



# College of Science and Engineering STRATEGIC 2024-2029 | PLAN



COLLEGE OF  
**SCIENCE &  
ENGINEERING**  
CENTRAL MICHIGAN UNIVERSITY

[se.cmich.edu](http://se.cmich.edu)



The **College of Science & Engineering Strategic Plan** is the result of the dedicated work of the CSE Strategic Planning Committee and input from students, faculty, staff, and others collected through town hall meetings, surveys, and online feedback. The Strategic Plan is intended to evolve as the College evaluates progress, meets goals, and explores new opportunities. Implementing the Strategic Plan will include continuous assessment of the strategies, analysis and reporting of metrics, and revision and realignment of the plan when warranted. Our progress will be communicated to our faculty, staff, students, and other stakeholders through our CSE website, CSE annual meetings, and CSE town hall meetings.

#### **2024-2025 CSE Strategic Planning Committee**

- Rachael Agardy - Department of Earth & Atmospheric Sciences
- Dr. Felix Famoye - Department of Statistics, Actuarial & Data Sciences
- Dr. Benjamin Heumann - Department of Geography & Environmental Studies
- Katie Howland - Earth & Ecosystem Science doctoral candidate
- Dr. K. Alan Jackson - Department of Physics
- Jessica Lapp - College of Science & Engineering
- Dr. Dale LeCaptain - Department of Chemistry & Biochemistry
- Dr. Terry Lerch - School of Engineering & Technology
- Dr. Meera Mainkar - Department of Mathematics
- Dr. Sharyl Majorski - Department of Chemistry & Biochemistry
- Dr. Anna Monfils - Department of Biology
- Dr. Wiline Pangle - College of Science & Engineering
- Kegan Rojas - College of Science & Engineering
- Dr. Wendy Robertson - Department of Earth & Atmospheric Sciences
- Dr. Patrick Seeling - Department of Computer Science
- Meghan VanDamme - School of Engineering & Technology student

#### **2025-2026 CSE Strategic Planning Committee**

- Dr. Chin-I Cheng - Department of Statistics, Actuarial & Data Sciences
- Dr. Dale LeCaptain - Department of Chemistry & Biochemistry
- Dr. Wiline Pangle - College of Science & Engineering
- Kegan Rojas - College of Science & Engineering
- Dr. Leelah Rakesh - Department of Mathematics
- Dr. Benjamin Ritter - School of Engineering & Technology
- Dr. Wendy Robertson - Department of Earth & Atmospheric Sciences

# Vision, Mission, Values, Goal Areas

## Vision

The College of Science and Engineering will be an inclusive community of scholars known for outstanding research, innovative teaching and outreach, and the high quality of our STEM graduates.

## Mission

The College of Science and Engineering facilitates high-impact STEM research, teaching, learning, and outreach to improve the communities we serve.

## Core Values

**Equity and Belonging:**  
Creating an equitable and inclusive space for students, faculty, and staff that fosters engagement, innovation, personal well-being, and professional success.

### Collaboration and Community Engagement:

Encouraging positive, meaningful, and productive interactions and partnerships within CSE, with other colleges at CMU, and with the community at large.

### Experiential Learning:

Providing practical, hands-on experiences that enhance understanding, skill development, and growth to promote a well-rounded community.

### Empowerment:

Providing resources and opportunities that encourage agency for all individuals to meaningfully contribute to and collaborate with the mission of the departments, college, and university.

### Innovation:

Promoting creative research and innovative teaching to advance knowledge and improve learning in our STEM disciplines.

