Dean of the College of Engineering

Michigan Technological University
Houghton, Michigan
mtu.edu
Michigan Technological University seeks a visionary leader to serve as Dean of the College of Engineering

Michigan Tech was founded in 1885, with a mission to develop engineering talent to support the mining industry in Upper Michigan’s Copper Country. The University has evolved into a leading public research institution, home to more than 7,000 students from 60 countries around the world. Our beautiful campus in Michigan’s Upper Peninsula overlooks the Keweenaw Waterway and is just a few miles from Lake Superior.

MTU offers more than 120 undergraduate and graduate degree programs in engineering, science and technology, forestry, business and economics, health professions, humanities, mathematics, and social sciences through seven Colleges and Schools. Our multidisciplinary emphasis means low boundaries for students and faculty to engage in educational and research opportunities across disciplines.

More than $72 million in total research expenditures and 19 research centers and institutes help us foster a world-class and diverse faculty, staff, and student population. Partnering with industry and federal institutions like the National Aeronautics and Space Administration, the National Science Foundation, the Environmental Protection Agency, and research organizations within the Department of Defense, we develop, apply, create, and demonstrate the future in science, technology, engineering, and mathematics.

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We work across disciplines to build nanosatellites, equip vehicles with technologies that improve ecological decisions and energy use, deploy underwater robots, and develop the technologies health providers need to do their jobs–better. Our graduate students are active in one-on-one graduate-to-faculty research projects, and in 2016, our undergraduate students conducted 126,000 hours of paid research.
Total Research Expenditures: $72.5 MILLION
The Role of the Dean of the College of Engineering

The Dean of the College of Engineering (CoE) provides leadership in shaping the vision for the future role of the CoE within the University, the state of Michigan, higher education, and society at large. The dean is the CoE’s chief academic and administrative officer. The dean reports directly to the provost and works with other administrators (vice presidents, deans, directors, and department chairs), as well as faculty, staff, and students to promote excellence in research, teaching, and service. The dean is responsible for fostering successful collaborations among personnel within the CoE, other areas of the University, and external constituencies.

The dean’s responsibilities include the following:

1. Lead the CoE in developing and implementing research and education strategies in support of the goals of the University’s Strategic Plan.

2. Actively engage in fundraising and other advancement activities in order to obtain resources that support the continual growth and improvement of students, faculty, staff, programs, and infrastructure of the College and the University.

3. Enhance and develop relationships with key external constituents, including alumni, government, industry, and foundations to support departments, the College, and the University.

4. Lead planning, decision-making, and resource allocation activities within the CoE; provide oversight for decisions made at the departmental level.

5. Identify and implement new initiatives within the CoE and/or in partnership with other academic units in order to promote growth in alignment with emerging, developing, and/or priority areas.

6. Supervise CoE associate dean(s), department chairs, and office staff.

7. Make recommendations to the provost and the president regarding hiring, tenure, and promotion for tenured and tenure-track faculty, and appointments and renewals of non-tenure-track faculty and academic administrators within the CoE.

8. Comply with and provide leadership for initiatives associated with accreditation of departments and programs within the CoE and the University.

9. Ensure the CoE maintains a safe, diverse, inclusive, welcoming, and equitable learning and work environment for all students, faculty, and staff.
Personal Qualifications and Requirements

Knowledge, Skills, and Abilities:

- Ability to articulate a clear vision for the future of engineering research, education, and fundraising at Michigan Tech.
- Demonstrate excellent interpersonal, oral and written communication, and presentation skills.
- Proven leadership ability and collaborative management skills.
- Demonstrated fiscal responsibility and the ability to manage budgets.
- Demonstrated success in building partnerships among diverse stakeholder groups.
- Experience with and commitment to shared governance.

Minimum Qualifications:

- Earned PhD or equivalent degree in engineering or a closely related discipline.
- Administrative experience at or above a level equivalent to a department chair or head leading in an academic institution or in a research-oriented organization.
- Experience in managing and leading PhD-level (or equivalent) engineers and/or scientists.
- Experience in promoting a culture of safety as a professional value and an essential component of day-to-day activities.
- Experience in developing and/or maintaining a safe, diverse, inclusive, welcoming, and equitable environment.

Desired Qualifications:

- Experience in teaching at the college level.
- Record of independent and collaborative scholarship consistent with that expected for a professor in the CoE.
- Experience in fostering interdisciplinary research and/or entrepreneurial activities.
- Experience in generating resources through coordinated fundraising efforts.

JOB DESCRIPTION: DEAN OF THE COLLEGE OF ENGINEERING
College Overview

The College of Engineering is home to eight separate academic departments, with 4,714 students, 161 full-time faculty, and 115 staff.

