TechTopics

March 19, 1999
Vol. 31, No. 24

Michigan Tech's Faculty/Staff Newsletter — Published weekly by University Relations

Health survey says: We're not so healthy

Nationwide, the better educated you are, the more likely you are to take care of yourself. That isn't necessarily so at Michigan Tech.

Among the 155 employees who participated in the University's Health Risk Appraisal study, 54 percent say they exercise aerobically fewer than three times a week, and of these 21.2 percent said they do not exercise at all. About 52 percent were at least 20 percent heavier than their ideal weight, and 50.3 percent had total cholesterol levels of 200 or higher.

The study was conducted last fall in collaboration with Portage Health System. Participants responded to a detailed questionnaire and had their blood pressure and cholesterol levels checked.

Only 3.2 percent said they had more than fourteen alcoholic drinks per week, but 21.9 percent said they indulged in binge drinking (five or more drinks in one sitting) during the previous week.

On the plus side, only 5.8 percent said they were cigarette smokers, with 2 percent smoking cigars or pipes and another 2 percent using smokeless tobacco.

Underlying all these problems may be high stress levels. A total of 69.7 percent said stress had a lot or some effect on their health.

Not surprisingly, considering who we are, the participants were well-educated; 27.7 percent were college graduates and an additional 32.9 percent had postgraduate or professional education. The remaining 38.7 percent were high school graduates or had completed some college.

The true picture of MTU employee health may be bleaker than the survey indicates. "It's probably much worse overall because the people who signed up cared enough about their health to participate," Wellness Coordinator **Erin Carter** said. "But the Health Risk Appraisal results do give us a pretty good idea of the areas we need to work on to improve our health and reduce our health insurance costs."

Just among the survey participants, the estimated cost of health problems brought on by six risk factors (inactivity, obesity,

(Continued on page 6)

Men blaspheme what they do not know.

—BLAISE PASCAL, 1623-62

Matthews: Biomed engineering key to cutting health-care costs

Recent advances in biomedical engineering could save Americans billions of dollars in heath-care costs every year, Dennis Matthews told the crowd gathered March 16 for the dedication of the Center for Biomedical Engineering.

Biomedical technology will be increasingly important in a society that believes everyone should have quality health care.

Matthews, the laser programs leader at Lawrence Livermore National Laboratory, noted that biomedical technology has not always been viewed as economical. "When I first started talking about implementing new technology, people said, 'Great, but it's gonna cost,'" he said.

Instead, better-designed keyboards can prevent carpel tunnel syndrome and its associated workplace and medical costs, and insulin pumps regulate diabetics' blood glucose levels to help prevent the onslaught of serious complications.

Biomedical technology will be increasingly important in a society that believes everyone should have quality health care. Costs will rise exponentially as baby boomers start to age and get sick, he said. Health-care costs eat up over 20 percent of the federal government's budget, and at current rates, that figure will rise to 70 percent between 2020 and 2030. Social Security will take another 70 percent. "Do the math," Matthews joked. "That's 140 percent."

"We're going to make the difference," he said. "We're going to figure out how to use medical technology to reduce the cost of health care while giving better care and better service." By targeting the biggest killers—heart disease, cancer, stroke and head injuries, and diabetes—medical technology could cut $40 billion from the nation's annual health-care bill.

Though medical technology is often associated with late-stage treatment of catastrophic diseases and injuries, it may be most useful in prevention and screening. Better diagnostic tools, which could, for example, detect breast cancer at an early stage, could save thousands of dollars per patient. At the Lawrence Livermore lab, researchers are developing small, portable "stud finders" that can detect a hemorrhage following a head injury. "We're working with the NFL on this," Mattews said, noting that quick detection of a brain injury can determine whether a player sits out a play or two or heads for the emergency room.

Students in Michigan Tech's new Center for Biomedical Engineering will be joining one of the fastest-growing engineering specialties, he said. "Kids are voting with their careers," Matthews said. "They want to make a difference by working in this area." And, as a researcher at a national laboratory involved in biomedical engineering, he said, "I'm looking forward to working with you on government-sponsored programs."

Citing the late Nobel laureate Glenn Seaborg, President **Curt Tompkins** said we are moving from the century of physics to the century of biology and biotechnology. And Michigan Tech is reflecting that change, progressing from its roots in mining to new offerings in biomedical engineering. He credited the faculty for the new developments.

"This program and center are supreme examples of faculty leadership," he said. "Thank you all very much."

"I'm thrilled to take part in this activity," said Dr. **Ken Rowe,** vice chair of the Board of Control and a retired physician. "I'm stimulated to return to Michigan Tech to get a bachelor's in biomedical engineering . . . This is an exciting time for the University."

Senate OKs double majors

The University Senate approved a proposal March 10 to recognize double majors.