**GOAL AREAS:** Opportunities for growth were identified for four goal areas:



CSE Student Success



CSE Scholarship



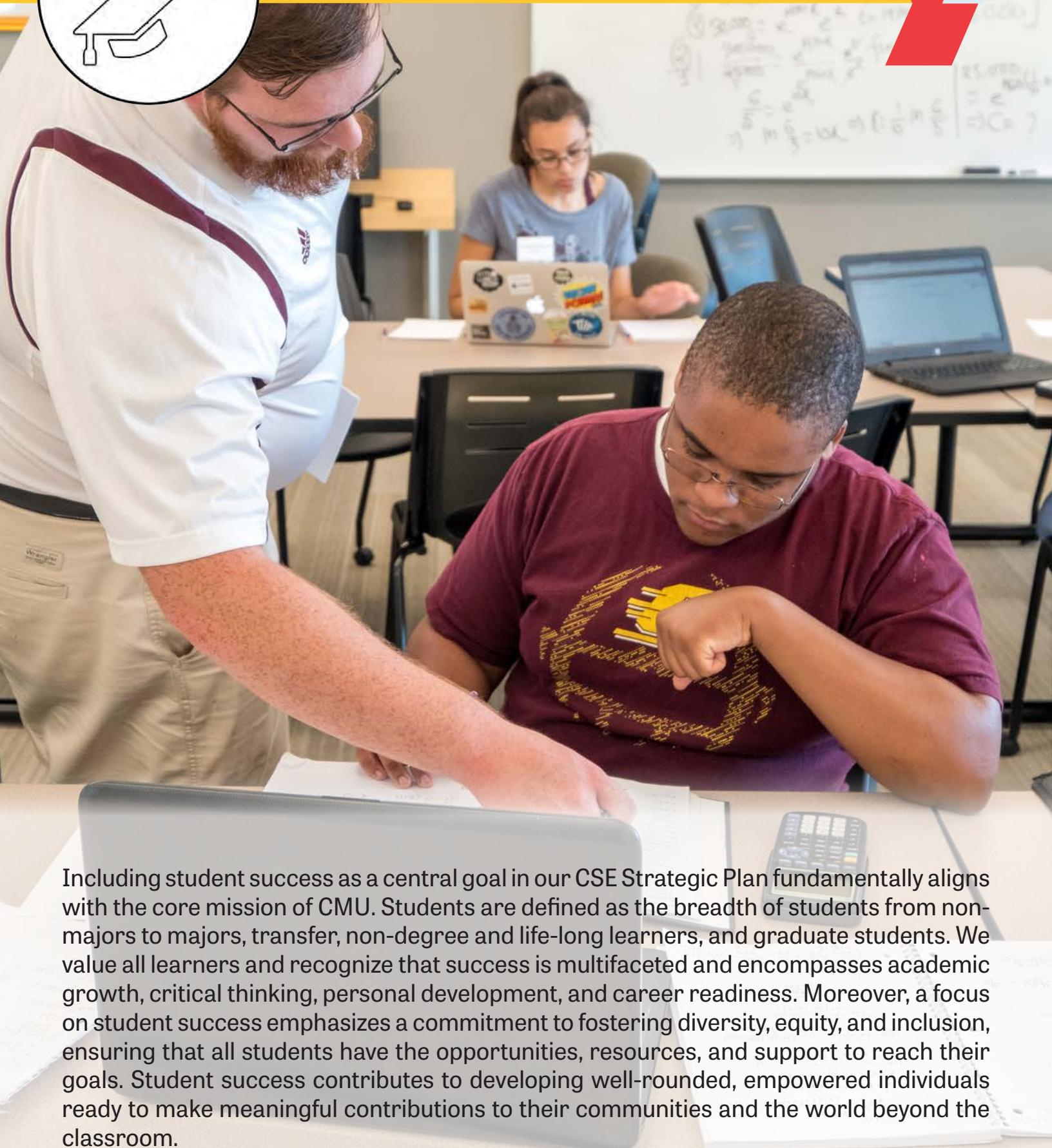
CSE Culture



CSE Connections



# Goal Area: CSE Student Success



Including student success as a central goal in our CSE Strategic Plan fundamentally aligns with the core mission of CMU. Students are defined as the breadth of students from non-majors to majors, transfer, non-degree and life-long learners, and graduate students. We value all learners and recognize that success is multifaceted and encompasses academic growth, critical thinking, personal development, and career readiness. Moreover, a focus on student success emphasizes a commitment to fostering diversity, equity, and inclusion, ensuring that all students have the opportunities, resources, and support to reach their goals. Student success contributes to developing well-rounded, empowered individuals ready to make meaningful contributions to their communities and the world beyond the classroom.

## STRATEGIES

- S1. Cultivate a learning environment that **builds students' abilities, talents, and skills** by encouraging dedication, resilience, and creative problem-solving.
- S2. Promote and strengthen existing co-curricular programs and connect students with experiential learning opportunities that **build relevant transferable skills and competencies** to foster leaders and civic responsibility.
- S3. **Inspire students** to explore and pursue STEM fields and academic pathways.