Our vision:

The College of Engineering will inspire students, advance knowledge, and innovate technological solutions to create a sustainable, just, and prosperous world. The CoE will provide exceptional research and education that is broadly accessible.

Our mission:

Michigan Tech’s College of Engineering exists to serve the state of Michigan, the nation, and the world by providing:

- Inclusive and accessible undergraduate and graduate education for a diverse workforce in engineering and applied science.
- Research leading to the dissemination of original knowledge and the creation of new economic opportunities.
- Outreach that encourages all citizens to consider education and careers in engineering and applied science.
- Technical leadership, guidance, and support to industry and government.

Scope:

Guided by the University’s Strategic Plan and Portrait 2045, our five-year goals position the College of Engineering to coordinate closely with our faculty-, department-, and college-level efforts to strategically grow our enrollments and impact the communities we serve. Through a strategic process that encourages and thrives upon regular re-engagement, CoE and department leadership will develop top annual priorities, being cognizant to sustain ongoing initiatives as appropriate.

Goal 1: An exceptional and diverse community of students, faculty, and staff.

Goal 2: A distinctive and rigorous action-based learning experience in engineering and applied sciences for undergraduate and graduate students.

Goal 3: Research, scholarship, entrepreneurship, innovation, and creative work that promotes a sustainable, just, and prosperous world.

To learn more, go to: mtu.edu/engineering/about/mission-plan
Ongoing Development in the College of Engineering

1. Refinement of the CoE vision and strategy to position the College to continue research, education, and economic development trajectories via inclusive initiatives.

- To achieve University and College goals, the new dean is enabled to lead efforts to strategically and judiciously align finite resources to support growth initiatives. The CoE is the largest college at Michigan Tech, with 4,714 students out of a total of 7,224. The College has 945 graduate students, of which 278 are PhD candidates.

- External research expenditures in fiscal year 2016 were $16.4 million, averaging approximately $125,000 per tenure/tenure-track faculty member. Total expenditures rank us 81st nationally by the National Science Foundation (NSF).

- The vast majority of research activity occurs through University research centers and institutes or with multi-investigator teams. We are increasingly pursuing and securing larger multi-investigator, multi-university projects.

- Our faculty are research-active, with 86 percent submitting proposals and 62 percent currently chaperoning externally funded grants.

- Roughly 20 percent of our external funding is industry sponsored, which contributes to a culture yielding 6.4 invention disclosures (compared to the national average of 4.45) and 2.1 licenses (national average is 1.39) per $10 million in research.

- Ongoing effort to impact the improvement of facilities, and growth of faculty, staff, and external graduate support resources.

2. Hiring, developing, and retaining outstanding faculty and staff.

- With nearly half of our faculty hired in the past nine years, we have programs supporting career development, such as Early Career Management Committees,
Faculty Fellows, and sabbaticals as foundations for faculty development.

- Portrait 2045 goals (mtu.edu/stratplan/portrait) anticipate a modest increase of tenure-track faculty in the CoE.

- Staff attend professional conferences and leverage on-demand trainings.

- Michigan Tech is an NSF ADVANCE institution that has steadily increased women faculty and students. Recent ADVANCE efforts have focused on campus-wide climate transformations via an open, grassroots, continuous-improvement effort, Advanced Matrix Process for University Programs (AMP-UP).

- Women comprise 16 percent of the tenure-track faculty and 43.5 percent of the non-tenure-track faculty cohort.

- The College seeks to hire a diverse faculty with competitive start-up packages and in growing incentives for retaining exceptional faculty.

3. Increasing the collaborative, multidisciplinary research with an emphasis on graduate students, research positions, and infrastructure.

- Collaborative, multidisciplinary research is foundational to the College of Engineering’s character, and we continue to reduce barriers between disciplines.

- Via the State of Michigan’s capital outlay process, a new health sciences building, currently referred to as the H-STEM Complex, is being considered for development within the next five years. The vision for this facility is to bring together health-related disciplines from across campus. Other active multi- and transdisciplinary initiatives on campus include mobility, health, sustainability, and energy.

- Increasing external research funding and research productivity, and continuing to enable quality PhD enrollments and postdoctoral positions:

  - The greatest growth over the last 10 years has been in coursework and online MS programs, which has been accompanied by steady increases in our PhD programs.

  - Women comprise 22.3 percent of PhD students.

  - Houghton was recently named one of the best cities in the US for graduate school by Magoosh, based on 12 key indicators of academic, social, and economic strength.

  - Opportunities exist to grow and align graduate programs to support long-term research specialization goals and to expand domestic researchers.

4. Inspiring the creativity, possibilities, and breadth of engineering and applied science via innovative and contemporary educational approaches.

