



# College of Engineering and Mathematical Sciences

## 2023 - 2024 FACTS & FIGURES

### ABOUT

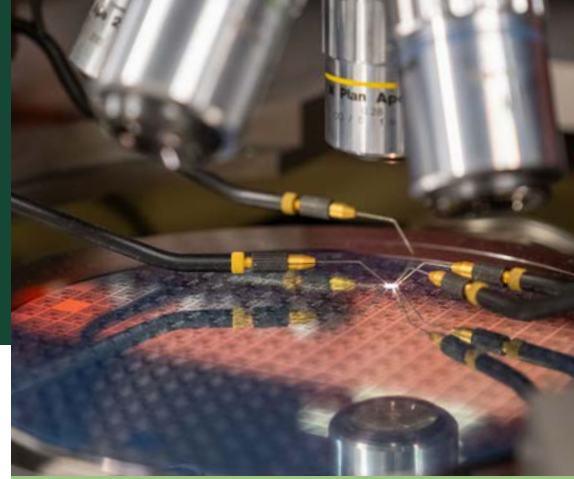
At the **College of Engineering and Mathematical Sciences**, we are proud of the leadership role we play on and off campus as UVM successfully positions itself as a top-tier research University. Our students benefit from joining a campus large enough to provide world-class faculty and state-of-the-art facilities while comfortably scaled to ensure close mentorship and support across all levels of study, from bachelor's to doctoral programs.

We view our role as more expansive than educators. We are a community of problem solvers, inspiring each other to build local and global solutions to our shared challenges that will lead to healthier, more sustainable societies. Our approach is both team-based and personal, fostering a culture of collaboration driven by student-to-student connections that prioritizes hands-on experience in advanced research led by faculty who are internationally recognized as experts in their fields.

Our broad and varied research interests extend well beyond the walls of the College. We engage in groundbreaking interdisciplinary partnerships with colleagues across campus as well as local and international leaders in industry and government. From pioneering work in artificial intelligence and computer security to dynamic discoveries in biomaterials and environmental engineering, our students actively contribute to some of the most important research advances on a global scale.

### SUPPORT

Whether your donation is by financial contribution, time & energy, professional network, or a combination of the three, you build the foundation for the personal and educational growth of the next generation of STEM professionals. For more information on how you can make a difference, reach out to **Max Seeland** at [Maxwell.Seeland@uvm.edu](mailto:Maxwell.Seeland@uvm.edu) or **(802) 735-7321**.



### QUICK FACTS

#### Enrollment

- Undergraduate Students: 1,400
- Graduate Students: 250

#### Faculty

- 120 Full-Time Faculty

#### Student Success

- 95% of 2022 CEMS graduates were employed or continuing their education within 6 months of graduating

#### Programs

- 13 Undergraduate programs
- 14 Graduate Programs
- 3 Interdisciplinary Programs

#### Research

- 30% of our undergraduates do work for at least one semester in a research laboratory.
- \$25.8M in research funds (FY23)
- Active research in:
  - » Artificial Intelligence
  - » Biomedical Engineering
  - » Complex Systems and Data Science
  - » Computer Security
  - » Materials and Biomaterials
  - » Sustainable Energy Solutions
  - » Stable Energy Grids
  - » Clean Water
  - » Pedagogy



# HIGHLIGHTS:

## EXPERIENCE-BASED LEARNING

Supported by a robust Career Readiness Program, CEMS students are prepared to launch into successful careers and top graduate schools through high-impact, hands-on learning opportunities like Internships, Off-Campus Study, and cooperative education programs. A record of outstanding performance from past students has allowed CEMS to forge partnerships with local employers such as Burton, Beta Technologies, and Global Foundries as well as national partners like NASA.

New classrooms and facilities support active learning, hands-on project-based courses, and state-of-the-art laboratory experiences.

## FACILITIES

Few schools that provide the personal learning experiences found at CEMS can offer the impressive, state-of-the-art facilities found in the heart of our campus. Completed in 2019, Discovery & Innovation Halls were built as a testament to the University's commitment to advanced research and STEM education and house classrooms, advanced laboratories, and informal learning spaces. The expanded complex joins a newly renovated Votey Hall that connects to Discovery through an elevated glass walkway that serves as a landmark to this centerpiece of engineering and science.

## STUDENT SUPPORT AND OUTCOMES:

At CEMS, we pride ourselves on a long tradition of intensive student support and services. Students are provided with countless ways to get involved in the interests and with each other:

- 15 academic-focused student clubs, including the Alternative Energy Racing Organization, Engineers without Borders, National Society of Black Engineers, and the Society of Women in Computer Science.
- A first-year course for all students where they learn about all the majors in CEMS, complete their first team-based project, and are connected to a Peer Mentor.
- A dedicated Office of Equity, Belonging, and Student Engagement that administers our eSTEM program and teaches leadership skills to support all CEMS' clubs.

The commitment to student support is evident in our impressive student outcomes and success rates. The class of 2023 had an 89% first-year retention rate and over 95% of the graduating class of 2022 are employed or continuing education.



# FUNDRAISING PRIORITIES:



## **TORREY HALL RENOVATIONS:**

To meet the expanding need for collaborative spaces, CEMS will soon be transforming historic Torrey Hall into a modern facility that will tailor spaces to the needs of students of all levels as a centralized, all-inclusive student services suite. This ambitious project aims to create an environment that fosters multidisciplinary collaboration, social engagement, breakthrough research, and overall, student success. Fundraising has yet to begin, but we'd love to have a conversation!



## **ENDOWED PROFESSORSHIPS:**

To grow and retain our world-class faculty and to attract the next generation of talented STEM students & professionals, endowed professorships are essential. For prospective faculty, endowed professorships offer prestige, collaboration potential, and the promise of stability. For students, studying under the guidance of renowned faculty opens doors through mentorship, research innovation, and opportunities to engage with research and learning outside of the classroom.



## **CENTER FOR BIOMEDICAL INNOVATION:**

The Center for Biomedical Innovation (CBI) sits at the nexus of advanced engineering design and modern healthcare. Created with a vision to improve rural health care on a significant scale in Vermont and beyond, the CBI has recently signed an agreement to co-develop an Omni-Mission Healthcare Delivery Vehicle with the University of Vermont Health Network. The innovative truck will provide mobile, high-value healthcare that can be customized based on mission type through swappable, modular payloads.



## **SCHOLARSHIPS:**

Scholarships are critically important for CEMS to attract the best and brightest undergraduate and graduate students. Donors open the door to the University and a future of endless possibilities for these students through their generous ongoing support.



The University of Vermont  
**FOUNDATION**



**Max Seeland '06**

DIRECTOR OF MAJOR GIFTS

College of Engineering  
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