

Tech Topics

January 12, 2001
Vol. 33, No. 17

Michigan Tech's Faculty-Staff Newsletter

Published weekly by University Relations

Longtime ME-EM Professor Ward Frea Dies

Professor **Ward Frea**, one of the longest-serving faculty members at Michigan Tech, died January 4 following an apparent heart attack.

Frea, 68, collapsed on the trail while cross-country skiing with his longtime friend, Presidential Professor **John Crittenden** (Civil and Environmental Engineering).

"He loved skiing," Crittenden said. "It was a daily activity in the winter. Skiing and running were passions for him."

Frea graduated from what was then the Michigan College of Mining and Technology in 1954 with a BS in Mechanical Engineering, took a position with Allis-Chalmers, and then returned to Michigan Tech to earn an MS in Mechanical Engineering in 1960. He was an instructor during his last year as a graduate student, and served as a graduate teaching assistant from 1955 through 1958. Frea left to continue his education at the University of Washington, where he received his PhD in Mechanical Engineering in 1963. In September 1963, he returned to MTU as an assistant professor. He was promoted to the rank of professor in 1971.

"He was a quiet, thoughtful person, and he had the longest service of any of our faculty," said ME-EM Chair **Bill Predebon**. "He was here in the early days of the ME department, and was responsible for the early development of the research and graduate programs."

"You never saw Ward walking," Predebon added. "He ran to and from work every day. He was just relentless."

Presidential Professor **John Johnson** (ME-EM), who came to Michigan Tech in 1970, called Frea "a wonderful person, committed to Michigan Tech." In the 1960s, Frea was among the University's most productive researchers, advising numerous graduate students. In later years, he turned his attention to the classroom. "He was a sincere and devoted teacher," Johnson said. "His is a big loss. It's very tough, a real blow."

Frea maintained a heavy teaching schedule, with three classes a semester, including heat transfer, thermal fluids, and heating,

Continued on page 3

*Happy people plan actions;
they don't plan results.*

—DENNIS WHOLEY

For the Campus Campaign, Every Little Gift Helps

Big decisions often hinge on little things. So before major donors commit to supporting programs at Michigan Tech, they often ask how many faculty and staff contribute.

"It may seem a bit dramatic to say that this can be a deciding factor in whether a company or foundation makes a gift or not, but it's true," said **Paula Nutini**, director of annual giving. "Giving indicates whether employees believe in the mission of the institution enough to invest in it."

Erin Minne, director of foundation relations and stewardship, saw this principle played out at a recent regional meeting on the capital campaign. "A representative from Dow Corning asked what our campus participation rate was," she said. "He said that the committee could encourage alumni to give at the same rate."

"He was also happy to hear that the Fund's participation rate is 100 percent."

"I was surprised," she added. "I didn't think

they paid that much attention. But it makes sense: If the people who are internal, who really know what's going on, participate, it encourages others. On the flip side, why should they support a program if the people closest to it don't support it? I'm constantly impressed at how many foundations and other donors ask about participation rates."

So far during 2000-01, 416 faculty and staff, or 31.8 percent, have participated in the Campus Campaign, making gifts and pledges totalling more than \$134,000.

"If you haven't contributed because you think your gift won't count, be assured that it will," Nutini said. "Every dollar helps, and your support for Michigan Tech tells major donors that you believe in the University and its programs."

For more information on the Campus Campaign, contact Nutini at pjnutini@mtu.edu or 487-3324.



MLK Week Features "I Have a Dream" Speech

Martin Luther King Jr. Celebration Week at Michigan Tech, with the theme "The Love, the Life, the Legacy," begins on Monday, January 15, at noon, with King's "I Have a Dream Speech," to be delivered on the steps of the Memorial Union. Classes will be dismissed at noon, and at 6:00 p.m., a candlelight vigil will be held around the leaning tree in front of the EERC. Everyone is invited to come and bring a candle.

On Saturday, January 20, a dinner theater honoring King's legacy will be held at the Memorial Union (see related story). And on Monday, January 22, at 6:00 p.m., the National Coalition Building Institute will hold a "Controversial Issues" workshop in Memorial Union 105A.

MLK events are sponsored by the Black Student Association, the National Society of Black Engineers, the Society of African American Men, and the Society of Intellectual Sisters. For more information, contact Educational Opportunity at 487-2920

Essay Contest for Students

Faculty and staff are asked to encourage their students to participate in the Dr. Martin

Luther King Jr. Leaning Tree Essay Contest. In 75-100 words, participants will write how Michigan Tech's leaning tree and the life of King parallel each other. The leaning tree, located in front of the EERC, leans as it strives to reach sunlight blocked by surrounding buildings. The deadline for submitting entries is January 19, and the prize is \$100. Essays should be sent to Betty Chavis in Educational Opportunity. For more information, call 487-2920.