- 52.4 percent of Michigan Tech’s beginning freshmen are in the top 20 percent of their high school graduating class (average GPA and ACT scores above 3.70 and 27.2, respectively).

- Student recruitment efforts include the Crazy Smart campaign and our Women in Engineering Learning Communities.

- Michigan Tech faculty provide a practical, hands-on education closely aligned with industry. Our Enterprise program enrolls more than 800 students per year and provides a unique, hands-on education; 73 percent of our 26 Enterprise teams are supported by external funds.

- CoE graduates are prized for their technical prowess, with a 94 percent job placement rate and $62,000+ starting salaries.

- Women comprise 23.5 percent of the college undergraduates. We currently add
approximately 16 additional female students each year, while we need to add roughly 44 per year to meet Portrait 2045 goals.

• We have historically had an increase of about six domestic underrepresented students, but need to add approximately 16 or more annually to meet targets.

• Opportunities exist to increase our students’ workplace skills with a broad range of abilities in a society with changing trends in information flow.

5. Cultivating external relationships, creatively leveraging financial resources in order to grow the College’s academic and scholarly initiatives along with the needed infrastructure (instructional, experiential learning, and research).

• The University’s Portrait 2045 outlines a vision for the institution, and the strategic goals align with this portrait. Opportunities exist for the College to more efficiently and effectively align resources with strategic goals and the historic progress toward those goals.

• Past investments in equipment, people, safety, and space have manifested in Core Research Facilities, an annual resource distribution for those facilities, internal funding competitions, strategic faculty hiring initiatives, a culture of safety campaign, and space reallocation programs.

• Cultivation and engagement of alumni, in addition to streamlined, facilitatory policies and practices, will help strategically enhance infrastructure and grow the College. Opportunities stem from many alumni with strong affinities to their departments.

• Engaging closely with departments and the advancement office to attract resources that assist with the vision and Portrait 2045.

Average undergraduate starting salary: $63,400
Glenn D. Mroz became the ninth president of Michigan Technological University in 2004 after serving as dean of the School of Forest Resources and Environmental Science for four years. He served as a faculty member in the School since 1980. Mroz earned his BS and MS degrees in forestry from Michigan Technological University and earned his PhD degree in forestry from North Carolina State University in 1983.

Mroz is chair of the Presidents Council State Universities of Michigan and former chair of the Great Lakes Intercollegiate Athletic Conference Council of Presidents. He has also served as a trustee of the Citizens Research Council of Michigan. As president, he has supported the formation of the Michigan Tech Entrepreneurial Support Corporation and Superior Innovations—corporations that support startup companies. He is also a member of the Society of American Foresters and Xi Sigma Pi, the forestry honor society.

On April 6, 2017, President Mroz announced his intention to return to faculty no sooner than June 30, 2018. Prior to the announcement, Mroz and University leadership developed a comprehensive transition plan in anticipation of leadership succession. Mroz’s announcement marked the beginning of the transition period, allowing the Board of Trustees to conduct a thorough and effective search.

Mroz is the third-longest serving current president among the 15 public universities in the state of Michigan and will be the fourth-longest serving president at Michigan Tech by the time he steps down next year.

Jacqueline Huntoon is provost and vice president for academic affairs at Michigan Technological University. Huntoon served as dean of Michigan Tech’s Graduate School from 2005 to 2015. She is also a professor in the Department of Geological and Mining Engineering and Sciences. From 2003 to 2005, she served as program director for diversity and education in the National Science Foundation’s Directorate for Geosciences.

Huntoon has been recognized nationally for her leadership in higher education and in her field of geology. She has served as a member of the boards of the Council of Graduate Schools, Geological Society of America, Graduate Record Exam, Michigan Science Teachers Association, Midwestern Association of Graduate Schools, and National GEM Consortium. She is a fellow of the Geological Society of America.

Huntoon earned her PhD in Geology at the Pennsylvania State University and is a member of the Geosciences Department Alumni Advisory Board. In 2016, she was awarded the Charles L. Hosler Alumni Scholar Medal by the College of Earth and Mineral Sciences at Penn State. Her work has been supported by more than two dozen sponsored research awards, including most recently a $5 million grant from the Herbert H. and Grace A. Dow Foundation to reform middle-school science education in Michigan.
The Value of a Michigan Tech Education

“Less than one percent of Michigan Tech students come from families who are in the top one percent of family income. But 2.2 percent of our students end up there later in life.

About 38 percent of Michigan Tech students come from families in the top 20 percent of family income; 61 percent of our students end up there later in life.