If approved by the administration, the proposal would grant students a double major if they fulfill the requirements for a major in more than one department. Unlike a dual degree, which MTU has offered for years, a double major would not necessarily require students to complete more credits than they would under ordinary circumstances, although, in some cases, a few additional credits could be required. They would be awarded only one baccalaureate degree but would be recognized for completing the requirements of two majors (e.g., BS in Mathematics and Computer Science).

"This is a degree designation that is very common among our peer institutions, and it is an option that has been long overdue at MTU," Associate Professor **Steve Seidel** (computer science) said.

New Internet service now available for MTU travelers

Telcom is now providing GlobalNet Service to MTU employees who want to take their Internet connection on the road.

"GlobalNet allows faculty and staff to receive and send e-mail, surf the Web, etc., while they are traveling," said **Rick Nye,** telecommunications engineer. "All you need is a laptop loaded with your e-mail software and Web browser."

Many MTU travelers already use Internet services while they are away from campus. However, most of these charge a flat monthly rate. GlobalNet only charges subscribers when they use the service, which can be a significant savings for those who don't travel regularly.

GlobalNet subscribers can dial into the Internet from about 1,000 U.S. and international cities. From a hotel room, users dial the local GlobalNet access number (available at Merit's Web site at http://www.merit.edu/phonenos/) to get a connection. A special 800 number service is also available for those traveling in the U.S., though the cost per minute is slightly higher. If you are traveling to several cities on one trip, this may be easier to use than GlobalNet Service.

GlobalNet Service is available for short-term trips out of the U.S. If you plan to be out of the country for longer than one month, Telcom recommends signing up with another Internet provider.

The cost for GlobalNet service is 10 cents per minute; 800 Service is 15 cents per minute. The cost of Internet service from outside the U.S. varies; 60 cents per minute is about average.

To receive GlobalNet Service, contact Telcom at telcom-request@mtu.edu and include your name, department, your MTU username, and account number to bill; and indicate whether you would like GlobalNet Service, 800 Service, or both activated for your userid. You will be e-mailed a password, unless you already have an MTU modem password, to activate the service.

For more information, contact Telcom at 487-2000 or telcom-request@mtu.edu

MichiganTech

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- By e-mail to ttopics@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.*

New staff

Tim Langford has joined the ME-EM staff as a computer system support specialist. He was previously a system administrator with the Mississippi State Tax Commission. Langford has experience in network hook-ups, cable, assembling PCs, and NATURAL, COBOL, PASCAL, and SAS software. He has a bachelor's degree from Mississippi State University and an associate degree from Kellogg Community College. His wife's name is Ginger and he has two sons, Joshua and Joel.

Michael Niemi has joined the Memorial Union staff as a custodian. He was previously a maintenance worker at Portage Hospital. He is married to Susan Niemi, has three children, Sarah, Timothy, and Bradley, and lives in Ripley. Niemi is a licenced emergency medical technician-specialist and has been a volunteer with Mercy Ambulance Service for fourteen years.

Michael Harsh has joined the Residential Services-Facilities staff as custodian in Douglass Houghton Hall. He was previously employed by D&L Janitorial, of Houghton. Harsh has three children, Kyle, Chris, and Jason, and lives in Houghton. He belongs to the U.P. Scale Modelers modeling club based in Marquette.

But they're adults, aren't they?

Center for Teaching, Learning, and Faculty Development

Teaching Tips

By William Kennedy, director

"The Times They Are a Changing" goes the song. Bob Dylan's nasal rendering of this sixties anthem spoke of a generational shift where the established order would no longer meet the needs of the day. For decades, the public schools have been reporting that the fundamental roles of the primary and secondary teachers are different largely in response to the changing nature of the American family as a result of a host of sociological and economic drivers. Schools have installed metal detectors, brought uniformed police officers on campus, established breakfast programs for students who don't eat at home, and put school nurses on the front line of the war against drug and child abuse. Middle school principals worry about gangs, drugs, and other manifestations of societal collapse while they roam the halls with walkie-talkies trying to provide a safe and secure learning environment.

We must reckon with the conclusion that the factors driving change in primary and secondary education also impact the academic performance, motivation, and social abilities of our students. I believe we have an ethical and professional obligation and as well as a fiduciary interest in amending our instructional practices to meet the diverse and complex needs of our entering students.

Although the vast majority of our entering students feel that they are well-prepared to excel in their college studies (81.3 percent), less than 40 percent said they spent more than one hour per night studying or doing homework in high school, while 93 percent reported that they graduated from high school with a B or better grade point average. The message they received from this experience? "You will be a success at Tech because you're a top-flight, bright student who doesn't need to do much work to succeed." The reality? Forty-one percent of the freshman class on academic probation.