Martin Luther King Dinner Theater Jan. 20

All members of the University community are invited to celebrate Martin Luther King Jr. Week at a dinner theater on Saturday, January 20, in the Memorial Union Ballroom.

Dinner begins at 5:00 p.m., followed at 7:00 p.m. by "Through Our Eyes" from 7AM Productions, of Greensboro, North Carolina. Tickets are \$6 for students, \$15 for everyone else, and are available from Educational Opportunity. Contact Sandy Henkel at 487-2920 or shenkel@mtu.edu

RFP for Perspectives

Permanent faculty interested in teaching UN1001 for fall 2001 and spring 2002 are invited to submit proposals. Funding is available.

UN1001 Perspectives on Inquiry is the seminar for first-year students that begins the general education sequence. This year, 71 sections are being taught by 53 instructors from 14 departments. The success of this course is due completely to excellent teachers from across the University. For these faculty, Perspectives is an exciting course to teach. The sections address topics chosen by the instructor; the course focuses on inquiry that is intellectually stimulating to instructors and students; and sections are capped at 22 students. (The goal for 2001: fewer than 20.)

Descriptions of the course and individual sections are at www.biol.mtu.edu/courses/bl447/poi_home.htm.

UN1001 instructors who wish to teach their same topic next year should contact Bob Keen, course coordinator, at rekeen@mtu.edu. If you want to teach a new topic, submit a new proposal. Submitting a proposal expresses interest. It does not commit you to teaching a section. That decision comes later.

For permanent faculty teaching UN1001, \$4,500 will be given to the SS&E accounts of their departments. Instructors can discuss the disposition of these funds with their department chairs. (Exceptions apply to those departments with assigned commitments to UN1001.)

Some sample proposals from 1999 are also available on the Perspectives Web site. Note that these proposals are in a format that differs from the present RFP.

Please send your proposal to Keen by February 1; e-mail is preferred. Deadline extensions may be available if requested.

Proposals will be reviewed by the Perspectives committee of faculty and professional staff. The committee may consult the Center for Teaching, Learning, and Faculty Development to ensure the selection of effective teachers.

If insufficient permanent faculty respond, temporary instructors will be solicited. Temporary instructors who wish to teach next

MichiganTech

Bill Curnow, executive director, University Relations
Marcia Goodrich, Tech Topics editor
Tech Topics Web site: www.mtu.edu/level3/ttpics.html

To get Tech Topics via e-mail, send a message to MAJORDOMO@MTU.EDU saying SUBSCRIBE TECH-TOPICS-L
Information to be included in Tech Topics should be submitted to the Tech Topics editor in one of the following ways:

- By e-mail to ttpics@mtu.edu
- By campus mail, send typed copies to Tech Topics, University Relations.

Each week, the deadline for submitting information is Friday at 5:00 p.m. for publication the following Friday.

Assessing General Education

Center for Teaching, Learning, and Faculty Development
By William Kennedy, director



One of the first issues we must come to grips with as we roll out our new curricula is assessing achievement in general education. Our regional and professional accrediting agencies view assessment as a vital function of a university. The NCA Handbook states that an institution's "program to assess student learning should emerge from and be sustained by faculty and administrative commitment to excellent teaching and effective learning and use the information gained from the systematic collection and examination of assessment data both to document and improve such student learning. A strong assessment program is founded on a plan that is widely accepted and routinely updated, is ongoing, and is related to other planning and budgeting processes."

According to Cecelia Lopez, associate director of the Commission on Institutions of Higher Education of the NCA, an effective general education assessment plan must be based on explicit and public objectives for student learning which are linked to specific measures of achievement. The plan should specify exactly how and when data will be collected, interpreted, and utilized, by whom, and to what end.

Programmatic assessment plans must be methodologically sound and well thought out. Lopez recommends using pre-tests and post-tests to determine the amount of "value added" by the education, since pre-test assessment can estab-

lish a baseline of the competencies of incoming students. General education assessment plans must use appropriate sampling techniques and should use multiple direct measures to triangulate on objectives and avoid systematic bias. For the general education, Lopez also recommends assessing student learning during the course of the program as well as before students begin and after they complete their courses.

lish a baseline of the competencies of incoming students. General education assessment plans must use appropriate sampling techniques and should use multiple direct measures to triangulate on objectives and avoid systematic bias. For the general education, Lopez also recommends assessing student learning during the course of the program as well as before students begin and after they complete their courses.