Eighteen percent of our students move up two or more income quintiles. And the chance of a student moving from the bottom 20 percent of household income to the top 20 percent? It’s 47 percent.

This is why access to education is important. This is why financial aid is important. Over 90 percent of Michigan Tech students receive financial aid in the form of merit and need-based support, and 26 percent—those students from the bottom fifth of family income—benefit directly from Pell grants. In fact, seven percent of our first-year students this year had financial need. They had more need than their counterparts at 11 of the other Michigan public universities and at 13 of the state’s private colleges.

These are good, solid students from all 80 counties, which is why we’re rated as an A+ school for B students by US News & World Report and a (great) school that you can actually get into by Time and Money magazines.”

- President Glenn Mroz
About the University

Our vision: To lead as a global technological university that inspires students, advances knowledge, and innovates to create a sustainable, just, and prosperous world.

Our mission: To deliver action-based undergraduate and graduate education and discover new knowledge through research and innovation.

• We create solutions for society’s challenges through interdisciplinary education, research, and engagement to advance sustainable economic prosperity, health and safety, ethical conduct, and responsible use of resources.

• We attract exceptional students, faculty, and staff who understand, develop, apply, manage, and communicate science, engineering, technology, and business to attain the goal of a sustainable, just, and prosperous world.

• Our success is measured by the accomplishments and reputation of our graduates, national and international impact of our research and scholarly activities, and investment in our University.

Our goals:

1. An exceptional and diverse community of students, faculty, and staff.

2. A distinctive and rigorous action-based learning experience grounded in science, engineering, technology, sustainability, business, and an understanding of the social and cultural contexts of our contemporary world.

3. Research, scholarship, entrepreneurship, innovation, and creative work that promotes a sustainable, just, and prosperous world.

What do we value?

• Community

• Scholarship

• Possibilities

• Accountability

• Tenacity
Welcome to The Keweenaw

Our setting on Michigan’s Keweenaw Peninsula provides a beautiful backdrop to world-class research and education. Michigan Tech is located in Houghton, Michigan, which was included as one of the best rural places to live in the US in The 100 Best Small Towns in America by Norman Crampton.

• Houghton, its sister city Hancock, and the surrounding towns have a combined population of approximately 15,000. However, add in the Michigan Tech student population, and it grows to more than 22,000.

• Safewise ranks Houghton in the top 20 safest college towns in America.

• Houghton-Portage Township schools rate 9 out of 10 on greatschools.org.

• The Keweenaw Peninsula is temperate, averaging in the low- to mid-20s in the winter and mid- to high-70s in the summer. Winter brings more than 200 inches of snow, whereas summers are generally sunny.

• The ruggedly beautiful Keweenaw Peninsula is one of the Midwest's top year-round recreation destinations, thanks to its record snowfalls and comfortable summers. The Keweenaw was rated one of the top 10 outdoor adventure spots by National Geographic Adventure Magazine. Outdoor enthusiasts of all ages downhill and cross-country ski, snowboard, bike, hike, paddle, camp, golf, and more. Surrounded by Lake Superior, pristine shorelines earned the Keweenaw second place in Lake Superior Magazine’s “Top-10 Lake Superior Destinations” list, and National Scenic Byways recognized us as “one of the best snowmobiling and winter sport destinations in the US.”

• Houghton’s historic downtown features locally owned shops, eateries, museums, and brewpubs, while chain restaurants and major shopping outlets are a short car ride away on the business strip. You can also explore locally owned stores across the bridge in Hancock and in historic Main Street Calumet, just 15 miles north of campus.

• Michigan Tech’s arts and entertainment scene is vibrant, diverse, and global. The University is home to the area’s premier performing arts venue, the Rozsa Center, and the unique black-box McArdle Theatre in the Department of Visual and Performing Arts.
University Events and Fast Facts

| Graduate Students: 1,443 | Undergraduate Programs: 120+ | Master’s Programs: 40 | PhD programs: 28 |

Winter Carnival: Organized by Blue Key National Honor Society, Winter Carnival started in 1922 and has grown to become one of the largest annual winter festivals in the nation. Featuring dozens of one- to two-story intricate snow statues all around campus and the community, this event also brings together students to participate in broomball, comedy skits, sleigh rides, a queen coronation, a beard contest, and lots of winter fun.

Parade of Nations: Michigan Tech hosts the region’s largest, oldest multicultural festival, flying the flags of more than 60 countries represented on campus and in our community. Thousands join us in mid-September for international food, entertainment, and family activities promoting global peace and unity.

To learn more or to apply, visit: mtu.edu/dean-engineering

Michigan Technological University is an equal opportunity educational institution/equal opportunity employer, which includes providing equal opportunity for protected veterans and individuals with disabilities.