Only about half of our students come from a family where Mom or Dad completed college. Sixty-four percent of our students openly express some degree of anxiety about how they will finance their college careers. Twenty percent of our students come from homes touched by the death of a parent or a divorce. In short, mixed in our student body are a large number of young adults whose primary support network may not be attuned to or have the ability to provide knowledgeable, intellectual encouragement and support. Given the fact that most of our entering students are 18 or 19 years old and that nearly half live more than 500 miles from Tech, and you realize that we are putting a lot of responsibility on their shoulders all at once.

Primary and secondary school teachers realized that redesigning lesson plans and simply "putting it out there clearly" was no longer enough. Maybe we need to take the hint.

Is it a coincidence that many of the teachers that our students value most (measured by student evaluation of instruction scores) are teachers that demand attendance, participation, collect and grade homework, and are available, approachable, and encouraging outside of class? Should we give up on this pie-in-the-sky idea that to be a first-class university citizen, every professor must be an engaging, gifted teacher as well as bring in a half a dozen grants and publish four articles and a book? Or is it time for us to recognize that we value involved and effective teachers at the front end of our academic programs to set the tone for further disciplinary study, just as we need and value those who excel in research as we work together to fulfill the dual missions of a university that values innovation, leadership, and excellence in all areas of human inquiry? Are we "dancing as fast as we can," or should we recognize that the tune has changed?

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MTU researcher fights terrorism with physics

Submitted by the News Bureau

A Michigan Tech researcher is exploring ways of detecting materials, especially explosives and illegal drugs, with the aim of making the world a safer place.

Professor **Bryan Suits** (physics) has received a two-year, $45,000 per year grant from the U.S. Department of Defense Naval Research Lab to continue work he began while on sabbatical there.

Suits is exploring a technique known as nuclear quadruple resonance (NQR) to improve materials detection. NQR is closely related to MRI. NQR measures the intensity of radio frequency signals from certain atoms. "We are principally looking at the nucleus of the nitrogen atom because it occurs in almost every explosive. It also occurs in non-explosives, but by using NQR, we can look at only the compounds we want to see," he said.

The frequencies used are very low, a few megahertz, resulting in very weak signals. Hence, it is important to have very sensitive receivers and pick-up coils. Suits is working on different shapes and dimensions for the pick-up coils, and experimenting with a number of simultaneous receivers to get better performance.

Possible applications for this research include luggage scanning in airports, scanning mail, and searching for land mines. "Terrorism is part of our lives," says Suits. "I'm using physics to create new ways to fight terrorism and to hopefully make the world a safer place."

Call for student research papers

The Graduate Student Council and the Sigma Xi research society are inviting graduate and undergraduate students who have conducted original research to present their papers at the Sigma Xi Research Colloquium, set for April 17 in ROTC Graduate Student Center. The deadline for submitting abstracts for consideration is April 1. For information on submitting an abstract, contact Haluk Kucuk (hkucuk@mtu.edu) or visit http://www.sos.mtu.edu/gsc

Books still needed for sale

The Friends of the Van Pelt Library are still looking for used books for their annual book sale on Thursday, April 1, in the Memorial Union Ballroom. Drop those old books off in the bin in the library; they'll sell them and use the money to benefit the library, and you'll get the extra space.

For more information, contact Faith Morrison, fmorriso@mtu.edu, 487-2050.

Scientists search for source of cosmic rays

Submitted by the News Bureau

Something out there is hurling incredibly energetic particles around the universe. But no one knows what that something is. Now scientists from 50 institutions representing 19 countries have joined forces in an attempt to solve the mystery and find the source of high-energy cosmic rays that have bombarded the Earth since the beginning of time.

Named the Pierre Auger Project after the French scientist who discovered extensive showers of secondary subatomic particles caused by the collision of primary high-energy particles with air molecules, the unified effort is perhaps the largest truly international scientific collaboration in history.

The project involves the construction of two huge observatories—one in the Southern Hemisphere at a site in Argentina, and the other in the Northern Hemisphere at a location in Utah. Each observatory will extend over an area 10 times larger than the city of Paris, France, and will combine air fluorescence detectors and an array of detectors located on the ground to measure extensive air showers produced when high-energy cosmic rays strike the Earth's atmosphere. The ground array will operate continuously, while the fluorescence detectors will provide additional information on dark moonless nights.