In 1998, Lopez delivered an address at the AAC&U national meeting to discuss NCA reviews of 130 undergraduate general education assessment plans. Based on these reports, Lopez cautioned that schools 1) should not rely on anecdotes, but should present solid evidence of student learning; 2) should not focus on what students are exposed to but should focus on demonstrating what students are able to do as a result of the experience; 3) should not rely exclusively on indirect measures of learning (student opinion surveys, etc.) unless these measures enrich or clarify findings gathered from direct measurements.

Consultant evaluators also cautioned that general education assessment plans shouldn't rely too heavily on standardized tests. Although these tests are nationally normed, most tests provide only the most general sort of feedback on the programs' strengths and weaknesses. They do not provide the feedback needed to improve specific instructional designs, thereby defeating the purpose of the assessment.

Next week, we'll look at how some other schools are assessing their general education programs.

Workshop Series for Parents, Young Teens Starts Jan. 17

Parents and teens are often at odds. This program allows parents and their eighth- and ninth-grade children to learn together. While the parents are in one room learning about adolescent topics and how to discuss them with their children, the teens will be in another room learning how to express themselves with their parents in a positive manner. Then, the parent and teen will come together to discuss what they learned. Teen issues like sex, drugs, violence, and discipline will be discussed throughout this six-session workshop.

Workshops will be held January 17, 24, and 31; and February 7, 14, and 21, from 6:30 to 8:30 p.m. at The Institute, 900 W. Sharon Avenue, Houghton.

Call 482-4880 to register. The deadline to register is January 12. For more information, stop by the Benefits Office to pick up a flyer.

New Staff

Marlene J. Brown has joined the staff of the Center for Teaching, Learning, and Faculty Development as a secretary. She was previously employed by the Michigan Tech Fund. Brown lives in Mohawk.

year should notify Keen. A workshop series is planned for current and prospective instructors for the spring semester.

If you have any questions, contact Keen at 487-2346 or rekeen@mtu.edu. Interested instructors should also feel free to contact current instructors of UN1001 for first-hand accounts. Be forewarned: Many of the instructors have become contagiously enthusiastic about this course.

Proposal Format

If you are interested in teaching Perspectives, please address the following points in a brief proposal (500 words maximum), e-mailed to rekeen@mtu.edu by February 1:

1. What general topic do you propose as the focus for your section?
2. Describe your interest in and approach to this topic.
3. What one or two central questions will guide the inquiry of the course?
4. What different perspectives on the central question will be addressed in the course? (Preferably, express this in terms of further questions.)
5. What are your specific ideas for material for your section (books, articles, films, videos, field trips, etc.) that you might use?

Ward Frea Continued from page 1

ventilation and air conditioning. "He taught his courses with care and dignity, and then he'd go skiing," said Professor **Oner Arici** (ME-EM). "Whatever course he taught, he knew really well. And he'd do whatever we asked him to do; he would do his job the best way he knew how.

"I would walk by his house on the way to work, and he'd say hi and start running," Arici remembers. "By the time I got here, he was already having his coffee. . . . And he was extremely generous and helpful, a good friend, a nice person, and a good colleague. I will miss him."

Professor **Narasipur Suryanarayana** (ME-EM), who came to MTU thirty years ago, remembers Frea's decades at Michigan Tech. "He was a very good researcher, with an incisive knowledge of the thermal sciences, and he was a good experimentalist," he said. "And he had a good understanding of students' aspirations and capabilities, of what they wanted and what they could do. He had a very strong commitment to a good curriculum."

Suryanarayana saw Frea's perspective change over the years. "In the beginning, he was into snowmobiling, but then he became committed to the environment," he said. "So he turned away from consumerism. He would keep a car for a long period of time, and he enjoyed his ability to repair things and find solutions, to take a computer and make it work. . . . He was committed to leaving as small a footprint as possible."

Crittenden tells about Frea's careful frugality. "It gave him a great deal of pleasure not to have to buy a \$30,000 SUV by keeping his old, high-mileage Subaru going in winter," he said. "Since he did a lot of his work outside, I mentioned to him that he should have a garage built. He would say, 'Yeah, I probably should. But I have this old hot air popcorn popper that I use to heat things up, and it keeps my hands warm.'"

"He was like that. The more he could do for himself, the better he liked it. And of course, he cared deeply about Michigan Tech and its direction. He was concerned about students getting a quality learning experience."

"He'd been very active in research, but recently, his attentions focussed more on teaching. He was still interested in scholarly work, though, and was just starting a sabbatical to write a book on thermal fluids and heat transfer. He wanted to develop suitable learning materials for students."

The two had lots of time to talk. "We skied, ran, and rollerbladed about 40,000 miles together in the past twenty years," Crittenden said. "If there's an entry like this in the Guinness Book of Records for two friends, we should be somewhere near the top."

