

# University News

## Portable pioneers In the Fall of 2002, all freshmen will be required to use laptop computers

Instructors involved in the new laptop pilots at UW-Stout are definitely breaking ground. Sure, other campuses are using laptops in the classrooms. Some are even launching wireless networks. But very few, if any, are combining this hardware with innovative classroom management software.

Integrating these three technologies into the classroom has not been an easy task. Part of the purpose of a pilot is to discover flaws, so instructors have spent the past semester resolving glitches in the new system. "All three technologies do things that we want to do. The obstacle is getting them to work in conjunction with each other," explained Bruce Maylath, director of the technical communication program.

Fortunately these brave instructors are ironing out technical problems before this initiative goes full scale in the fall of 2002, when all incoming freshmen will be required to use a laptop. To move the process along, they are currently pursuing a UW System grant to support seminars about teaching in new and exciting ways with notebook computers. Additionally, they are seeking funds to support a class that will introduce incoming students to the ins and outs associated with laptops.

Currently, all freshmen entering the technical communication program and the graphic communications management program are required to purchase either an iBook or a PowerBook. Both programs selected these models because most professionals in their fields use Apple computers.

These two programs are particularly well suited to adopt portable technologies. Both involve courses that require heavy computer use. Also, professionals working in these fields often travel or work from mobile offices and require laptops to communicate with clients and co-workers.

"We need to be pioneers to prepare students for their future," said Jim Herr, director of the graphic communications management program.

Faculty members who teach the laptop classes have had to be flexible enough to change their lesson plans at the last minute when they either cannot connect with the wireless network, or with their students' computers. And students have had to remain patient, often collaborating with their instructors to overcome technical obstacles.

Now, their process of trial and error has begun to bring exciting results. "This is a revolution. Wireless access allows much more flexibility and spontaneity in the classroom," said Maylath. For example, he can easily introduce hands-on computer activities without worrying about scheduling time in a lab months beforehand.

In addition, laptops promote group work. "Instead of sitting in a row in a lab, my students can sit in circles with laptops between them," explained Maylath. They pass their computers to each other, and type responses to what their classmates have written, he added.

Using classroom management software originally designed for computer labs, Maylath can view what is on a student's screen from his PowerBook and instantly send them his comments. He can also show the class examples of their fellow students' work on a projector screen connected to his laptop. While the student's work is on the screen, Maylath can manipulate the text by taking control of their keyboard from his own keyboard.

"I am having students do more in-class writing than I ever have before, because they can easily revise it. At first they were a little inhibited, knowing that I can see what they are writing, but they soon got over it," noted Maylath. When he is observing their screen, a graphic pair of eyes pops up on the student's menu bar. Maylath said he can turn this indicator off, but prefers to let the students know he is viewing their work.



Bruce Maylath gives pointers to a student working on her laptop computer.

Students are beginning to use their laptops to take notes as well. "They can search for a Web site while I am lecturing, gather relevant information and paste it right into their notes. This also allows them to easily incorporate their notes into the papers they write," said Maylath.

Instructors and students in biology and chemistry classes are also using laptops in innovative ways. For example, using special software and temperature and pressure sensors that plug directly into their laptops, students can simultaneously monitor and tabulate changes in temperature and pressure at precise, automatically timed intervals, said John Crandall, chemistry department.

In addition, they can see graphical presentations of the changes that are occurring in live time. "From this, students are better able to conceptualize those changes. Not only is the data being recorded much more precisely than before, but students can also manipulate that data for presentation in alternate forms and can then print their results," explained Crandall.

Students involved in the pilot can work on their laptops in the classrooms, the hallways, or even outside, providing they are within approximately 150 feet of a Lucent base station and not aligned with any steel obstructions. Each laptop must contain an "airport" card in order to connect with one of several base stations located in Harvey Hall, the Communication Technologies Building and the Science Wing.

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**Bruce Maylath**

According to Herr, each station can process connections to approximately 10 laptops. For security purposes, Stout Solutions-Learning Technologies assigned each notebook computer a roaming Internet Protocol address. IP addresses ensure only students, faculty members and staff connect with UW-Stout's network.

