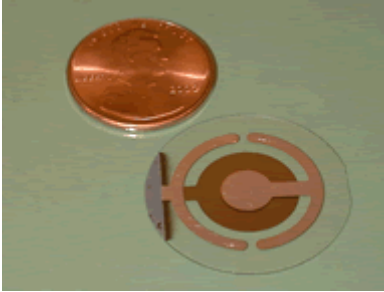


March 2002

UM Fellows to put Sensors in the Bangor High Curriculum!



Fish pathogen sensor

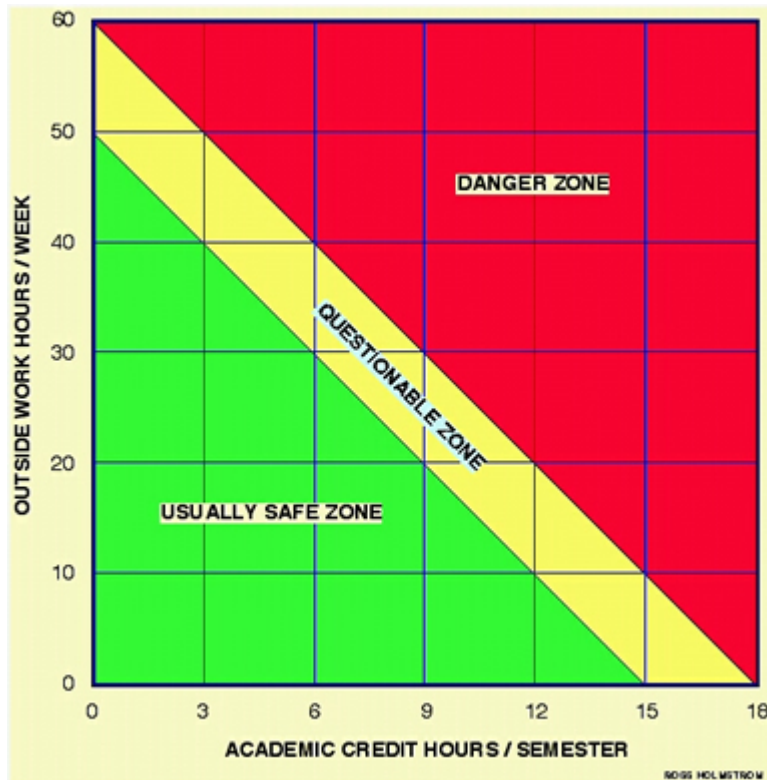
carry out the work. [Graduate Applications](#) and [Undergraduate Applications](#) are now being accepted.

Dr. John Vetelino and a team of researchers from the College of Engineering have [just been awarded a \\$1.68 million project](#) from the National Science Foundation to integrate sensors into the AP curriculum at Bangor High School and create a sensor engineering course that will be disseminated to other high schools. Some of the most exciting news is that ten [Graduate Fellows](#) and five [Undergraduate Fellows](#) will be given **generous awards** to

Outside Employment and Studying - When is it a Dangerous Mix?

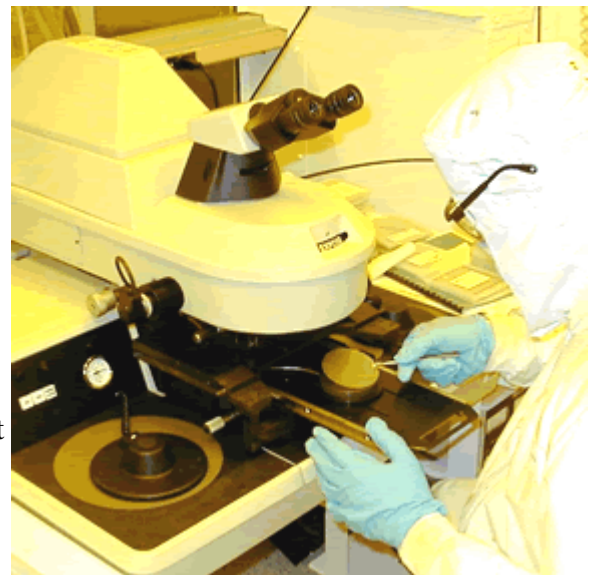
The ECE Department at the University of Massachusetts, Lowell, has produced a chart (reprinted with permission) to giving guidelines for students who are employed in addition to taking courses. The basis of the chart is that a three credit course roughly corresponds to ten hours of outside employment. We strongly advise students to consider the advice shown, and as a general rule, students should try to devote full time to either working (co-op, summer job) or studying.