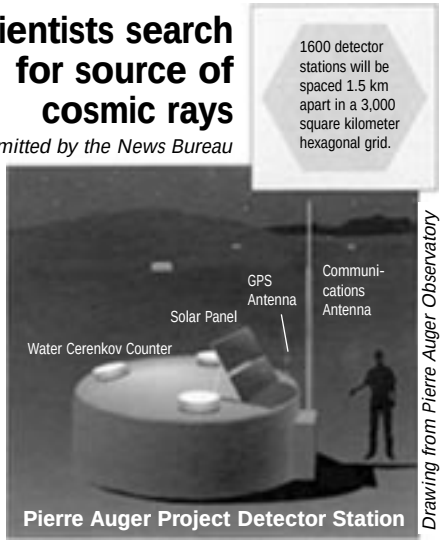
The international cost of the project is $50 million for each of the two observatories. Funding for the U.S. participation in the construction and operation of the first observatory has been approved by the U.S. Department of Energy and the National Science Foundation. Groundbreaking for the Southern Hemisphere observatory is scheduled for March 17. Both facilities are expected to be completed by 2004.

But what are cosmic rays anyway, and why are scientists so interested in them?

"Cosmic rays are fast-moving particles from space that constantly bombard the earth from all directions," explains Research Professor **David Nitz** (physics), Northern Hemisphere project spokesperson. "Most of the particles, at least those at energies low enough to make identification practical, are either the nuclei of atoms, or electrons. Single protons—the nuclei of hydrogen atoms—make up most of the nuclei, but a few are much heavier, ranging up to the nuclei of lead atoms." Cosmic ray particles travel at nearly the speed of light, which means they have very high energy. In fact, some of them are the most energetic of any particles ever observed in nature. The highest-energy cosmic rays have a hundred million times more energy than the particles produced in the world's most powerful particle accelerator.

But the source of such super rays remains a mystery, and scientists love a mystery, because solving a mystery in nature provides the opportunity to learn something new about the universe.

"No one knows the source of the highest-energy cosmic ray particles," says Nitz. "Most lower-energy cosmic ray particles that strike the Earth come from within our own Milky Way Galaxy. Many probably come from the exploding stars we call supernovae."



Drawing from Pierre Auger Observatory

However, scientists believe that the very highest-energy cosmic ray particles come from sources beyond the Milky Way. But where?

"Wherever they come from, these highest-energy particles could hold secrets to the beginning of the universe," says Nitz. "We know of no source in the cosmos that could produce such energies, not even the power released by the most violent exploding stars. More powerful natural accelerators, therefore, must be responsible for these extraordinary rays, and these accelerators must lie outside our galaxy."

To discover the source of cosmic ray particles, scientists measure their energy and their direction as they arrive from space. Cosmic rays can be detected indirectly on the surface of the earth by observing the showers of particles they produce in the air—which is just what the Pierre Auger observatories are designed to do.

Nitz and his colleagues at Michigan Tech have received a three-year, $620,000 operating grant from the Department of Energy to fund their participation in the project. An additional $600,000 in DoE construction funding will be granted to Michigan Tech to provide instrumentation for the Southern Hemisphere observatory. The Michigan Tech team will develop and supply custom application specific integrated circuits for the surface detector stations, which identify and record in real time the passage of extremely high-energy cosmic rays. They will also oversee the design and implementation of the microwave radio system that provides the link for all information transfer to and from the four fluorescence "eyes" and the 1,600 surface detector stations at each observatory.

Overall Pierre Auger project leaders are Dr. James Cronin, professor of physics at the University of Chicago; and Dr. Alan Watson, professor of physics and pro-vice-chancellor at the University of Leeds, United Kingdom.

Wind Symphony presents "World Winds"

Submitted by the Department of Fine Arts

Michigan Tech's select band, the Wind Symphony, presents "World Winds," a whirlwind musical trip around the world, at 7:00 p.m. on Sunday, March 21, in Walker Theatre. Known for its highly entertaining approach to concerts, the Wind Symphony plays both band classics and pop favorites with zest and humor. Tickets are available from MTU's box offices (487-3200 and 487-2073) for $7 general, $5 seniors, and $3 students ($1 more at the door).

Director **Jeffrey Bell-Hanson** (fine arts) says the March 21 program features music identified with several different countries, each piece reflecting the country's sense of national identity. The program includes Ronald Lo Presti's tribute to John F. Kennedy, "Elegy for a Young American," as well as lively pieces by Alfred Reed and Gustav Holst that celebrate England, and Percy Grainger's "Colonial Song," a beautiful evocation of Australia. Pieces by Vincent Persichetti and Alan Hovhaness round out the program.

The Wind Symphony will present "World Winds" twice on March 21, first at 2:00 p.m., in the Laird Township Hall in Alston, then at 7:00 p.m. in Walker Theatre. More information is available from the fine arts office, 487-2067.

NASA astonaut visiting Houghton

Submitted by the News Bureau

NASA astronaut Bonnie Dunbar will be at Michigan Tech Friday, March 19.

Dunbar will present a talk on the value of science experiments on the shuttle and space station on Friday from 9:00 to 11:00 a.m. in ME-EM 112. This presentation is open to the public free of charge.