Both Maylath and Herr said that the price of the laptops didn't seem to be a big issue with the students or their parents. Because the laptops are required for class, they were given the option to boost their financial aid to cover the cost. Those who were not eligible for aid had the opportunity to apply for a loan through Apple.

Still, only three students requested additional aid and two received Apple loans. The remaining 51 bought their computers outright, said Herr.

Because the University Bookstore is the university's Apple sales agent, they put together five different packages that include a printer, software and either an iBook or a PowerBook. They also offer additional software at an educational discount and help students with maintenance, said Sam Morey, University Bookstore manager.

If a laptop crashes, the students need to call a 1-800 number to discuss the problem with an Apple representative who will help them determine if they have a hardware or software problem. If the hardware is faulty, Apple sends an overnight express container. Morey said students usually get their laptop back in a week. The bookstore maintains two loaner laptops that students can check out in the meantime, he added.

### Coordinating a classroom revolution

Vic Mincoff, UW-Stout's laptop initiative coordinator, is prepared to tackle his next technology challenge. He has been charged with developing a long-range plan to implement UW-Stout's laptop program. "Our intent is to deploy laptops to all incoming freshman in three consecutive years," he explained.

Born and raised in Montreal, Canada, Mincoff has worked with computers for more than 25 years. As computer technology has evolved, so has the nature of his job — from working in telecommunications to managing training centers to dealing with Y2K compliance issues.

Mincoff gained a great deal of experience implementing laptops while working for Labatt Brewing Company in Ontario. He helped introduce portable computers to 135 salespeople, allowing them to access past sales information while visiting merchants.

Currently, Mincoff is a consultant for Compuware, a company that builds technology solutions. Working for such a large company gives him a clear advantage. "If I need help with some aspect of a project, I can draw on the experience of some 15,000 other Compuware employees," he said.

To begin his plan, Mincoff has been meeting with a variety of people on campus and collecting their input. He said people seem open to the laptop initiative. "I have received a tremendous amount of positive feedback," he noted.

In addition to gathering information from faculty, students and staff, Mincoff is considering the pros and cons of the different vendors who may supply laptops to the UW-Stout campus. He pointed out that choosing one vendor over another is not just dependent on cost. Other factors include customer support, maintenance, trade-in allowances, upgrade capabilities and flexibility in renegotiating contracts.

Still, Mincoff indicated that student satisfaction is the most important element to consider during the planning process. He believes in giving students options, so that they can take responsibility for their own education. "We can make them aware of what their program suggests they purchase and what the industry standard is. Then, they can decide what laptop they will still be happy with at the end of four years," he said.



Mincoff



## Stomping through the bogs

Nold receives National Science Foundation grant to study Wisconsin peat bogs

Stephen Nold, biology, has received a \$532,900 undergraduate research grant from the National Science Foundation's Faculty Early Career Development Program. The CAREER program recognizes and supports the activities of beginning faculty members who demonstrate the potential to become leaders in their fields.

NSF has also nominated Nold for the Presidential Early Career Awards for Scientists and Engineers. PECASE is the United States government's highest honor for scientists and engineers as they begin their careers.

During the five-year grant period, Nold will study bacteria that consume methane, a greenhouse gas. He will conduct his research in methane-producing peat bogs located in the Trout Lake Station, a Long-Term Ecological Research site in Northern Wisconsin.

"We are currently limited by the methods we use to study these organisms, which are very small—a micrometer in diameter. These peat bogs contain an enormous number of species, but we don't know what the species are doing," Nold said. "I plan to measure how

much methane particular bacteria are eating. This will link bacterial species' identity to their activity, offering a new and hopefully useful method in microbiology."

Trout Lake Station is located in Wisconsin's Northern Highland Lake District in Vilas County. According to Nold, NSF supports crews to work in these research sites for 50 years or more. "Other people have studied the Trout Lake site and collected data for over 70 years. I will tap into that knowledge base as I work there," he said. "I will also bring undergraduates up to Northern Wisconsin to stomp through the bogs to collect samples that we will bring back to study."

