TECH TOPICS
Michigan Technological University
Published weekly by University Relations

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If it works, it must be obsolete.

—Jack Engel

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Exempt, nonexempt, and Michigan Tech's Weather Advisory Policy

When Michigan Tech issues a weather advisory, hourly employees who decide not to come into work must use vacation time or time off without pay to account for the lost hours. Exempt employees, on the other hand, are not compensated on an hourly basis and don't have to take vacation. It may seem unfair. But don't blame Michigan Tech—the University is required to comply with the Fair Labor Standards Act.

This federal law states that nonexempt employees must be paid by the hour for their work, Human Resources Director **Ellen Horsch** told Staff Council February 25. Thus, if they miss hours on the job, the time needs to be accounted for some way.

Exempt, or salaried, staff are paid to accomplish their job, whatever time it takes. If they are at work during a weather advisory or not, they are paid the same, but they are expected to fulfill the requirements of their job. If the time off results in an overall loss of productivity, then the exempt employee should be taking vacation, Horsch said.

Being exempt is not always a blessing. Horsch noted that many exempt staff worked fifty to sixty hours per week while BANNER was being implemented and received no overtime or compensatory time off, while many hourly employees received substantial overtime pay for their extra work.

Staff Council members questioned the distinction. **Gino Becia** (facilities management) said that some exempt employees leave work saying they are taking "comp time" for working extra hours previously. "They shouldn't be," Horsch said. "Exempt employees can't 'bank' hours." Supervisors are responsible for seeing that the Fair Labor Standards Act is properly enforced on campus, she added.

Council Member **Ron Parker** (public safety) said that dispatchers who get off work at 6:00 a.m. on the day a weather advisory is called have to drive home in the same weather that is allowing other staff to take time off, with or without using vacation.

"I don't think a weather advisory is the way to go," Council Chair **Dee Vincent** (library) said. "I think the University should be either closed or open."

Horsch said that Northern Michigan University does not have have a similar policy and that, if Staff Council were interested, it could propose eliminating the weather advisory.

In other business, the council

- decided in principle that all council members should have alternates and asked its Elections Committee to develop a proposal for choosing them.
- heard proposals from the Finance Committee designed to improve morale, including a staff picnic and smaller awards for staff for "a job well done."

Valdivia to coach volleyball through spring

Submitted by Dave Fischer, director of athletic communications and promotions

Athletic Director **Rick Yeo** has announced that **Krista Valdivia,** who last fall completed an outstanding four-year volleyball career at MTU, has been hired as interim coach for the women's volleyball team. Her duties will continue until a new head coach is in place.

"Krista will lead our team through the spring and we feel very fortunate to have her," said Yeo.

Michigan Tech is conducting a national search to replace **Mary Kaminski,** its highly successful women's volleyball coach for the last thirteen seasons. Kaminski is resigning effective March 1 to take over the women's volleyball program at Northeastern University, in Boston.

"We fully intend to hire someone who can step in and continue to keep the program at the high level Mary has brought it to," said Yeo. "I've charged a search committee with providing me two finalists and I'd like to have their list as soon as possible."

The search committee is chaired by **Dave Fischer,** director of athletic communications and promotions. Other members are **Cheryl DePuydt,** chair of the physical education department; **Pat Joyce** (SBE), professor and the faculty representative for athletics to the GLIAC; **Dawn Plitzuweit,** assistant women's basketball and track coach; **Christian Wilson,** assistan men's basketball coach; and **Scott Aldrich,** athletic equipment supervisor.

In addition to a head women's volleyball coach, Yeo said an assistant coach will also be hired. "We've never had an assistant in women's volleybal before and there's a definite need for one," said Yeo. "The new head coach will hire the assistant."

Michigan Tech joins AAC&U

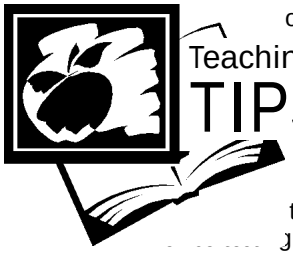
Submitted by the News Bureau

Michigan Tech has been admitted to membership in the Association of American Colleges and Universities (AAC&U), the institutional membership association focused on advancing the aims of liberal education, headquartered in Washington, DC.

Founded in 1915, the AAC&U membership is comprised of accredited public and private colleges and universities of every type and size. The association forges links between presidents, academic administrators, and faculty leaders to plan and implement effective educational programs as a means to strengthen their institutions.

AAC&U facilitates campus-based work on leadership and educational values; curricular purposes and involvement in learning; faculty and institutional development; diversity and educational excellence; and learning in the global community. Together, these priority areas encompass the liberal learning arena in which all institutions operate in order to serve contemporary students best.