Dunbar received BS and MS degrees in Ceramic Engineering from the University of Washington and earned her PhD in Mechanical/Biomedical Engineering from the University of Houston. She accepted a position with the Lyndon B. Johnson Space Center in 1978 and has since logged 1,208 hours (50 days) in space. She is a veteran of five space flights and was payload commander for the Space Shuttle Columbia mission in the summer of 1992 and for the Space Shuttle Endeavor mission in January 1998.

Her visit is sponsored by the Visiting Women and Minority Lecturer Series, the College of Engineering, and the Department of Chemical Engineering; and she is hosted by the Educational Opportunity Department and the Society of Women Engineers.

Everest mountaineer and filmmaker to visit Michigan Tech

Submitted by University Cultural Enrichment

Adventurer, mountaineer, and one of the world's most acclaimed adventure filmmakers, David Breashears visits Michigan Tech on Wednesday, March 24. His public lecture, "Everest—Mountain Without Mercy," the second in the 1998–99 Van Evera Distinguished Lecture Series, is scheduled for 8:00 p.m. in Fisher 135. Breashears' presentation will include a slide show of breathtaking images from his 1996 IMAX Everest expedition. He'll also talk about the challenges he faced on that now-historic expedition, and recall the series of events which led to the deadliest day in the history of Mt. Everest. Breashears' lecture is free and is open to the public.

When the May 10, 1996, blizzard hit the mountain, killing eight climbers, Breashears and his team were in the midst of making the first IMAX film on Mt. Everest. They stopped filming and risked their own lives to assist several stranded climbers to safety in some of the worst conditions ever experienced on the mountain. They were later recognized as heroes for their courageous efforts. Breashears and his team then regrouped and climbed the mountain on May 23, 1996, achieving their goal of becoming the first to attain IMAX film images from the top of the world. The resulting film, which Breashears directed, photographed and co-produced, premiered in March 1998 and was released in more than forty IMAX and OMNIMAX theaters throughout North America and Europe; the allure of Mt. Everest made it the most eagerly anticipated IMAX film of all time. However, Breashears has said that if there is a lesson to be learned from the May 1996 tragedy, it is that for him success was not being the first IMAX team to summit, but that everyone on his team survived.

Breashears' work has taken him to remote locations throughout Tibet, China, Nepal, India, Pakistan, and East Africa. Over the past seventeen years, Breashears has worked on twenty-seven film projects ranging from full-length feature films to music videos. His film credits include director of photography and field-producer for *Seven Years in Tibet* (1996), a feature starring Brad Pitt; director of photography and field-producer for *Ice Princess* (1995), a National Geographic Explorer film shot in Peru; director of photography and producer of the Telluride Mountain Film Festival grand documentary prize-winning *Red Flag Over Tibet* (1994); a *Frontline*, WGBH-TV program shot in Tibet, India, and Nepal; and *Cliffhanger* (1993), a feature film starring Sylvester Stallone, for which he was a cameraman, climbing consultant, and advisor. In addition, Breashears transmitted the first live television pictures from the summit of Mt. Everest in 1983, and, in 1985, became the first American to twice reach the summit of Mt. Everest. He has climbed the mountain eleven times. He is the recipient of four Emmy Awards for achievement in cinematography.

Breashears' visit is coordinated by the University Cultural Enrichment Department. Call 487-2844 for further information.

Charlie Maguire Coffeehouse this weekend

The Memorial Union Board welcomes musician Charlie Maguire to MTU on Friday and Saturday, March 19–20, at 8:00 p.m. in the Keweenaw Commons.

Maguire is returning to the U.P. with his friends Gordy Abel and Lisa Fuglie. This is his twentieth year performing his songs of the Great Lakes and the Iron Range at Michigan Tech.

Maguire was a regular on *A Prairie Home Companion* for ten years and has been featured on the *CBS Evening News* and *Car Talk.* He has won a number of awards, including the NPS Freeman Tilden Award and the New York Film and Television Festival Gold Award.

Admission to the Charlie Maguire Coffeehouse is $1.00 for students and $2.00 for non-students. All tickets are sold at the door. Refreshments will be served. For more information, call 487-2422.

Meet David Breashears at Tech Tea

Tech Tea Time takes advantage of David Breashears' visit to Michigan Tech on Wednesday, March 24. The distinguished mountaineer, adventurer, and filmmaker will be speaking on his Mt. Everest experiences at his evening presentation. At Tech Tea Time he'll discuss his recently completed autobiography, *High Exposure: A Lifelong Passion for Everest and Unforgiving Places* (available in bookstores in May). Tech Tea Time is at 4:00 p.m. in the MTU Memorial Union Alumni Lounge and is open to both campus and local communities at no charge.

