

In brief

Economic Development



UMass/EOEA ENVIRONMENTAL PARTNERSHIP PRODUCES RESULTS

To Friends and Supporters of the University of Massachusetts:

On January 12, 2000, Massachusetts Secretary of Environmental Affairs Robert Durand and I signed a groundbreaking partnership agreement to bring together the intellectual power of the University of Massachusetts and the policy-making skills of the Executive Office of Environmental Affairs (EOEA). The agreement states that the University and EOEA have a "shared goal of increasing their cooperation in meeting the environmental needs of the citizens of the Commonwealth through research, education, and public service and establishing an effective interorganizational framework for the management of those cooperative activities."

I am happy to report that the UMass-EOEA Environmental Partnership has made excellent progress. Joint work groups have been formed in seven high-priority areas: agriculture, biodiversity and ecosystem protection, community preservation, environmental technology, marine science and technology, pollution prevention, and watershed management. These joint working groups, supported by \$5 million from the University and the EOEA, have developed

action-oriented projects that are detailed on pages 2 and 3 of this newsletter.

Environmental science and technology has long been an area of national distinction for the University. Now, the University and EOEA are establishing a national model of how an environmental agency and a public university can make a measurable difference in advancing knowledge and improving the environment.

As this effort continues, new ideas will emerge. We are fully prepared to act on those that hold great promise to improve the Commonwealth's quality of life.

Thank you to Secretary Durand and to all from the University and the EOEA who have dedicated themselves to this important pursuit.

Sincerely

William M. Bulger
President
University of Massachusetts

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Environmental Partnership

“This strategic partnership between UMass and EOEA is a national model of a state agency and a state university working together for our environmental future.”

ROBERT DURAND
Secretary,
Massachusetts
Executive Office
of Environmental
Affairs

STEP Enhances the Commonwealth's Environment and Economy

The Strategic Envirotechnology Partnership (STEP) is an award-winning \$2 million program, a seven-year partnership between UMass and EOEA. This group works with the private sector to promote innovative technology solutions that protect the Commonwealth's environment and improve its economy. For every dollar appropriated to the STEP program in 2000, more than \$3 was leveraged in outside financing and company contributions. Over 150 UMass faculty and students have participated in STEP projects. These include more than 35 applied research and development projects and technical and business assistance activities with 130 Massachusetts companies in preventive, sustainable technologies; alternative/renewable energy technologies to reduce greenhouse gases; technologies for environmental assessment and monitoring; and technologies that convert waste and scrap into useful raw materials.

Contact: William Brah, Director,
Environmental Business and Technology
Center, UMass Boston (617) 287-7723

Community Preservation Institute for Local Leaders Held

During the spring, UMass faculty and staff teamed with EOEA policy specialists to teach an eight-week certificate course for local and regional community leaders from across Massachusetts. The program presented tools and skills for managing growth and preserving local character in participants' communities. It was developed as part of the Secretary's Community Preservation Initiative. Held at the UMass I-495

Center for Professional Education in Westborough, it was supported with a \$140,000 grant from EOEA. Plans are under way to offer the course again, possibly at other sites around the state.

Contact: Linda Silka, Professor of Regional, Social, and Economic Development,
UMass Lowell (978) 934-4675

UMass and EOEA Kick Off Project to Ensure Diversity in Community Preservation

UMass and EOEA are exploring ways to involve diverse minority and ethnic interests in community preservation efforts. UMass Lowell's Center for Family, Work and Community will lead a demonstration project to identify traditions, brought to Lowell by its many refugees and immigrants, that are important to housing, transportation, economic development, environmental practices, parks/open space, and the uses of rivers and streams. This knowledge will be used to increase the number and diversity of people participating in community preservation efforts both statewide and locally. The project is supported by a \$50,000 grant from EOEA.

Contact: Linda Silka, Professor of Regional, Social, and Economic Development,
UMass Lowell (978) 934-4675

Hydrodynamic Model Enhances Value of Commonwealth's Coastline

The Mass Water Resources Authority (MWRA) has developed a hydrodynamic model and a water-quality model to monitor the condition of the waters at the Deer Island outfall and to ensure compliance with regulatory requirements. This world-class monitoring tool brings to the Commonwealth the capacity to understand and predict the responses of the natural environment as effluents from the outfall enter Massachusetts Bay. Under a new agreement, this model of Boston Harbor will be transferred to UMass Boston. Through the Office of the President, the University has granted \$150,000 to the Marine Natural Laboratory Project at UMass Boston to support this effort, and the MWRA has committed \$360,000 to the project as well.

