Who We Are

The University of Michigan Electric Boat (UMEB) team is a student-led project team founded in 2019 that designs, builds, and races an electric boat to compete in the Promoting Electronic Propulsion (PEP) competition hosted by the American Society of Naval Engineers.

Our members come from all walks of life, but we all share one important commonality: We strive to challenge ourselves to implement sustainable technologies to educate the next generation of engineers.

Sustainability

We are committed to sustainability. Our vessel will be powered with electrical energy, decreasing our reliance on fossil fuels.

Innovation

No idea is a bad idea. Our project gives members the opportunity to apply their theoretical skills to a real-world project with room to experiment.

Adaptability

We’re no strangers to setbacks; we were founded during the COVID-19 pandemic. Our adaptability allows us to strive for greatness no matter the circumstances.

Collaboration

Diversity is vital to our team, and we recognize the value that it brings. Our members thrive in the pursuit of over 10 different majors across an array of different departments.
Achievements

First hydrofoil design in the history of PEP Competition and 2nd place finish in 2021

In July of 2021, UMEB finished 2nd in our first ever race at the PEP competition. In 2022, we issued a complete redesign, implementing hydrofoils to the boat. In 2023, we plan to finish the design cycle and develop even more innovative concepts. Your support will help us achieve this goal!
Our Competition

In June of 2023, UMEB will compete in a 5-mile race with our electric boat in Portsmouth, Virginia. This competition gives us an opportunity to work with design software, a variety of tools, and collaborate to create an innovative final product.

UMEB and our competitors are tasked with completing 5 laps in a short out and back circuit and will be given the opportunity to compete in an acceleration challenge. Cash prizes will be awarded to the top three finishers and teams displaying innovative engineering.
Primary UMEB Subteams

A high-level overview of the UMEB subteams & their responsibilities

**Electrical Team**

**Controls**
Integrates control surfaces and propulsion motors with controller systems

**Power**
Implements powertrain systems from batteries to motors

**Operations Team**

**Supply Chain**
Manages team supply chain to ensure parts arrive on-time

**Team Communication**
Manages internal communication network

**Workspace**
Maintains and upgrades Wilson Center area to ensure a safe and efficient work environment

**Mechanical Team**

**Hydrofoils**
Designs and manufacturers hydrofoils to reduce drag and maximize lift

**Structures**
Develops mounting mechanisms for hydrofoils and battery system

**Hull**
Designs hydrodynamic surfaces and propulsion pods

**Drivetrain**
Implements powertrain systems from gearbox to propeller

**Cooling**
Manages cooling of all components

**Business Team**

**Finances**
Manage the team's expenses and funding

**Marketing**
Develop marketing strategies for the team to acquire new members and advertise sponsors
Our Demographics

DEI Initiative

Diversity is paramount to UMEB’s success. We are building the next generation of leaders in the field of engineering. Everyone is welcome on our team. Regardless of a student’s background, or area of expertise, there is a place for them at UMEB.

38% pursuing a minor
58% pursuing graduate studies
11 different majors

Team Degree Distribution

40+ team members
2023 Vision

UMEB is dedicated to our culture of innovation, and we plan to be the first team to compete with hydrofoils in the 2023 PEP Competition.

Throughout this school year we’ll be working on our next-generation design to potentially compete on the world stage. We’d love to have you be a part of that process!
## How to Help

UMEB benefits from monetary donations, material donations, and design reviews. Please contact us if you have additional support strategies; we’d love to work with you!

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Current Sponsors

Thank you to our sponsors! Their support is what makes UMEB’s continued progress possible.
Thank you for considering donating to UMEB. Without generous sponsors, such as yourself, we would not be able to expand our knowledge through our innovative projects.

Our team would be more than happy to meet with you to answer any questions you may have, meet some of our members, or learn about our current projects! We would love to hear your thoughts!

Deven Parmar
Captain