Center for Teaching, Learning, and Faculty Development



Testing and Learning

By William Kennedy, director

For many of us, one of the least favorite parts of college teaching is the process of assigning grades to students. It's sort of disheartening to see students flip through the course syllabus with the primary purpose of discovering "what do I have to do to get an A in this class?" For many classes, the answer is that "you have do well on the mid-term and the final." Perhaps in response ten-week term, many Tech professors have concluded that g uses valuable teaching time, it will occur infrequently and will be used primarily for the purpose of giving grades. Testing and measurement specialists have argued that mid-term and final examinations, as they are most commonly constructed, primarily measure a student's ability to memorize lecture material and extbook readings. Students have developed a characteristic response to this common measurement paradigm, namely, cramming before exams.

Testing and assignment making, however, can serve many other educational purposes beyond the assigning of grades. Some professors have carefully developed mandatory out-of-class assignments, in-class quizzes, and specialized examinations that, in and of themselves, further student learning as well as provide relative measures of student performance. Although the lecture hall may be a reasonably efficient place to gain exposure to basic knowledge and fundamental theory, it may not be as well-suited to the development of higher-order learning like analysis, synthesis, and evaluation. These professors have discovered that carefully designed, out-of-class assignments can provide focus and motivation for students to engage in higher-order learning.

The frequent use of brief, carefully targeted quizzes can motivate students to keep up with their studies throughout the term and can give the teacher the opportunity to provide mid-course corrections in terms of shifting teaching emphasis to meet student learning needs.

Teachers can construct exams and assignments that help students move from the role of anonymous, passive, listener/note-taker to active participant. Tests can be constructed to measure the students' ability to apply the basic knowledge and theories they are learning in lectures and reading (e.g., case studies, scenarios). These tests help students understand the utility of what they are learning as well as allowing the professor to separate those students who can memorize well from those who truly understand and can apply the subject matter.

Testing and measurement is a complex subject but one that we need to constantly consider as teachers. We must ask ourselves the question "what are we trying to accomplish in our classes and how are we going to meaningfully measure our success and our students' success in achieving those complex educational goals?"

Always feel free to call the MTU Center for Teaching, Learning, and Faculty Development if you have questions about these ideas or anything else related to your teaching at 487-2046.

New staff

George Willard III has joined System Administration Services as a system administrator. He was previously employed at X-Rite Incorporated in Grand Rapids. Willard is earning his BS in Computer Science from MTU and was departmental scholar in 1995–96. He is the former head consultant of the PACE lab. Willard, who lives in Houghton, enjoys roller blading, computers, electronics, and video games.

Judi Nuottila has joined the Dining Services staff as a secretary. She was previously employed at Century 21 North Country Agency as a secretary. Nuottila lives in Lake Linden with her husband, Bob, and has a son, Craig.

Controlling polymer reactions paves way for new products

Submitted by the News Bureau

A Michigan Tech researcher has found a way to control polymer reactions and permit scientists to create tailor-made materials with unique properties including a varnish that's comparable to polyurethane and costs less than half as much to produce.

Polymers are formed when chemical compounds combine with one another (a process called polymerization) to form larger molecules, said Associate Professor **Gerard Caneba** (chemical engineering).

"We've been studying chain-reaction polymerization systems, which are prone to a runaway situation called the Gel Effect," says Caneba. "This happens when increasing temperatures cause the chemical reaction to go out of control, usually rendering the end product useless. We found that by adding a type of diluten we can slow the reaction, gain control of the polymerization process, and control the properties of specific polymer products. This allows us to engineer certain polymers to have unique and desirable properties. From a process standpoint, it allows higher-yield production of polymeric materials normally made in solution."

This method can be used to make a generic class of polymers called block copolymers, which combine the qualities of select chemical and physical properties. "It is the only process that can make acrylic and methacrylic copolymers in an aqueous environment," he says. "And products could be free of volatile organic compounds [VOCs] that are always an environmental concern."

The process has several potential applications.

"We've been able to make a really good, tough varnish that is comparable to polyurethane, but is three or four times less expensive and is resistant to ultraviolet rays," says Caneba. "The process could also be used to produce coatings, paints, adhesives polystyrene molding, medical implants, diagnostic devices, and thermo plastic rubber. Just recently we have seen the all-solid properties of our no-VOC interior paint approach and even exceed those of VOC-laden commercial counterparts.

"The knowledge that will be gained from this work could lead to the commercial development o products that will promote pollution prevention and upgrade the quality of peoples' lives."

