Message From the Dean

2010 was the 60th anniversary of the formation of the Graduate School!

In 1960 Dr. Donald Yerg became the first dean of the Graduate School. This is not to say that graduate education at Michigan Tech only began in 1960. Quite to the contrary, the first graduate students were on campus in 1889, only four years after Michigan Tech (then the Michigan Mining School) was established. The first MS degrees were awarded in 1927 and first earned doctorates were granted in 1934.

Although this annual report is mainly a review of what happened during 2009-10, it is also the basis for our planning for the future. Since the middle of the twentieth century, Michigan Tech’s graduate programs have seen nearly a ten-fold increase in enrollment. Fall 2009 enrollment reached a record high of 1,206 students, approximately one-seventh of Michigan Tech’s overall enrollment. The fall 2010 enrollment was even greater, reaching 1,256 students. The University’s Strategic Plan calls for continued growth in graduate enrollment so that the number of graduate students will reach 3,000 by 2035. Faculty and staff on campus are working hard to make this vision a reality.

You can help, too, if you choose to respond to our “Give us 60” campaign. We are asking graduate alumni to send us sixty words about how their Michigan Tech graduate education made a difference in their lives. We also hope that everyone who responds will consider making a donation to the Graduate School that will be used to enhance graduate education. Any amount is helpful; the first gift to the Graduate School was for $7 (in 1970).

Jacqueline E. Huntoon  •  Dean of the Graduate School
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Graduate Student Enrollment
Percent by Ethnicity: Fall 2009

The number of graduate students not supplying race/ethnicity information grew since the fall of 2008, while the number identifying themselves as multiracial decreased. Michigan Tech attracts a large proportion of international students due in part to the University’s extensive offerings in the STEM (science, technology, engineering, and mathematics) disciplines.
Office Renovation

Through a generous alumni donation, a new graduate student conference center has been constructed. At the same time, the Graduate Student Government (GSG) offices moved to the fourth floor of Michigan Tech’s Administration Building. The new conference room will provide a space for GSG to conduct business. It is being outfitted with state-of-the-art technology, which can be used for graduate students’ presentations and defenses.

Giving Opportunities

Dean’s Fellowship
Contributes to the development of a rich and distinctive academic environment through the recruitment of a diverse graduate student population.

Doctoral Finishing Fellowship
Financially supports outstanding PhD candidates during their last semester on campus.

Graduate School Peace Corps Fellowship
Recognizes outstanding Peace Corps Master’s International students.

Graduate School Travel Fund
Supports graduate students’ travel to academic conferences.

Graduate Student Enhancement Fund
Acknowledges and rewards graduate student achievements through celebratory events, cash awards, and distinctive gifts.
New Programs
CREATING THE FUTURE AND CHANGING THE WORLD

- Applied Cognitive Science and Human Factors (MS-PhD)
- Computer Engineering (MS-PhD)
- Environmental and Energy Policy (PhD)
- Geophysics (PhD)
- Hybrid Electric Drive Vehicle Engineering (Certificate)
- Sustainable Water Resources Systems (Certificate)

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>4</td>
<td>The number of graduate programs ranked in the top fifty by <em>US News &amp; World Report</em>. (Civil Engineering, Environmental Engineering, Materials Science and Engineering, and Mechanical Engineering-Engineering Mechanics)</td>
</tr>
<tr>
<td>47.2</td>
<td>Percent increase for first-time doctoral students in fall 2009</td>
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<tr>
<td>22.6</td>
<td>Percent overall increase in graduate enrollment in fall 2009</td>
</tr>
<tr>
<td>22</td>
<td>Number of research centers and institutes conducting innovative research</td>
</tr>
<tr>
<td>60.4</td>
<td>Millions of dollars in research expenditures for 2009</td>
</tr>
<tr>
<td>1206</td>
<td>Number of graduate students enrolled at Michigan Tech in fall 2009</td>
</tr>
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Professional Affiliations of the Graduate School Staff

- American Association of University Women (AAUW)
- American Society for Engineering Education (ASEE)
- Association for Women in Science (AWIS)
- Association of International Educators (NAFSA)
- Council for Advancement and Support of Education (CASE)
- Council of Graduate Schools (CGS)—Board of Directors
- National Coalition Building Institute (NCBI)
- American Association of Collegiate Registrars and Admissions Officers (AACRAO)
- National Consortium for Graduate Degrees for Minorities in Engineering and Science (GEM)—Board of Directors
- National Association of Graduate Admissions Professionals (NAGAP)
- Society for Advancement of Chicanos and Native Americans in Science (SACNAS)
- American Association for the Advancement of Science (AAAS)
Graduate Student Enrollment
PAST, PRESENT, AND PROJECTED