## TACTICS

- T1. Incorporate hands-on success skills for students pursuing STEM careers in the curriculum. (Strategies 1 and 2)
- T2. Increase support for advising activities and further develop ongoing communications between the CSE Student Success Center and departments. (Strategy 1)
- T3. Strengthen support for student activities that build community, enhance belonging, and promote professional development. (Strategies 1, 2, and 3)
- T4. Amplify student-driven accomplishments. (Strategies 1 and 3)
- T5. Invest in efforts to recruit and retain students in STEM fields. (Strategies 1, 2, and 3)
- T6. Reduce achievement gaps by providing structured mentoring programs. (Strategies 1, 2, and 3)
- T7. Foster a culture of support for CSE graduate students. (Strategy 1)
- T8. Normalize metacognition to reinforce lifelong learning and science literacy. (Strategy 1)
- T9. Reinforce a culture of inclusive teaching, mentoring, and professional support. (Strategy 1)



# Goal Area: CSE Scholarship



Scholarship encompasses academic endeavors of all types, including impactful research, innovative, evidence-based pedagogy, and supportive mentoring. CSE is well-positioned to address many of society's most pressing problems, and its goal should be to support the creative work needed to tackle them adequately. An internal challenge is a mismatch between the aspirations toward high-quality scholarship and the limited financial resources available within our existing budget. When many needs cannot be met, the College must be transparent in its decision-making and balanced in its support for our dual mission of teaching and research. To meet our strategic challenges, CSE must harness the strengths and passions of its faculty, staff, and students and promote closer collaboration and cooperation across its departments.



## STRATEGIES

- S1: **Establish College priorities for scholarly endeavors** and align future investments to support these scholarly priority areas.
- S2: Encourage departments to **recognize and value scholarship** that includes subject-specific research based on faculty expertise, including scholarship of teaching and learning.
- S3: **Provide career-focused mentoring** to early-career faculty and encourage departments to provide career development opportunities to their students and postdoctoral scholars.

## TACTICS

- T1. Investigate pathways for strengthening existing scholarly areas with a focus on growth opportunities. (Strategy 1)
- T2. Encourage review of bylaws to ensure impactful scholarship products that result from development of innovative teaching methods and subject-specific research expertise are valued during reappointment, tenure, and promotion decisions. (Strategy 2)
- T3. Develop guidelines to support faculty course release for scholarly activity while meeting department teaching needs. (Strategy 2)
- T4. Share information about research funding opportunities with students. (Strategy 3)
- T5. Provide support for pre-tenure faculty and encourage departments to establish career-focused mentoring for postdoctoral scholars. (Strategy 3)



## Goal Area: CSE Culture



Strengthening effective communication, sustainable operations, and the engagement of CSE students, faculty, and staff are fundamental for fostering a thriving and interconnected college environment where CSE becomes a destination of choice. Effective communication strategies enhance transparency, collaboration, and understanding among students, faculty, and staff, promoting a cohesive and informed community. Prioritizing sustainable operations establishes long-term fiscal stability and allows the College to focus on strength areas and opportunities. Community engagement ensures that CSE actively contributes to the well-being of its members, promoting mutually beneficial relationships.



## STRATEGIES

- S1: Encourage positive and respectful interactions across the College **where all members are valued and empowered.**
- S2: **Improve internal communications throughout the College.**
- S3: **Increase support for cross-college activities** that foster relationships across disciplines.
- S4: Adjust resource allocations across the College to **ensure long-term fiscal stability** and promote shared decision making.

## TACTICS

- T1. Cultivate communication and collaboration within the College. (Strategies 1 and 2)
- T2. Encourage inclusive participation of all members in departmental decisions and establish best practices for committees and meetings. (Strategies 1 and 2)
- T3. Promote and support events that create a sense of community across the College, as well as provide opportunities for individuals to embrace CSE goals and values in their everyday activities. (Strategies 1 and 3)
- T4. Support equitable and inclusive recruitment and retention practices for faculty and staff positions. (Strategy 1 and 4)
- T5. Revise the College's faculty line request process with clear guidelines for departments and a transparent decision-making process. (Strategies 1, 2, and 4)
- T6. Develop and implement workload guidelines, including teaching assignments and service expectations, that departments can utilize to leverage the talents of all their members. (Strategy 4)
- T7. Regularly review salary structures of faculty and staff to advocate for equity across the College. (Strategy 4)