At Tech Tea Time, Breashears will talk about his remarkable filmmaking career and give a revealing glimpse into his affinity for cold, high altitudes and the perfect shot. Having ventured to Everest eleven times and having summited on four of those occasions, one might say he is driven to get breathtaking footage.

Breashears' visit to Michigan Tech is funded by the Van Evera Distinguished Lecture Endowment and is coordinated by the University Cultural Enrichment Department. For further information, call 487-2844.

Computer classes

The following classes will be offered through dL Computer Consultants. Cost of the workshops is $60 for half-day, $115 for full-day sessions. Sessions are limited to six participants. Custom classes can be scheduled for at least three participants. For more information or to register, contact Becky Christianson, Professional Development and Quality Improvement Office, at 487-2416 or rwchrist@mtu.edu

If you have registered for a course and cannot attend, you must cancel forty-eight hours in advance or you will be billed full price for the course. You will have the option of attending the same class the following month at no additional charge.

March courses

- Access 97, Level 3, 9 a.m.–noon, March 23
- Access 97, Level 3, 1–4 p.m., March 23
- Access 97, Advanced, 9 a.m.–4 p.m., March 26
- HTML, 9 a.m.–4 p.m., March 27
- PageMaker, 9 a.m.–4 p.m., March 19
- PowerPoint, 9 a.m.–4 p.m., March 19
- Windows 95/98/NT, Level 1, 9 a.m.– noon, March 30
- Windows 95/98/NT, Level 2, 1–4 p.m., March 30

April courses

- Access 97, Level 1, 9:00 a.m.–noon, April 13
- Access 97 Level 2, 9:00 a.m.–noon, April 20
- Access 97 Level 3, 9:00 a.m.–noon, April 23
- Access 97 Advanced, 9:00 a.m.–4:00 p.m., April 29
- Excel, Level 1, 9:00 a.m.–noon, April 8
- Excel, Level 2, 1:00–4:00 p.m., April 8
- Excel Charts, 1:00–4:00 p.m., April 27
- HTML, 9:00 a.m.–4:00 p.m., April 22
- PageMaker, 9:00 a.m.–4:00 p.m., April 1
- PowerPoint, 9:00 a.m.–4:00 p.m., April 9
- Publisher, 1:00–4:00 p.m., April 15
- QuickBooks, 9:00 a.m.–noon, April 15
- Windows 95/98/NT, Level 1, 9:00 a.m.–noon, April 16
- Windows 95/98/NT, Level 2, 1:00–4:00 p.m., April 16
- Windows 95/98/NT, Level 1, 9:00 a.m.–noon, April 30
- Windows 95/98/NT, Level 2, 1:00–4:00 p.m., April 30
- Word, Level 1, 9:00 a.m.–noon, April 6
- Word, Level 2, 1:00–4:00 p.m., April 6
- Word, Level 1, 9:00 a.m.–noon, April 23
- Word, Level 2, 1:00–4:00 p.m., April 23

Leadership Week seminars on tap next week

A series of seminars is open to everyone during Leadership Week, March 22–25. All seminars are free; the Saturday lunch is $5. To register, e-mail dhmarion@mtu.edu. For more information, go to http://www.civil.mtu.edu/~paszorny/odk/leadership99.htm

Events include the following:

Monday, March 22

- Assistant Director of the Career Center **Shirley Rudd,** "Time Management for the 90s… Is Your Life Out of Control?" 5:00 p.m., Memorial Union Red Metal Room A
- Major **Scott Hausman,** "Effective Team Building," 5:00 p.m., Memorial Union Alumni Lounge
- **Betty Chavis,** Youth Programs, "Experiences Are a Sum Total of Who We Are, but Not of What We Can Become," 6:00 p.m., Memorial Union Red Metal Room A
- Lecturer **Betsy Aller** (chemical engineering), "Preparing and Giving Professional Oral Presentations," 6:00 p.m., Red Metal Room B
- Vice Provost and Dean for Student Affairs **Martha Janners** and TKE , "Being Your Brother's Keeper Goes Beyond Wearing Letters: Group Accountability Falls on Every Individual's Shoulders," 8:00 p.m., Alumni Lounge

Tuesday March 23

- Associate Professor **Faith Morrison** (chemical engineering), "Not Another Boring Presentation!" 5:00 p.m., Red Metal Rooms
- Associate Dean of Students **Steve Tyrell,** "Live From Atlanta!" Teleconference: "Designing Your Future with an Attitude," 6:00 p.m., EERC B11
- Hockey Coach **Tim Watters,** "Team Building," 7:00 p.m., Alumni Lounge