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</thead>
<tbody>
<tr>
<td>PhD Students</td>
<td>637</td>
<td>670</td>
<td>710</td>
<td>831</td>
<td>916</td>
<td>984</td>
<td>1206</td>
<td>1250</td>
</tr>
<tr>
<td>Master's Students</td>
<td>201</td>
<td>223</td>
<td>229</td>
<td>244</td>
<td>249</td>
<td>250</td>
<td>227</td>
<td>258</td>
</tr>
<tr>
<td>Graduate Nondegree</td>
<td>201</td>
<td>223</td>
<td>229</td>
<td>244</td>
<td>249</td>
<td>250</td>
<td>227</td>
<td>258</td>
</tr>
<tr>
<td>Projected Enrollment</td>
<td>637</td>
<td>670</td>
<td>710</td>
<td>831</td>
<td>916</td>
<td>984</td>
<td>1206</td>
<td>1250</td>
</tr>
</tbody>
</table>

Enrollment of degree-seeking and nondegree-seeking students reached an all-time high in the fall of 2009. The University’s Strategic Plan calls for continued growth, with the goal of reaching 1,250 students (approximately 500 PhDs and 750 Master’s) by 2012 and 3,000 students by 2035.

Graduate Degrees
PHD AND MASTER’S GRADUATES

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>02–03</th>
<th>03–04</th>
<th>04–05</th>
<th>05–06</th>
<th>06–07</th>
<th>07–08</th>
<th>08–09</th>
<th>09–10</th>
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<tbody>
<tr>
<td>PhD Graduates</td>
<td>201</td>
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<td>227</td>
<td>258</td>
</tr>
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In 2009-10, Michigan Tech awarded a record number of graduate degrees: 56 PhDs, 202 master’s degrees. Eleven graduate certificates were also awarded. The University’s goal for 2012 is to graduate approximately 65 PhDs and 225 master’s students.
1885
School is Established
In 1885, the Michigan Mining School was established and began educating engineers to serve Michigan’s copper and iron industries. The first location for the school was a rented space at the Houghton Fire Hall. As the school broadened its mission, it relocated to its first official building, Hubbell Hall, and was renamed Michigan College of Mines (MCM).

1927
First Master’s Degrees
Jack L. Byers and Corbin T. Eddy received the first two master’s degrees awarded by the College. Both degrees were in the area of metallurgy and both degree recipients went on to be faculty members at the College.

College Name Change
The Michigan College of Mines changed its name to the Michigan College of Mining and Technology (MCM&T) to reflect its expanding curriculum.

1934
First Earned PhDs
The first two earned PhDs were granted to Roy W. Drier and Corbin T. Eddy by the metallurgy department. Drier pioneered early X-ray research and later received the first Faculty Research Citation. He also helped to establish the MCM&T foundation, which is the predecessor to the Michigan Tech Fund. Eddy was appointed the chair of the metallurgy department in 1940.

1880 1900 1920 1930 1940 1950

1889
First Graduate Students
Edmund J. Longyear and William E. Parnell were our first two graduate students. Both started their education at MCM in the first undergraduate class and graduated in 1888. Longyear went on to use diamond drill technology for prospecting on the Mesabi Range, and Parnell served as the superintendent of several area mines and as a consulting engineer for the city of New York.

1930s
First Female Graduate Students
During the 1930s, the first female graduate students arrived on the campus of MCM&T. The first was Margaret R. Holly, in 1933, who was a candidate for an MS in General Science. She was followed by Eileen G. Driscoll and Eunice R. Jackson, who both studied graduate-level chemistry in 1936.

1950s
Board of Control Approval
On July 6, 1950, the Board of Control approved the creation of the Graduate School, Graduate Council, and the publication of the Graduate Bulletin. Later that year, on October 6, the Board of Control approved the appointment of Dr. A.K. Snelgrove (Geology) to the position of director of graduate studies.
1960

Formalization of the Graduate School

Dr. Donald G. Yerg was the first Graduate School dean and appointed the first Graduate Faculty Council. He was also instrumental in producing the graduate catalog.

Graduate School deans from 1960 until today include Donald Yerg, Leland Shirley, Eugene Huang, Thomas Courtney, Bertwell Whitten, Sung Lee, Bruce Rafert, David Reed, Martyn Smith, and Jacqueline Huntoon.

1964

Michigan Technological University

Michigan College of Mining and Technology became Michigan Technological University in 1964. With a new president, Raymond L. Smith (1965-79), enrollment grew from 3,400 to more than 7,600 students. During Smith’s tenure, research funding increased 250 percent and nearly 66 percent of faculty had PhDs, compared to 27 percent in 1964.

1970s

First Graduate Donation

The first recorded donation to the Graduate School was $7 on January 15, 1970.

First Female PhD

Nancy Scofield was the first female to be granted a PhD in Michigan Tech’s history. Her degree was in geology, with research in the area of mineral chemistry.

1980s

Graduate School Growth

In 1981-82, Michigan Tech received 661 graduate applications and had a graduate enrollment of 310 students. Currently the Graduate School processes over 2,800 applications per year and has an enrollment exceeding 1,200 students.

2000s

First Female Dean

Jacqueline Huntoon is the first female dean of the Graduate School (2005).