Contact: Curtis Olsen, Environmental, Coastal, and Ocean Science Program, UMass Boston (617) 287-7440

"Green Chemistry" Concept Introduced at UMass Boston Symposium

On April 6, 2001, a major conference on green chemistry, funded with \$100,000 from the UMass Office of the President, was held at Boston's John F. Kennedy Library and Museum. EOEA and UMass, through their Strategic Envirotechnology Partnership (STEP), co-sponsored the symposium, along with Associated Industries of Massachusetts and the Massachusetts Biotechnology Council. Green chemistry incorporates environmental factors in the design of new chemicals and processes by replacing toxics-producing steps in chemistry with benign ones. The conference was highly successful, attracting an equal mix of academics, policymakers, and businesspeople who were introduced to the

green chemistry concept and its application to local industries. More than 30 faculty members and students from across the UMass system are working in green chemistry, including those in a new doctoral program and laboratory at UMass Boston.

Contact: William Brah, Director, Environmental Business and Technology Center, UMass Boston (617) 287-7723

Product Stewardship Initiative Established at UMass Lowell

The state's solid waste reduction commitment requires that the products we use daily are more easily reused, recycled, or composted. To address this requirement, EOEA has committed \$150,000 from the Clean Environment Fund to establish a Product Stewardship Initiative (PSI) at UMass Lowell. The initiative will work to develop a new way of thinking about how products are made, distributed, and disposed of. A national forum was held last December to introduce the PSI, and by May of 2001, 13 states and seven local and regional agencies had signed on as members of a coalition pledging support of the PSI mission and participation in its programs. In addition, the PSI is coordinating an effort involving 10 states, several regional agencies, and the U.S. Environmental Protection Agency to begin a dialogue with the electronics industry about how to lessen its impact on the environment, from product design through end-of-life product disposal.

Contact: Ken Geiser, Toxics Use Reduction Institute, UMass Lowell (978) 934-3275

A list of UMass environmental contacts is provided on page 7.

WORKING GROUPS

UMass-EOEA
Environmental
Partnership for the
Commonwealth

- Agriculture
- Biodiversity and Ecosystem Protection
- Community Preservation
- Environmental Technology
- Marine Science and Technology
- Pollution Prevention
- Watershed Management

"In the future, employers will want employees who are in the process of acquiring forty-year degrees. Online education is the key to meeting this growing need for learning that can be brought to the busy learner."

JACK M. WILSON
CEO of UMass Online

UMass Online Introduced to Leaders of the New Massachusetts Economy

On May 22, 2001, UMass Online was officially introduced to the Commonwealth's business community at a forum titled "Online Education: Bringing Learning to the Learner." The forum was hosted by Nortel Networks in Billerica, MA, and co-sponsored by the Massachusetts High Technology Council, *Mass High Tech — The Journal of New England Technology*, and UMass Online. Devoted to what online learning, the new wave in higher education and workforce development, means to the businesses and economy of Massachusetts, the forum featured as speakers UMass President William Bulger; Jeff Taylor, UMass alum and CEO of monster.com; Jack M. Wilson, CEO of UMass Online; and Christopher Anderson, president of the Massachusetts High Technology Council.

Contact: Jack Wilson, CEO, UMass Online
(617) 287-7160

Area High-Tech Firms Support UMass Lowell Fellows in Computer Science

Cisco Systems, Mercury Computer Systems, Compaq, and Sonus Networks have teamed up with UMass Lowell's Department of Computer Science Systems Lab. Together they will sponsor a fellowship program that offers students an opportunity to strengthen their technical, communication, and business skills prior to entering the workforce. Student scholars who commit to working in the lab at least 10 hours per week, under faculty and peer supervision, are awarded a Systems Lab Fellowship worth \$1500 per semester. In exchange for fellowship support, the systems lab provides its corporate sponsors increased department-

level visibility to computer science majors and alumni.

Contact: Jim Canning, Professor of Computer Science, UMass Lowell
(978) 934-3633

UMass Lowell Offers High-Tech Training to Avici Systems and Liquid Metronics, Inc.

UMass Lowell's Division of Continuing Studies and Corporate Education has contracted with Avici Systems, Inc., to offer employees on-site training in UNIX systems. There are currently 16 students enrolled in the program, which was customized to meet the specific needs of the company. Avici Systems, with worldwide headquarters in North Billerica, has developed a new generation of router technology specially designed for optical networks. Acton-based Liquid Metronics, Inc., (LMI) is a leading manufacturer of chemical metering pumps, controllers, and accessories that serve as a standard for water treatment professionals around the world. Twenty-five LMI employees recently graduated from UMass Lowell's Water Treatment Certificate Program. The training was funded as part of a \$53,750 Massachusetts Workforce Training Grant.

Contact: Dean Jacqueline Moloney, Continuing Studies and Corporate Education, UMass Lowell (978) 934-2493

UMass Dartmouth and Southern New England School of Law Offer Joint MBA-JD Program

UMass Dartmouth and the Southern New England School of Law are teaming up to offer a unique master's and law degree program that will integrate curricula and allow students to earn a joint MBA-JD degree in 3 1/2 years. Full-time students can take 15 credits

a semester for seven semesters and a total of 105 credits, and part-time students can complete degree requirements in four years. Pursuing the combined degrees will save students 12 credits, or one semester, and the expense of that semester. Students interested in applying for the program must submit test scores from the Law School Admissions Test and a graduate admissions test. Current MBA and law students may also apply.