ECE faculty are in the process of creating a recommended five year curriculum for those students who must be employed or would like to stretch out the traditional four year curriculum to allow greater focus on coursework.



ECE Professor Wins Prestigious CAREER Award

We have learned that Dr. Mauricio Pereira da Cunha has been awarded a National Science Foundation CAREER award that will support his research in gigahertz radio-frequency (RF) [filters for wireless communication](#) using high velocity surface acoustic waves. According to the NSF, "The Faculty Early Career Development (CAREER) Program is a Foundation-wide activity that offers the National Science Foundation's most prestigious awards for new faculty members. The CAREER program recognizes and supports the early career-development activities of those teacher-scholars who are most likely to become the academic leaders of the 21st century."



Antique Electrical Devices To Be Sold ...



15 inch
Vacuum
Tube

A good portion of Barrows Hall will be razed this summer to make way for the new Engineering and Science Building. As a result, we have a "dungeon" full of old equipment that we will be auctioning off to support student scholarships. In the next few months, we will be developing a web site and making our equipment available via ebay. If you would like to be kept informed of related activities via email , please send me a message (musavi@eece.maine.edu). Here is a very small sampling of what we have. **Click on the images below to enlarge them.** If you have any stories you'd like to relate to this equipment, send them on! Thanks.



Oscilloscope



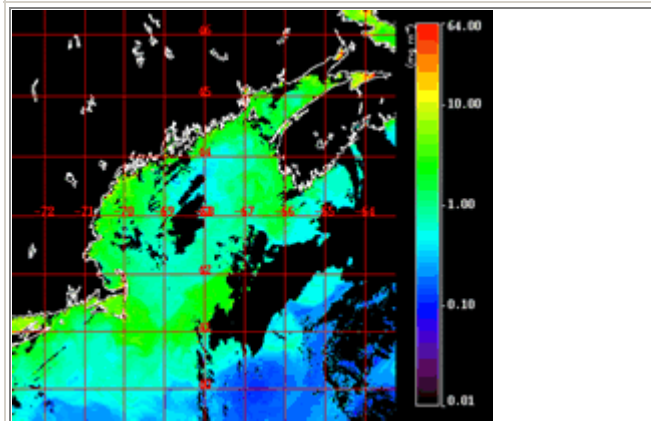
Power supply/modulator
oscillator/amplifier



General Motors "turntable"
(about 5 feet high)

Biodiversity and Ecosystems Informatics Workshop

A [workshop on biodiversity and ecosystem informatics](#) was held on February 7th and 8th, 2002 at the Doubletree hotel in Cocoa Beach, Florida. The workshop was initiated by the faculty and research personnel at the Intelligent Systems Laboratory, Department of Electrical and Computer Engineering. Researchers from diverse fields of ecological sciences, biodiversity, remote sensing, spatial information systems, computer science, and intelligent systems met at the workshop to investigate the informatics needed for the Indian River Lagoon (IRL) in Florida.

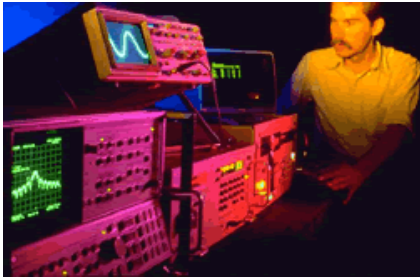


Phytoplankton and other suspended materials give oceanic waters characteristic coloring.

While a great deal of data has been acquired to define the IRL system's biodiversity and ecosystem processes, the data were collected at different time and space scales by numerous investigators, and exist in disparate formats. Novel approaches in modeling, visualization, geospatial and temporal data management are needed for effective research and management of this national resource.