To enhance the education of Nold's students, the NSF grant also supports sending him to four weeklong summer workshops to learn how to incorporate cooperative learning strategies into his classroom. As a result, he will develop new courses and make improvements to existing courses, integrating activities that get students to solve problems together.

"I plan to hire a graduate student to study the effects of small-group learning in our Introductory Biology course. Hopefully, these efforts will act as a catalyst for

improving science education at Stout," he said.

In addition, Nold plans to develop relationships between Stout and the emergent biotechnology industry in Wisconsin. "This grant will help build a research and education infrastructure that will supply a trained workforce to this growing industry," he said.

Nold received his bachelor's degree from UW-Stevens Point and his Ph.D. from Montana State University. After earning his degrees, he spent a year and a half in the Netherlands, where he also studied methane-eating bacteria. Before his arrival at Stout last January, Nold was at Michigan State University studying samples of Pacific Ocean sediment he collected on an oceanographic cruise.

To support grant-writing efforts in their college, Dean John Murphy and Associate Dean John Hunt organized a College of Arts and Sciences grant writing stipend. "Without that support, I would not have written this grant proposal," Nold said. "I am grateful for the opportunity to think and write. Fortunately, my scientific peers liked what they read."



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*Stephen Nold*

## Applied Science

Undergraduate degree program is first in nation

A new applied science program to meet the demand in the business world for graduates who can adapt to rapid scientific and technical advances is now being offered by UW-Stout.

"This program will benefit students and the state economy by providing job skills that are in great demand by high-tech industries," said Forrest Schultz, director of the applied science program.

The new program is unlike any in the nation, emphasizing flexibility through a broad scientific base along with practical experience. The curriculum is based on a core of chemistry, physics and biology. "Students entering the program will have the opportunity to study three areas of science. They will not have to focus on one area," Schultz said.

Graduates of the program will pursue careers in pharmaceutical sales, biotechnology or laboratory management, or as technical support for scientific equipment or chemical sales. "This degree will provide a foundation that can lead to specific jobs, graduate

schools or even professional schools," said Schultz.

Students in the program will also explore technical writing, data analysis, interpersonal communication, experiment design and basic business principles. This versatility helps students obtain the qualities that employers are looking for in today's college graduates—interpersonal and problem-solving skills, high energy level and good judgment, Schultz said.

In the near future, technical school graduates will be able to pursue this four-year degree. Associate degree credits will transfer to UW-Stout with the consent of the program's director. This 2 + 2 articulation agreement will allow students to earn an applied science degree without having to duplicate what they have already spent in time, effort or money.

UW-Stout's new applied science program begins the fall semester of 2001. For more information, visit the program Web site at:

<http://www.uwstout.edu/programs/bsas/>



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## Bridging cultural distances

Cerritos/Xavier links widen students' perspectives

To bridge racial, ethnic, geographic and experiential boundaries, two instructors in the College of Arts and Sciences use video cameras and audio equipment to link classes at UW-Stout with classes at Xavier University in New Orleans and Cerritos College in Norwalk, Calif. While courses are often linked across long distances, this is the first time that a learning community has been created using distance technology to promote communication between students of different ethnic and cultural backgrounds.

Xavier University is the only historically black, Catholic university in the United States and Cerritos College is one of the most diverse community colleges in the country. "Pursuing an education means also widening your views to include how people from other cultures who have different experiences view the same issues.

This is very hard to do at Stout, where our student body is predominantly white and rural. Even if the students desire to have broader conversations, where can they find the opportunity to do so?" said Brian Fitch, of UW-Stout's department of English and philosophy.

Students involved in the program become familiar with both synchronous and asynchronous technologies. Using Blackboard online course delivery, they participate in discussion threads about issues in their assigned readings for approximately ten days. They then take part in a 90-minute live discussion.

Last semester, Fitch's English composition class was linked to a theology course and a philosophy course at Xavier. Alec Kirby, of UW-Stout's department of social science, and an instructor at Cerritos College also created a link between their American history courses. At points

in the semester students participate in live discussions that include all five classes.

