University of Michigan
Engineering Sustainable Systems
Sustainable Water Systems specialization

Dual-Master's Degree Program

Summary of Requirements for a Master of Science **(Aquatic Sciences)** and a Master of Science in Engineering **(Civil or Environmental Engineering)**

Effective Fall 2025

2-2.5 Year MS & MSE Plan		Requirement	Notes	Course #	Credits	Term
Engineering	**Civil Engineering or Environmental Engineering Core**	Please consult with your CEE faculty advisor about specific requirements and specialization/areas of study for Civil or Environmental Engineering.	The Civil Engineering guidelines can be found here. The Environmental Engineering guidelines can be found here.			
School for Environment and Sustainability	**Aquatic Sciences Core**	9-12CR in Aquatic Sciences (courses on next page)	One course each from: 1) Organism Biology 2) Ecosystem Ecology 3) Ecosystem Modeling			
	EAS Core	EAS 509 (Natural Systems Core) EAS 510(Social Systems Core) or 3CR from the *Social Systems Distribution list. *IAMS Requirement Two courses; 3CR minimum				
	Analytics	Students must take an approved statistics course and an approved analytics course	Approved list of acceptable analytics courses Approved list of acceptable statistics courses Recommended stats course: CEE 573			
	Capstone	Students are **not** expected to complete a Capstone, but could petition to do a thesis/practicum or project				
	TOTALS	Total "EAS" credits - 25				
	TOTALS	Total "CEE" credits - 18 54 credits total for both				

*IAMS and Social Systems Distribution courses can double-count with Core requirements but we do not double-count the actual credits.

SEAS School for Environment and Sustainability, University of Michigan | College of Engineering, Civil & Environmental Engineering, University of Michigan

A) Civil and Environmental Engineering (CEE) Requirements

- CEE Master's Main Page
  - Civil Engineering Guidelines
  - Environmental Engineering Guidelines

B) SEAS Aquatic Sciences

1) Organismal Biology

Choose one:

EAS 409 (4CR) – Ecology of Fishes (F/W) OR
EEB 486 (3CR) – Biology & Ecology of Fishes (UMBS)
EAS 422 (3CR) – Biology of Fishes (F)
EEB 457 (5CR) – Algae in Freshwater Systems (UMBS)

2) Ecosystem Ecology

Choose one:

EAS 476 (3CR) – Ecosystem Ecology (W)
EEB 483 (3CR) – Freshwater Ecosystems: Limnology (F)
EAS 520 (3CR) – Fluvial Ecosystems (F)

3) Ecosystem Modeling

Choose one:

EAS 635 (3CR) – Multivariate Statistics (F)
EAS 540 (2CR) – GIS and Nat Res Applications (F)
EAS 543 (3CR) – Environ Spatial Analysis (F)
EAS 549 (3CR) – Analysis and Modeling of Eco Data (F)

Links to Both Programs' Course Lists

- Civil or Environmental Engineering
- SEAS

Integrated Analytic Methods and Skills Requirement

Students are required, at some point during their time enrolled in the program, to take 2 courses comprising at least 3 credits from a faculty-approved list of courses that focus on integrative analytic methods and skills.

Engineering Graduate Chair Directory