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By e-mail to ttopics@mtu.edu
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Each week, the deadline for submitting information is **Friday at 5:00 p.m.** for publication the following Friday.

Our URL is http://www.sas.it.mtu.edu ucs/ttopics/index.html

Proposals in progress

Researchers, their proposals, and their potential sponsors are

- **Dana Richter** (IWR), "Ectomycorrhizal Fungus Diversity Following Clearcutting Northern Hardwoods and Replacement with Red Pine Plantations," EPA
- **Stephen Bowen** and **Timothy Menard** (biological sciences), "Evaluation of Aquatic Communities within Probable Path of White Pine Smelter Emissions," Michigan DNR
- **David Odde** (chemical engineering), "Chemical and Mechanical Interactions in Microtubules," NSF
- **Kirk Schulz** (chemical engineering), "Hydrodesulfurization Surface Reactions on Carbided Mo(110) Surfaces," SCS-PRF

In print

Associate Professor **Glenda Gill** (humanities) has published an entry on Arthenia Bates Millican in the 1997 edition of the *Oxford Companion to African American Literature*.

Associate Professor **Vernon Dorweiler** (SBE) has reviewed two books in the current issue of the *International Trade Journal,* Vol. XI, Issue 2): *The Law of Domestic and International Strategic Alliances: A Survey of Corporate Management,* by Alan Gutterman, 1995; and *Global Dangers: Changing Dimensions of International Security,* by S. M. Lynn-Jones, 1995.

-ree satellite broadcast on computer ergonomics March 4

Office work can be hazardous to your health. /ision problems, repetitive motion injuries, carpal unnel syndrome, and tendonitis were virtually unknown in the office environment a decade ago. Today, they are the occupational illnesses of the L990s. A free satellite broadcast on coping with office-related injuries will be shown Tuesday, March 4, at 4:00–4:30 p.m. in EERC B11. All members of the University community are invited.

This video training program, "Computer Ergonomics," shows employees what adjustments they can make to their work stations and work practices to help prevent these illnesses and enhance comfort. Written in consultation with ergonomics expert David Thompson, of Stanford University, and presented in easy-to-understand language, the program covers basic work station adjustments: light, screen, placement of the source document, work practices, work flow, monitor safety, and exercises.

The broadcast is sponsored by MTU Occupational Safety and Health Services. Seating is limited to MTU personnel only. Call Renee at 487-3026 to reserve a space.

If you are interested but unable to attend, this program will be videotaped and available in Occupational Safety and Health Services.

Computer classes

Michigan Tech is offering the following classes in cooperation with dL Computer Consultants at the reduced price of $115 (except Quicken, which is $70) at the consultants' office, 706 Shelden Avenue. All classes are held 9:00 a.m.–4:00 p.m., unless otherwise noted. For more information or to register, contact Rebecca Christianson, 487-2416.

- Tuesday, March 4: WordPerfect Basics
- Thursday, March 6: Lotus Basics
- Monday, March 10: Excel Basics
- Tuesday, March 11: Windows 95 Basics
- Thursday, March 13: Windows 3.1 Basics
- Monday, March 17: Quicken Basics (1:00–4:00 p.m.)
- Thursday, March 20: Word Basics
- Monday, March 24: Access Basics
- Tuesday, March 25: Pagemaker Basics
- Thursday, March 27: MS Works Basics

MTU notables

Professor **Abhijit Chandra** (ME-EM) has been named a Fellow of the American Society of Mechanical Engineers International.

Chandra was a researcher at GM Research Laboratories and on the faculty at the University of Arizona before coming to MTU. He has contributed to various areas of solid mechanics and manufacturing. Chandra developed the first boundary-element-method formulation for large deformation problems in viscoplasticity and applied this formulation to simulate various types of manufacturing processes. He developed BEM procedures for sensitivity analysis of manufacturing processes and a method to study of interaction and coalescence of microdefects in solids.

Professor Emeritis **Charles Hein** was named a life member of the Michigan Society of Professional Surveyors at their 56th Annual Meeting, held February 18–21 in Traverse City. Hein retired from the School of Technology several years ago and was coordinator of surveying for many years.

Beyond FOAD letters: 31's the charm

Submitted by Dave Strenski, '86 BS in both Civil Engineering and Surveying, '89 BS in Mechanical Engineering

After going through all the formal activities at the Career Center to try and find my first "real" job, as a civil engineer, all I received were thirty rejections (FOADs).

Then one day I was down at the Career Center, and I saw a business card tacked on the bulletin board with a message on the bottom saying "Looking for Civil Engineers." I called and sent my resume. The company was interested, was coming to campus, and wanted to have an interview.