"We have discovered that the live discussions have a life of their own. It is not possible to guide them in a particular direction, but they always go to a really interesting place," said Fitch.

So far, the linked courses have concentrated on race and ethnicity issues. Assigned readings include Martin Luther King, Jr.'s *Letter from a Birmingham Jail* and DuBois' *The Souls of Black Folk*. Next, instructors hope to begin talks about how all of these issues influence problem solving by linking a business ethics course at Xavier University with a UW-Stout business writing course.

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## A quality experience

### Baldrige Award team visits campus

UW-Stout was the only school to receive a site visit in 2000 for the new "education" category of the prestigious Malcolm Baldrige National Quality Award.

Named for the former secretary of commerce, the award was established by law in 1987 to enhance the competitiveness of organizations by advocating quality awareness. It also promotes the sharing of successful performance strategies and the benefits of implementing such strategies. Since 1988, 37 organizations have received the Baldrige award, including IBM Rochester, Motorola Inc. and The Ritz-Carlton Hotel Co. In 1999, new education and healthcare categories were added.

"This is great recognition for UW-Stout," Chancellor Charles W. Sorensen said. "The fact that we are the only school in the country to receive a site visit demonstrates the impressive processes and quality of this institution, the faculty and staff, and our students."

The Baldrige performance quality criteria provide a guide to any organization that desires to improve overall performance. The criteria are used by thousands of diverse organizations to enhance employee relations, increase productivity and develop greater customer satisfaction.

Award applicants undergo a review process that examines achievements and improvements in seven categories:

**Leadership**—How senior executives guide the organization and how the organization tackles its responsibilities to the public and practices good citizenship.

**Strategic planning**—How the organization sets strategic directions and how it determines key action plans.

**Customer and market focus**—How the organization determines requirements and expectations of customers and markets.

**Information and analysis**—How the management, effective use, and analysis of data and information supports key organization processes and the organization's performance management system.

**Human resource focus**—How the organization enables its workforce to develop its full potential and how the workforce lines up with the organization's goals.

**Process management**—How key production/delivery and support processes are designed, managed and improved.

**Business results**—How the organization performs and improves its key business areas: customer satisfaction, financial and marketplace performance, human resources, supplier and partner performance and operational performance. Also, how the organization performs compared to competitors.

This was the second year UW-Stout applied for the award. The three and a half day site visit the university received in October 2000 is the farthest any post-secondary institution has ever risen in the award process.

To read UW-Stout's Baldrige award application, go to: [www.uwstout.edu/chancellor/mba/](http://www.uwstout.edu/chancellor/mba/).

"This is great recognition for UW-Stout."

Charles W. Sorensen

## At an all-time high

### UW-Stout's employment rate pushes 100 percent

Within six months of graduating, a record 99.6 percent of UW-Stout's 1999-2000 graduates are working or continuing their education, according to Placement and Co-op Services annual employment report. Of those employed, 92.5 percent secured jobs in or related to their major.

Graduates from 20 of 24 degree programs reported 100 percent employment. The median yearly salary reported by all working graduates was \$30,000.

UW-Stout's 1999-2000 employment statistics were positively influenced by the highest survey response rate the university has ever experienced, said LaMont Meinen, director of Placement and Co-op Services. Due to new services offered by his office, 92 percent of 1999-2000 graduates responded to the employment survey, compared to 84.9 percent last year. Using funds generated by the new access fees initiated by students, Placement and Co-op Services expanded their services to include evening hours. The staff also installed new software that allows students, employers and alumni to access their office through the Internet at any time.

Meinen pointed out several other reasons why nearly all of UW-Stout's 1999-2000 graduates were employed soon after graduation. Each year more than 450 students participate in co-op programs, which makes them more appealing to prospective employers. "This practical work experience gives our students an edge in the job market," Meinen said.

In addition, Placement and Co-op Services builds strong relationships with a variety of employers, from smaller "mom and pop" operations to Fortune 500 corporations, said Meinen. As a result, more than 500 employers come to UW-Stout to interview students on campus each year. Just during the three-day career conference in 2000, 315 employers recruited students,

and more than 2,550 students participated.