# Goal Area: CSE Connections



Robust connections with community partners beyond CSE are critical for research innovation, educational opportunities enhancements, mutually beneficial community collaborations, and our improved reputation as a college. By actively engaging with businesses, K-12 schools, government entities, and nonprofit organizations, CSE establishes mutually beneficial partnerships that enhance educational opportunities, research collaborations, and community development initiatives. Furthermore, external community building bridges the gap between academia and industry, ensuring academic programs align with real-world needs and trends. This goal also promotes a positive university image, as it demonstrates a commitment to social responsibility and community impact, engenders alumni pride, and attracts potential students, faculty, and donors.

## STRATEGIES

- S1: **Increase connections** between CSE and future students.
- S2: **Enhance collaboration and foster engagement** with alumni, industry, and community partners.
- S3: **Communicate and celebrate** CSE successes.
- S4: Partner with CMU Advancement to **support our students and programs**.

## TACTICS

- T1. Grow and maintain an effective portfolio of opportunities to connect future students to CSE. (Strategies 1 and 2)
- T2. Increase the number and effectiveness of CSE's external partnerships. (Strategies 1 and 2)
- T3. Foster relationships with our alumni to create a network of support for our students. (Strategy 2)
- T4. Communicate our stories of engagement and successes. (Strategy 3)
- T5. Continue to partner with Advancement to support CSE students and programs. (Strategy 4)

# COLLEGE OF SCIENCE AND ENGINEERING

## CENTRAL MICHIGAN UNIVERSITY

### SCHOOLS AND DEPARTMENTS

Department of Biology  
Department of Chemistry and Biochemistry  
Department of Computer Science  
Department of Earth and Atmospheric Sciences  
Department of Geography and Environmental Studies  
Department of Mathematics  
Department of Physics  
School of Engineering and Technology  
Department of Statistics, Actuarial and Data Sciences

### INTERDISCIPLINARY PROGRAMS

Biochemistry, Cell and Molecular Biology Programs  
Earth and Ecosystem Science Ph.D. Program  
Science and Mathematics Education Programs  
Neuroscience  
Pre-Health Pathways  
Science of Advanced Materials Ph.D. Program  
Integration of Science, Technology, and Engineering  
(InSciTE) Certificate

### CENTERS AND FACILITIES

Brooks Astronomical Observatory  
CMU Biological Station  
CMU Greenhouse  
CMC Herbarium  
Flow Cytometry Facility  
Institute for Great Lakes Research  
Mathematics Assistance Center  
Michigan Geographic Alliance  
Microscopy Facility  
Statistical Consulting Center  
Neithercut Woodland

### CSE LEADERSHIP

Dr. Tracy Galarowicz  
*Interim Dean*  
Dr. Christopher Tycner  
*Associate Dean*  
Dr. Pete Vermeire  
*Assistant Dean*

### CSE STAFF

Rachel Anderson  
*Outreach Programs Coordinator/SERC Director*  
Kristina Harvell  
*Director of Business*  
Lori Kreiner  
*Executive Secretary*  
Jessica Lapp  
*Coordinator of Interdisciplinary Programs*  
Jennifer Laubenthal  
*Director of Assessment and Accreditation*  
Michelle Mowat  
*Sponsored Research Financial Analyst*  
Alexander Searfoss  
*Associate Director Biological Station*  
Angela Reeves  
*Executive Secretary*  
Kegan Rojas  
*Associate Director Student Services*  
Robert Wang  
*Communications Coordinator*  
Shanna Wenzlick  
*Assistant Director of Sponsored Research Administration*

### CSE SUPPORT

Jaclyn Johnston  
*Academic Advisor*  
Kelly Lawson  
*Academic Advisor*  
Heidi Mahon  
*Director of Student Services*  
Georgina Main  
*Academic Advisor*  
Ryan Phillips  
*Academic Advisor*  
Mel Taylor  
*Director of Information Technology*  
Lizandro Tremolada  
*Academic Advisor*  
Becky Walker  
*Engagement & Donor Strategist*  
Mackenzie Weiss  
*Academic Advisor*  
Megan Wertz  
*Academic Advisor*