Well, instead of using the Career Center, the recruiter said, "Just meet me in front of the civil office and we'll walk over to the Union for lunch."

I met Howard [the recruiter] and we talked and walked over to the Union, but it was noisy and full so he just wandered upstairs to some empty room, and we talked some more. Then he was interested in some stuff I was doing in the MEEM graphics lab so we walked over there—the most informal interview I ever had! A couple of weeks later he calls me from San Diego and offers me a job!

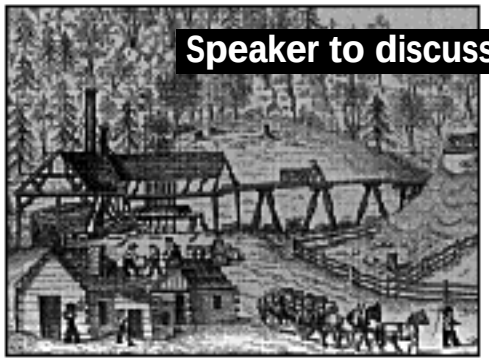
I had never been to San Diego, had no idea what kind of work I was going to be doing, and the pay was low, but what the hell, I took the job because my job title was going to be "junior scientist." Turns out that Howard was originally from Mass City and went to MTU. The reason for the interview was that he was back in the area visiting his mother and just stopped by MTU to interview me.

It turned out to be the best move I ever made. I was working for a defense contractor, SAIC, and they liked me because of my computer skills. I never did do any civil engineering, but I did become heavily involved in computer programming of large hydrodynamic codes. Now I'm working for the company whose computers I was using back in 1986, Cray Research. I'm still not using my civil degree, nor my surveying degree, and not much of my mechanical degree, but it was all a great background for working as an application analyst, my current position.

(Editor's note: Dave Strenski works in Detroit for Cray Research, a subsidiary of Silicon Graphics.)

Career Center stories

The University Career Center is slated to move to spacious new quarters this summer. In honor of its move to the Harold Meese Center, Tech Topics *is publishing anecdotes from those who have endured the teensy weensy cubicles of its current location in the ad building basement, not to mention that very public phone by the water cooler. Special sympathy goes to those black- and blue-suited students who sit in frozen panic in the hallway awaiting their interviews, while those of us who already have jobs traipse merrily back and forth to the Mail Room. If you have any interesting Career Center stories, help memorialize the center and e-mail them to ttopics@mtu.edu*



Speaker to discuss early shipping of copper

Jonathan Leitner, a doctoral student in sociology at the University of Wisconsin–Madison, will speak on "Shipping Mass Copper, 1850–90: Results From the Drier Collection," on Thursday, March 6, at 4:00 p.m. in the J. R. Van Pelt Library Archives Reading Room. His visit is part of the Archival Speakers Series.

A pioneer in X-ray research, **Roy Drier** was a member of the Michigan Tech faculty for more than forty years. He received the school's first earned doctoral degree in 1934, the first Faculty Research citation in 1953, and was pivotal in establishing the Michigan Tech Fund. Drier was also interested in the early history of copper mining in the district, particularly the mining of native copper by ancient peoples on Isle Royale and the early development of industrial mining, begun in the 1840s. Drier accumulated a wealth of artifacts, documents, and photographs relating to Copper Country history, much of which he donated to the Michigan Tech Library preceding his death in 1974. The Roy Drier Collection contains the most significant part of his donated manuscript material, including a series of correspondence with John Grout and other early copper shippers active in the district.

Everyone is welcome to the presentation. The Friends of the Van Pelt Library will provide refreshments.

For further information, contact Erik Nordberg at the MTU Archives, 487-2505 or copper@mtu.edu

LeaderShape: Molding the Lode

In a university without a journalism department, where well over half the students major in engineering, **Jeremy Henges** wants to make the student newspaper the best in the state.

Brave words. Especially brave, juxtaposed as they are with the misspelled word in the headline for the week's lead story. Henges sighs and then shrugs. An editor's life is speckled with such cringe-filled moments.

Henges is editor in chief of the *Michigan Tech Lode.* And though he doesn't expect to achieve best-paper designation this year, he feels he's moving in that direction. The *Lode* has changed its front page format and added an "Inside" box on page one. "We'll have AP wire service next year," he said, which should help satisfy student demand for more national news with a college slant.

Since most of the staff are new this year and are still learning the basics of putting out a paper, more brass-tacks improvements will wait until next fall, Henges said.

A second goal—financial independence for the *Lode*—is a lot closer to realization. "Our ad sales staff has been kicking butt this year," he boasted. "Our ad revenues are higher than they've been in five years."