Participants at the workshop included researchers from the Departments of Electrical and Computer Engineering, Spatial Information Science and Engineering, and Computer Science at the University of Maine, NASA Stennis Space Center (MS), Dynamac Corporation at NASA Kennedy Space Center (FL), Smithsonian Environmental Research Center (MD), Smithsonian Marine Station (FL), National Museum of Natural History (DC), American Museum of Natural History (NY), St. John River Water Management District (FL), South Florida Water Management District (FL), Hubbs-SeaWorld Research Institute (FL), US Army Corps. of Engineers (FL), University of Florida, and University of Central Florida.

And finally ...



Here are some snippets from "Engineering Explained" by Scott Adams. I include here a few of the less objectionable (disagreeable?) (controversial?) passages ... You be the judge.

Engineering is so trendy these days that everybody wants to be one. The word "engineer" is greatly overused. If there's somebody in your life who you think is trying to pass as an engineer, try this test to discern the truth.

To the engineer, all matter in the universe can be placed into one of two categories:

- *things that need to be fixed, and*
- *things that will need to be fixed after you've had a few minutes to play with them.*

Engineers are incapable of placing appearance above function. Fortunately, engineers have an ace in the hole. They are widely recognized as superior marriage material: intelligent, dependable, employed, honest, and handy around the house.

While it's true that many normal people would prefer not to date an engineer, most normal people harbor an intense desire to mate with them, thus producing engineer-like children who will have high-paying jobs long before losing their virginity.

Engineers are always honest in matters of technology and human relationships. That's why it's a good idea to keep engineers away from customers, romantic interests, and other people who can't handle the truth.

The fastest way to get an engineer to solve a problem is to declare that the problem is unsolvable ... At that point, it is a good idea for the normal person to not stand between the engineer and the problem. The engineer will set upon the problem like a starved Chihuahua on a pork chop.

Publications, proposals, etc.

UNIVERSITY/COLLEGE/DEPARTMENT SERVICE

- J. Patton attended Open House, Feb. 18
- R. Eason, E. Williams and D. Kotecki participated in Open House tours of Barrows Hall
- J. Patton, A. Whitney, and B. Segee attended Sleepover dinner with parents
- J. Patton attended a DEAC meeting with Provost Kennedy and Gerry Dube on 2/12
- D.E. Kotecki attended the graduate board meeting on March 1
- R. Eason, J. Patton, A. Whitney, A. Sheaff and E. Williams attended Engineer's Week Activities at Wells, March 2.
- J. Patton and D. Hummels interviewed Microelectronics Consortium candidates, March 2.
- J. Vetelino attended a press conference at Bangor High School for his newly funded GK-12 Sensors! project, March 4
- J. Vetelino was a panelist on the proposal review process at Bodwell Lounge, March 5

GRANTS RECEIVED

- M. DaCunha, "Acoustic Filters for Wireless Applications Using High Velocity Acoustic Modes," NSF, \$375,000, Feb. 6.
- J. Vetelino, "Undergraduate Research Participation in Electrical Engineering," Year 4, NSF, \$79,938, Feb. 15.
- J. Vetelino (50%), C. Holden (25%) and S. Godsoe (25%), "GK-12: Sensors!", NSF, February 22, \$1,678,292.

PROPOSALS SUBMITTED

- J. Vetelino, "Research Experience for Teachers Supplement," NSF, \$10,000, Feb. 13.
- J. Patton (80%) and G. Marrs (20%), "Mentored Scholarships Ensuring Engineering Success for Maine," NSF, \$432,868, Feb. 8.
- M. Musavi (35%), C. Domnisoru (25%), H. Resson (25%), and R. Van Beneden (15%), "An Efficient Gene Interaction Model," NSF, \$502,032, March 1, 2002.

PROFESSIONAL ACTIVITY

- H. Resson reviewed A paper for the IEEE Transactions on Neural Networks, March 5, 2002.

PUBLICATIONS

- .D.C. Malocha, M. Pereira da Cunha, Christine Klemenz, D. Puccio and K. Casey, "Investigations of Langanite and Langatate Materials for Use in SAW Device Applications," Proc. International Conference on New Piezoelectric Materials and High Performance Acoustic Wave Devices, January 28-29, 2002, pp. 117-124.

UPDATES

- Bangor Hydro held co-op interviews 2/21
- J. Patton, A. Sheaff, and B. Littlefield met with LASST and IT regarding networking issues and the new building