1000+ Graduate Students

In fall of 2009, graduate enrollment exceeded 1,000 students. In 2009-10, Michigan Tech awarded a record 258 graduate degrees.

2010

60th Anniversary

The sixtieth anniversary of the Graduate School brings 27 PhDs, 34 master’s, and 5 graduate certificate programs to Michigan Tech’s campus. These programs have an enrollment of over 1,200 students. We are proud to say that, as of 2010, there are 6,911 graduate alumni living and working across the globe. To date, our alumni and friends have donated $5.2 million in fellowship gifts to support our graduate students.
Graduate Students from Michigan

Michigan residents comprise approximately one third of our graduate student population. Our graduate students are conducting cutting-edge research that will positively impact the State of Michigan's economy in the areas of energy, health sciences, manufacturing, communication, sustainability, and water and forest resources. Graduate-level research and technology transfer are keys to Michigan’s future ability to compete on a global scale. Our graduate students are “Creating the Future” and “Changing the World” for the State of Michigan.

Michael Brodeur-Campbell  Chemical Engineering, PhD, Spring 2011
A native of Port Huron, Michael Brodeur-Campbell is a PhD student in chemical engineering. Michael’s research focuses on improvement of enzymatic hydrolysis of cellulose to glucose for the production of cellulosic ethanol. This step remains a major hurdle to commercial implementation of cellulosic ethanol. Cellulosic ethanol is a promising technology for the production of a large quantity of renewable liquid fuel from biomass. Fuel produced from sustainability grown biomass could displace a significant amount of the petroleum used in the US.

“Our graduate programs attract some of the best minds in the world to Michigan, while also serving some of the very best students from our state.”
President Glenn Mroz

32% of Michigan Tech graduate students are Michigan residents
Of these, 71% are from the south half of the lower peninsula.

NASA/courtesy of nasaimages.org
Women Graduate Students

From the first female graduate students on our campus in the 1930s to the class of 2010, Michigan Tech has continuously increased the percentage of female students in its programs. Today, more women than ever are seeking advanced degrees.

The Graduate School actively recruits and supports women. Recruitment can be direct, like attending the Society of Women Engineers (SWE) recruitment fairs or through networking at, for example, the Grace Hopper Celebration of Women in Computing.

This year Michigan Tech was ranked 15th in the nation by the American Society for Engineering Education for awarding 31.4 percent of master’s degrees in engineering to women.

Kari Brown  Mechanical Engineering, PhD, Summer 2012

Kari Brown, a first-generation college student from Detroit, is currently a PhD candidate in mechanical engineering at Michigan Tech. She believes access to education should be universal and is passionate about outreach to underprivileged and historically underrepresented groups in technical fields. Kari is researching sustainable methods of material recovery from vehicles to reduce material consumption and carbon dioxide emissions. She is a recipient of the King-Chavez-Parks Future Faculty Fellowship.
Quality Education

**Primary Field of Study—Math/Engineering/Life and Physical Sciences**

88.8% of Michigan Tech’s PhDs have math, engineering, life, or physical science as their primary field of study, as compared to only 45.2% of PhD recipients from High Research Universities in general.

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Less Debt

**More PhDs Graduate with Less Debt**

90.4% of Michigan Tech’s PhD graduates have less than $35,000 of debt after graduation. In contrast, only 76% of PhD recipients from all High Research Universities graduated with less than $35,000 of debt.

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Real Research

**Research and Development Work Activity**

56.3% of Michigan Tech’s PhDs are dominantly involved in research and development after graduation, while only 26.3% of PhD recipients for High Research Universities as a whole are involved in these activities.

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More Offers

**Post-Graduation Employment—in Industry**

52.8% of Michigan Tech’s PhD graduates leave with a signed employment contract. At High Research Universities, in general, only 41.4% of PhD graduates leave with a signed contract.
2009–10 Full-Time Graduate Tuition*
*Values shown are per semester. For schools on the quarter system, a “semester-equivalent” tuition is compared.

Like many universities, Michigan Tech has been forced to raise tuition in recent years. Educational programs in science and engineering are expensive, and the current economic situation in Michigan has made it difficult for the state to increase funding to universities. Our tuition has remained competitive however. In contrast, our minimum stipends (which are normally offered to incoming students) lag behind all but one of our benchmark universities. The cost of living is relatively low in Houghton, but some students do not want to come to Michigan Tech simply because they are offered more money elsewhere.
Michigan Technological University is an equal opportunity educational institution/equal opportunity employer. Michigan Technological University is a leading public research university, conducting research, developing new technologies, and preparing students to create the future for a prosperous and sustainable world. Michigan Tech offers more than 50 graduate degree programs in engineering, forestry and environmental sciences, computing, business and economics, natural and physical sciences, humanities, and social sciences.

There are many different ways you can support and give back to the Graduate School. We’ve listed a few of them below to get you thinking:

• 60 words on what you are doing
• 60 minutes of your time to help recruit new students
• $60 to help a graduate student travel to a professional conference
• $60K for six finishing fellowships

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www.mtu.edu/gradschool