Henges might not be heading the *Lode* with quite this fervor if he hadn't gone to LeaderShape last May. The week-long program brought about fifty MTU students together for training in leadership, teambuilding, and communication skills, with the goal of returning to Michigan Tech and making improvements in their organizations.

Through LeaderShape, Henges was encouraged to develop some pretty ambitious goals: "challenging what is, looking toward what could be," according to program literature. Henges took at look at where the *Lode* was, and, with the help of of other LeaderShape participants, imagined where he'd like it to be.

"It was nice to take a week off and brainstorm ideas," he said. "It's been a motivational fire all year for me."

LeaderShape also teaches how to share that fire, which may be one reason the ad sales staff has been breaking records. "At first they smirked and laughed and said it's not possible," Henges said. Now, they're looking at raising their ad rates, which are the lowest of any college paper Henges has been able to find.

He has also developed a staff handbook and is looking forward to replacing the *Lode's* computers, old Macs that are way past being unreliable. A readership survey is planned, as is a new design for the On-Line Lode. "Next year, I hope to get a program with the Writing Center, to help our staff improve their writing skills," he said.

Of course, nothing can completely eliminate the occasional faux pas, such as the headline touting "German shepards" as surrogate police officers. That's OK, Henges says. Perfection is not expected.

"It's not whether you get there; it's the process," he said. "Whether we're the best paper is not as important as if we improve, and as long as that happens, I'll be happy."

USG officers building a more powerful student body

Last year, **Anne Baldridge** got her application in for LeaderShape just under the deadline. "I took it for granted," she said. "I didn't realize how valuable it would be until I got there."

Baldridge, who is vice president of the Undergraduate Student Government, joined its president, **John DeVol,** for a week last May learning leadership and communications skills at LeaderShape, held at the Ford Forestry Center. By the time they left, they had set their sights on reworking the USG to make it a bridge between MTU's administration and its students.

Associate Dean of Student Affairs **Steve Tyrell** has observed the resulting changes. "I think they have a better rapport with our office, the provost, and the president," he said. "I also think the students are more comfortable expressing their concerns across campus, and the institution can benefit from their input."

By meeting regularly with administrators, the USG officers have established relationships they can draw on when they need to. "We have the connections now," DeVol said. "It's not like approaching some foreign territory."

As a result, students have become more involved in the NCA accreditation self-study process and are serving on a number of committees investigating institutional effectiveness. "And Provost **Fred Dobney** has asked them to talk to Lansing legislators about higher education issues and lobby for more funding for Michigan Tech," Tyrell said.

It's not that the USG would have stagnated without LeaderShape, they say. "It provided the initial push," Baldridge said.

In a few years, when they are both gone from Michigan Tech, LeaderShape techniques will continue to help them set and achieve goals. And in any case, it was fun. "LeaderShape is a great way to meet people," she said.

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Another LeaderShape session is set for this May. For more information on applying for the program or helping support it, contact the Office of Student Affairs, 487-2212.

February

28 Friday
6:30 p.m.—*Kansas City*—Walker 134
7:00 p.m.—Women's basketball, GLIAC tournament, winner of Thursday' game v. ?—Northern Michigan University

March

NATIONAL WOMEN'S MONTH

1 Saturday
2:00 p.m.—Women's basketball, GLIAC tournament third-place game—Northern Michigan University
4:00 p.m.—Women's basketball, GLIAC tournament championship game—Northern Michigan University

4 Tuesday
4:00 p.m.—"Computer Ergonomics" satellite broadcast—EERC B11

6 Thursday
4:00 p.m.—Jonathan Leitner, "Shipping Mass Copper, 1850–90: Results from the Drier Collection"—Van Pelt Library Archives Reading Room

8 Saturday
10:00 a.m.–5:00 p.m.—Family Fun Day—SDC, Memorial Union

14 Friday
1:00 p.m.—Men's tennis, MTU vs. Gannon University—Gates Tennis Center

15 Saturday
noon—Men's tennis, MTU vs. Mercyhurst College—Gates Tennis Center
5:00 p.m.—Men's tennis, MTU vs. Minnesota–Duluth—Gates Tennis Center

POSITIONS AVAILABLE AT MTU

The following positions will be posted Friday, February 28, 1997, at 1:00 p.m. through noon, Friday, March 7, 1997, in the Human Resources Office.

Staff Assistant—Civil Engineering–Transportation Center
Assistant Professor of Accounting—School of Business and Economics
Assistant Professor—Metallurgical and Materials Engineering

University employees are reminded to apply in writing prior to noon, Friday, March 7, 1997, to be considered as internal candidates. Applicants from the recall pool will be given first consideration for non-bargaining-unit positions. 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.