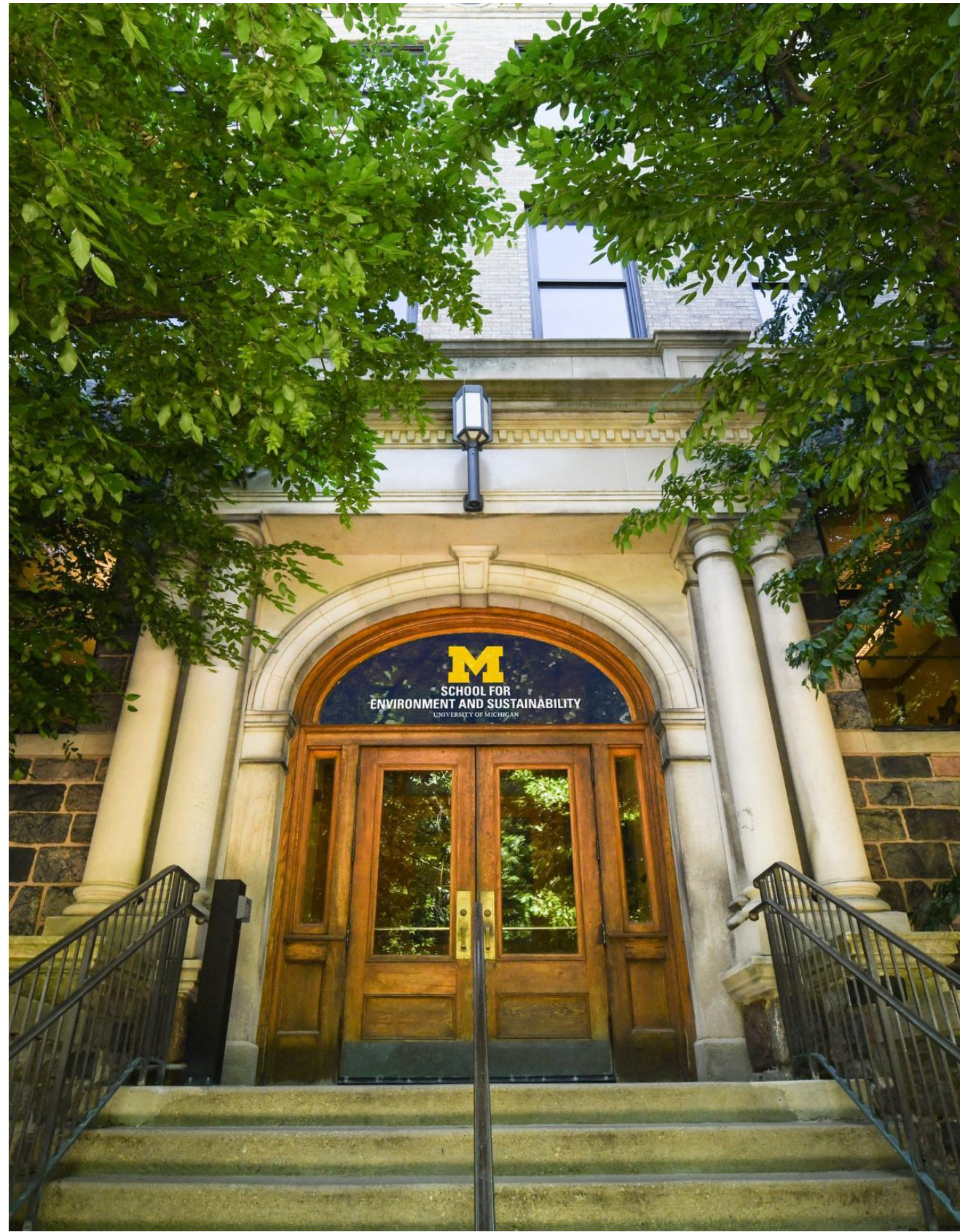
- The Nature Conservancy
- World Resources Institute
- World Wide Fund for Nature
- Ducks Unlimited



WORLD  
RESOURCES  
INSTITUTE







# Alumni Examples

## All Sectors

- **Rakhi Kasat**, Southeast Asia Program Manager, US EPA
- **Kesiree Thiamkeelakul**, Michigan Dept Natural Resources
- **Paul Winters**, Presidential Management Fellow, White House
- **Shelly Hudson**, Environmental Scientist, EA Engineering
- **Kat Superfisky**, Executive Director, Grown in L.A.; Adjunct Instructor, UCLA
- **Drew Peltier**, Postdoctoral research Northern Arizona Univerisity





# Career Outcomes



SATISFIED  
WITH POST-  
GRAD  
POSITION



JOB  
SEEKERS  
FOUND  
FULL-TIME  
JOBS



FOUND  
POSITION  
WITHIN 6  
MONTHS



# Supportive Community

Largest living alumni body of any university

 12,600+

TOTAL ALUMNI, THE LARGEST  
GRADUATE POPULATION OF ANY  
ENVIRONMENTAL DEGREE  
PROGRAM

 33%

OF SEAS ALUMNI  
HAVE RECEIVED A  
DUAL DEGREE FROM  
ANOTHER ONE OF U-  
M'S NATIONALLY  
RANKED TOP 10  
PROGRAMS

 Alumni

ARE REPRESENTED IN ALL  
50 STATES AND 80+  
COUNTRIES





**Enrollment  
deadline  
April 15**

**M** | **SEAS** SCHOOL FOR ENVIRONMENT  
AND SUSTAINABILITY  
UNIVERSITY OF MICHIGAN

**Come join us!**



# Questions?

## Address

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# University of Michigan

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- 51,000 students (19,000 grad/prof students)
- 3,100 tenure-track faculty; 6200 total faculty
- 260 degree programs
- 101 Top Ten graduate programs
- 17 professional schools – low walls



# Ann Arbor