Wednesday March 24

- Associate Professor **Tom Co** (chemical engineering), "Leadership Qualities and Assessment," 5:00 p.m., Alumni Lounge
- Associate Dean of Students **Gloria Melton,** "Goals—Transitions In Development" 5:00 p.m., Red Metal Room A
- Associate Director of the Career Center **Jim Turnquist,** "Careers, Resumes and Job Trends," 6:00 p.m., Red Metal Room B
- **Gary Anderson,** president of Dow Corning, Keynote Address, 7:00 p.m. in the Alumni Lounge

Thursday, March 25

- Academic Advisor **Jon Henkel** (general engineering), "Small Group Interactions: Knowing When to Hold & When to Fold," 5:00 p.m., Alumni Lounge
- Professor **Peck Cho** (ME-EM), "Take Control!" 6:00 p.m. in the Alumni Lounge
- Psychiatric Social Worker **Jeanine Sewell,** "Personal Style and Leadership Using the Meyers-Briggs Test," 6:00 p.m., Red Metal Rooms

Saturday, March 27

- **Shalini Rudak, John Lehman,** and **Gretchen Janssen** (educational opportunity), "Ice Breakers & Other Team Builders: Ways to Keep Your Group from Re-Freezing," 9:30 a.m., Alumni Lounge
- **Claude Verbal,** MTU Board of Control member, Keynote Address & Luncheon, 11:00 a.m., Memorial Union Ballroom A
- Affirmative Programs Director **Sherry Kauppi,** "Women and Men at Work: Clashing and Cooperating," 1:00 p.m., Red Metal Rooms
- **Becky Christianson** (human resources), "From Pledge to President: Developing a Leadership Program for All Aspects of Greek Life," 1:00 p.m., Alumni Lounge

PCW news

Submitted by the Presidential Commission for Women

Bulletin board contest

March is Women's History Month, and the Presidential Commission for Women has appointed a task force to organize the annual Women's History Month bulletin board contest. Members are **Patty Sotirin, Betty Chavis, Vicky Bergvall, Barb Radigan,** and **Peg Balachowski**. Prizes will be announced on Thursday, March 25, between noon and 2:00 p.m. in the Memorial Union Ballroom. We invite everyone to check out the bulletin boards displayed around campus March 15–31, as well as the displays in the Ballroom March 22–26.

Women's health

A PCW task force is working on ways to increase awareness of women's health issues on campus. Concerns about various aspects of this topic have been expressed several times at PCW meetings. The task force is now working on alcohol use, date rape, and STDs among students. In addition, the task force is discussing possible health-related speakers and workshops that might be valuable for MTU women. If you have any health topics you would especially be interested in learning about, contact any of the task force members: **Jennifer Mueller, Bev Auel, Kim Hoagland, Nancy Byers-Sprague,** and **Sherry Kauppi.**

Take Our Daughters to Work Day

Another task force is working on future plans for Take Our Daughters to Work Day. Since this task force got off to a late start, no formal lunches or tours are planned for the girls this year. Instead, lunch and tour plans being made this year will be in place for next year's Take Our Daughters to Work Day. If you have an idea for a tour or other activity next year, please contact any of the task force members: **Paula Nutini, Sonia Goltz,**

(Continued on page 6)

Credit Union business meeting March 31

The 45th Member's Annual Business Meeting of the Michigan Tech Employees Federal Credit Union will be held on Wednesday, March 31, at the Houghton High School Multipurpose Room. Refreshments will be served at 6:30 p.m. and the meeting will begin at 7:00.

Accomplishments of the past year will be reviewed as well as Y2K compliance issues and a look into the future. There are three seats to fill on the Board of Directors. There will be a gift for every one attending and cash prizes will be awarded to several lucky members.

For more information, call Rich Bezotte, 482-5005.

March

NATIONAL WOMEN'S MONTH

19 Friday
9:00 a.m.—Astronaut Bonnie Dunbar, "From Shuttle to the International Space Station: Exploring Space and Microgravity"—ME-EM 112
10:00 a.m.—Board of Control meeting—Memorial Union Ballroom
8:00 p.m.—The Troupe's Campus Comedy Show—Walker Theatre
8:00 p.m.—MUB Coffeehouse with Charlie Maguire—Keweenaw Commons

20 Saturday
10:00 a.m.—Men's tennis, Findlay at MTU—Gates Tennis Center
8:00 p.m.—The Troupe's Campus Comedy Show—Walker Theatre
8:00 p.m.—MUB Coffeehouse with Charlie Maguire—Keweenaw Commons

21 Sunday
10:00 a.m.—Men's tennis, Hillsdale at MTU—Gates Tennis Center
2:00 p.m.—Wind Symphony "World Winds" Concert—Laird Township Hall
7:00 p.m.—Wind Symphony "World Winds" Concert—Walker Theatre