"He had a lot of knowledge about scientific, political, and social issues, and his opinions were always based on careful thought,"

Crittenden said. "He helped shape my views. He was very giving that way, a good listener. And if anyone ever asked him for help on something, he wasn't frugal about his time."

"And he had this real subtle sense of humor. We trained late in the afternoon, and one day I arrived late as usual, and he said, 'What the heck were you doing? Defragging your hard drive?' I realized that I'd been insulted in a funny way, and he made me laugh about it. And I tried not to be quite so late."

"Ward was a poster child for fitness," Crittenden noted. "When he was in his forties, he ran a marathon in two hours, forty-five minutes. This had to be one of the fastest times in his age class, and was posted in *Runners' World*."

He was also class champion in the Birkebeiner cross-country ski race in Wisconsin, which attracts thousands of top-notch, competitive skiers.

Frea is survived by his two daughters, Melanie of Houghton and Jennifer of Kalamazoo; his son, Robert, of New Lisbon; his sister, Sarah Kelly of Monrovia, California; and Valerie Frea of Houghton. A memorial service was held January 8.

Crittenden invites skiers to participate in Ski for Heart on February 10 at the Swedetown Trails in Calumet as part of Team Ward Frea. And his friends may be able to take some consolation in the fact that Frea died doing what he enjoyed best. "Running is like medicine, but skiing. . . . It's so beautiful and peaceful, with snow hanging on the trees, a little vacation to cleanse the mind," Crittenden said. "Ward loved skiing."

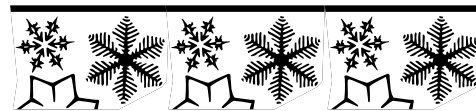
POSITIONS AVAILABLE AT MICHIGAN TECH

Job descriptions will be available at
1:00 p.m. on Friday, or by e-mail at <JOBS@MTU.EDU>.
For a complete list of job openings, visit www.admin.mtu.edu/hro/postings/index.shtml

The following positions will be posted Friday, January 12, 2001, at 1:00 p.m. through noon, Friday, January 19, 2001, in the Human Resources Office.

Equipment Operator—Facilities Management (AFSCME internal posting only)
Secretary N3—J. R. Van Pelt Library (Regular, part-time position; twenty hours per week; UAW internal and external posting)
Library Assistant N4—J. R. Van Pelt Library (UAW internal and external posting)
Supervisor, Building Operations—Facilities Management
Assistant Manager, Concessions, Vending, and Indoor Recreation—Memorial Union
Assistant Manager, Catering—Memorial Union
Assistant Manager, Production, Inventory, and Cash Operations—Memorial Union
Food Service Helper—Memorial Union (Regular, part-time position; variable hours; AFSCME internal and external posting)
Administrative Associate—Research Services
Secretary II N4—Physics (UAW internal and external posting)

University employees are reminded to apply in writing prior to noon, Friday, January 19, 2001, to be considered as internal candidates for bargaining unit positions only. Applicants from the recall pool will be given first consideration for non-bargaining-unit positions only. Vacancy announcements are normally posted every Friday at 1:00 p.m. in the Human Resources Office. Complete job descriptions are available in the Human Resources Office or by calling 487-2280. More information regarding employment opportunities is available by calling the Job Line at 487-2895. Michigan Technological University is an equal opportunity educational institution/equal opportunity employer.



January

- 13 Saturday**
10:00 a.m.—Nordic skiing, Husky Invitational
- 14 Sunday**
9:00 a.m.—Nordic skiing, Husky Invitational
1:00 p.m.—Women's basketball, Mercyhurst at MTU—SDC
3:00 p.m.—Men's basketball, Mercyhurst at MTU—SDC
- 15 Monday**
noon—Martin Luther King's "I Have a Dream" speech—Memorial Union steps
noon—Classes dismissed for Martin Luther King Day
6:00 p.m.—MLK Candlelight Vigil—At the leaning tree, by the EERC
- 20 Saturday**
5:00/7:00 p.m.—Martin Luther King Dinner Theater, featuring "Through Our Eyes"—Memorial Union
7:05 p.m.—Hockey, Alaska Anchorage at MTU—MacInnes Student Ice Arena
- 22 Monday**
6:00 p.m.—NCBI Controversial Issues workshop—Memorial Union 105A
- 25 Thursday**
5:30 p.m.—Women's basketball, Northwood at MTU—SDC
7:30 p.m.—Men's basketball, Northwood at MTU—SDC
- 27 Saturday**
1:00 p.m.—Women's basketball, Lake Superior State at MTU—SDC
3:00 p.m.—Men's basketball, Lake Superior State at MTU—SDC