"Employers have been establishing a stronger presence on campus. They are hosting information sessions, sponsoring evening dinners, and presenting to classes and student clubs and organizations," said Meinen.

Because the economy is currently unpredictable, Meinen said he is urging this year's graduates to begin looking for a job early and to take advantage of every interview offered on campus. He indicated that by spring break, only 21 percent of college seniors had accepted a job this year, according to a recent survey by Collegegrad.com, an Internet job site.

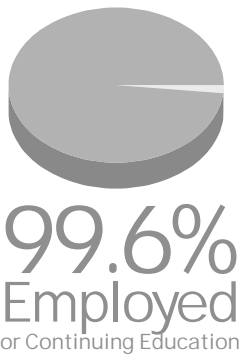
"Students will need to be more proactive in their job searches, start the process earlier and be willing to move to where a job is located," said Meinen. "After four years of catering to students, employers will now ramp up their requirements and focus their efforts as the market tightens," he added.

The outlook for new UW-Stout graduates remains promising despite the sluggish economy. According to Michigan State University's 2000-2001 *Recruiting Trends Report*, the demand for new hires will still increase approximately six percent due to factors that include retirement and turnover.

"Because of UW-Stout's distinctive array of programs that lead to professional careers and our strong mix of employers, I anticipate that our graduates will continue to find employment upon graduation in 2001 and 2002," Meinen said.

Alumni can access the full employment report on the Placement and Co-op Services Web site at:

<http://www.uwstout.edu/place>



"...practical work experience gives our students an edge in the job market."

LaMont Meinen

## 'Only hope': To aid his country

### Ugandan Fulbright Scholar will train entrepreneurs

Joseph Okiror, of Uganda, is a member of a select group. As a Fulbright Scholar, he went through a demanding application and selection process in order to reach his school of choice. He said he selected UW-Stout because its programs are unique, diverse and flexible. After two years of scholarship, Okiror will graduate this summer with a master's degree in vocational and technical education.

Each year just 5,000 foreign nationals and United States citizens are awarded Fulbright grants. Through the program, foreign national students, teachers and professionals come to the United States to conduct research and study, and United States citizens do so in other countries.

As an assistant lecturer for the faculty of vocational studies and education at the Institute of Teacher Education Kyambogo, Okiror applied for a Fulbright grant to expand his entrepreneurship, technology, business and management skills in order to meet a growing need in his country.

"Our faculty is the only hope for the Ugandan government as regards its policy on education," said Okiror. "In 1996, our government instituted free basic education for all children. This has resulted in the number of children at basic school level to rise from two million to six million," he explained.

According to Okiror, the Ugandan government hopes to balance this sudden influx by encouraging faculty to introduce entrepreneurship concurrently with vocational studies. "The objective is to try to turn out

graduates who will be able to create jobs for themselves," he explained.

Sarah Striker, the assistant director of the United States Information Services in Uganda, and David Abu, a Stout alumnus in Nigeria, advised Okiror that Stout had the classes he needed to expand his skills. "I strongly believe that the decision they guided me to, and that I took, will help me when I go home—not only to be a good instructor of technology skills and how to start small enterprises, but also to possibly be the dean of the faculty," said Okiror.

As a Fulbright Scholar, Okiror has followed a rigorous schedule for two years. He pointed out that during the time of the grant period he is bound by three organizations—the Fulbright Program, UW-Stout and ITEK. So, he has had to be careful choosing his priorities. "The scholar has to walk the thin line of fulfilling the demands of all these organizations," he said.

Still, Okiror encourages all students and educators to consider applying for a Fulbright grant to advance their careers. "Remember, though competitive, demanding, hectic and challenging, every year there are people going through it," he said.

The Fulbright Program's goal is to increase mutual understanding between people in the United States and people in other countries through educational exchange. The program was established in 1946 under legislation introduced by Arkansas Senator J. William Fulbright, and updated in 1961 by the Fulbright/Hays Act.



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