24 Wednesday
4:00 p.m.—Tech Tea: David Breashears—Memorial Union Alumni Lounge
8:00 p.m.—David Breashears, "Mountain without Mercy"—Fisher 135

25 Thursday
noon—Lunch and learn, "Developing and Nurturing Assets in Your Children"—Memorial Union 105B
noon—Women's History Month bulletin board contest winners announced—Memorial Union Ballroom

26 Friday
3:00 p.m.—Men's tennis, Gannon at MTU—Gates Tennis Center

27 Saturday
10:00 a.m.—Men's tennis, Westminster at MTU—Gates Tennis Center

28 Sunday
10:00 a.m.—Men's tennis, Mercyhurst at MTU—Gates Tennis Center

PCW news (Continued from page 5)

Suzanne Van Dam, or **Peg Balachowski.** However, everyone is still welcome to bring their daughters or their friends' daughters (ages 9–15) to work this April 22. For more information about Take Our Daughters to Work Day, see at http://www.ms.foundation.org.

CLIMATE STUDY

The PCW has been reviewing the 1992–93 climate study and assessing the progress on various issues it identified. As part of this process, we are reviewing other studies conducted in recent years on campus and at benchmark universities. If you are aware of any recent data concerning the experiences of female faculty, staff, or students that has been collected either at MTU or at a benchmark institution, please contact Marilyn Urion, mjurion@mtu.edu.

Health survey (Continued from page 1)

stress, high blood pressure, smoking, and high cholesterol) is over $100,000 per year.

"As employees, we could just blow this off," Carter said. "But the fact is, we all pay for it in the end through reduced salaries and underfunded programs."

Employee health-care costs rose $1.5 million from 1997 to 1998, the equivalent of an across-the-board pay raise of about 3 percent. This figure doesn't include the cost of pharmaceuticals, absenteeism, or turnover due to illness.

Stress could be driving some of the other unhealthy habits. "Since day one, people have been telling me how stressed out they are, and I believe that starts a lot of other health problems," Carter said. "Stress can cause high blood pressure, depression and inactivity, and binging, both on junk food and alcohol. As an institution, I think we need to address that."

Another risk factor might actually cause stress—being overweight. Carter wishes people would pay more attention to other measures of health. "The scale can say you are overweight, but you can still be healthy," she stressed. "We do have overweight people who exercise and have healthy blood pressure and cholesterol, so sometimes just looking at a person does not give us an accurate view of their health status."

Many MTU employees do care about their health and fitness. "Some run marathons and cross-country ski for miles," Carter said. "But many of us haven't made exercise a habit; they haven't taken the time. And I believe there's a fear that they can't do it, that if they can't run a mile they'll be failures. I don't think they realize that they can start with a walk down the driveway and back. It's so important to change that attitude of 'no pain, no gain' and do something—anything."

And while Michigan Tech faculty and staff are much better educated than the population at large, they may not be as informed about their own health.

"Even though MTU employees are intelligent and educated, they don't seem to take the time to improve their health. I don't know if they really know what sort of impact a healthy lifestyle can have on their lives." Carter said. For more information on getting healthier and feeling better, contact Carter at 487-2172 or ejcarter@mtu.edu

UWC scholarship available

The University Women's Club Endowed Scholarship valued at about $500 will be awarded at the University Women's Club's spring meeting in April. The scholarship(s) will be available for the 1999–2000 academic year.

Applicants must be full-time, female students at Michigan Tech with a minimum GPA of 2.75, who are currently in their freshman, sophomore, or junior year, and carrying a minimum load of 12 credits. Applicants should have demonstrated some leadership, contributed to extracurricular student activities, or participated in community service within the past three years. Financial need will be considered.

Applications may be picked up at the Financial Aid Office and must be submitted by March 31. For more information, contact Marie Ryding, 487-2622.

POSITIONS AVAILABLE AT MTU

Job descriptions are available from Human Resources starting at 1:00 p.m. on Friday.
You can e-mail us at JOBS@MTU.EDU and we will e-mail you the job description you request.

The following positions will be posted Friday, March 19, 1999, at 1:00 p.m. through noon, Friday, March 26, 1999, in the Human Resources Office.

- Research Associate—Institute of Wood Research (Regular, part-time position; twenty hours per week)
- Assistant Football Coach—Athletic Department (Regular, full-time, ten-month position)
- Custodian—Residential Services Facilities (Regular, part-time position; twenty hours per week; AFSCME internal and external posting)
- Assistant Women's Volleyball Coach—Athletic Department (Regular, full-time, ten-month position)
- Food Service Helper—Dining Services (Regular, full-time, nine-month position; AFSCME internal posting)

University employees are reminded to apply in writing prior to noon, Friday, March 26, 1999, 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.