Contact: Dean Ronald McNeil, Charlton College of Business, UMass Dartmouth (508) 999-8432

Howard P. Foley Professorship Named at UMass Lowell

President William Bulger recently announced the endowment of the Howard P. Foley Professor of High-Tech Workforce Development at UMass Lowell in honor of outgoing Massachusetts High Technology Council President Howard Foley. The announcement was made at the council's January 2001 annual meeting. The Howard Foley Professor will work to create and enhance efforts to improve the high-tech workforce in Massachusetts. He or she will also serve as the technical coordinator for the Engineering in Mass Collaborative, a partnership of high-tech businesses, institutions of higher education, primary and secondary schools, and the Commonwealth.

Contact: Dean Krishna Vedula, College of Engineering, UMass Lowell (978) 934-2576

Commonwealth IT Initiative Concludes Successful First Phase

The UMass-led Commonwealth Information Technology Initiative (CITI) — a Board of Higher Education initiative to strengthen all of public higher education's IT curriculum — has completed a successful first phase of a three-year, \$7 million program. During the

first year, the project sponsored workshops and seminars and awarded over \$1 million in grants to UMass, state, and community college faculty. The grants enabled recipients to strengthen and modernize existing curricula in computer science and engineering and to integrate IT curricula into non-technical disciplines (e.g., an IT minor for liberal arts majors). The first of the courses will be taught at UMass Amherst this fall. More info about CITI can be found at www.citi.mass.edu.

Contact: Brenda Philips, Project Manager, CITI, UMass Amherst (413) 577-2213

UMass Dartmouth Offers Cape Cod Engineering Certificate Program

In response to a growing need for skilled technology workers on Cape Cod, UMass Dartmouth is offering residents an opportunity to earn a graduate certificate in computer systems and a master's degree in computer science and engineering. The program is a joint venture with the Cape Cod Chamber of Commerce and three of the largest employers on the Cape: Lucent Technologies, Infinium, and Taqua Systems. The certificate program will consist of five courses and will allow students the option of continuing on to earn master's degrees. Classes will be held at Barnstable High School in Hyannis, using both on-site and distance learning techniques and faculty from multiple University campuses. The program is funded by an \$80,000 grant from the Commonwealth Corporation.

Contact: Dean Farhad Azadivar, College of Engineering, UMass Dartmouth (508) 999-8461

“Local continuing education opportunities are essential for building the Cape’s technology industry base by enabling Lucent and other companies to recruit and retain top-notch talent.”

DAVID BRAJCZEWSKI
Vice President of
Engineering for
Lucent Technologies

Collaborating with Industry

UMass Amherst Chosen to Test Innovative Microsoft Developer Tools

Students and faculty members at UMass Amherst are among the first in the country to participate in the Microsoft Developer Network Academic Alliance, a state-of-the-art package of software and resources designed to enhance teaching, curriculum development, and research at national universities. Nearly 4,000 students and 200 faculty members in the College of Engineering, the Department of Computer Science, and the Isenberg School of Management will have free access to the program. According to Karen Hayes, director of strategic partnerships for the office of Strategic Technology Alliances, the potential financial value to the University is more than \$9.1 million, making this the largest corporate contribution ever received by UMass Amherst.

Contact: Karen Hayes, Director of Strategic Partnerships, Office of Strategic Technology Alliances, UMass Amherst (413) 545-9724

UMass Lowell Awarded \$28 Million Software Gift from Cadence Systems

Cadence Systems, a Chelmsford-based provider of electronic design automation products and services, has donated software worth \$28 million to UMass Lowell. In addition, Sun Microsystems of Burlington has offered to sponsor 12 discounted workstations worth approximately \$30,000. The new Very Large Scale Integrated Circuits Laboratory will be named the Cadence and Sun Microsystems Laboratory. It will allow high-tech design of integrated circuits. College of Engineering Dean Krishna Vedula at UMass Lowell believes the lab will attract hundreds of students to its courses.

Contact: Dean Krishna Vedula, College of Engineering, UMass Lowell (978) 934-2576

UMass Amherst Translation Center Expands Its Services to Industry

The Translation Center at UMass Amherst has expanded its services to include software and project managers that facilitate software localization and Internet translation. The center offers professional translation and interpretation services to schools, businesses, government agencies, and community organizations. Pittsfield-based General Electric Plastics recently commissioned the center to translate GE's new executive training policies into Spanish, French, Portuguese, Italian, Dutch, Japanese, Korean, and Chinese. GE, with the assistance of the Translation Center, recently created a training Web site that gives employees instant access to local laws, customs, and environmental policies in any

given country. This project is one of several collaborative efforts, including the translation of the company's renowned Six Sigma employee training manuals into Chinese, Japanese, and Korean.

Contact: Edwin Gentzler, Director, The Translation Center, UMass Amherst (413) 545-2203

UMass Technology License Income Tops \$11 Million

Recently released statistics for the third quarter of fiscal year 2001 indicate continued progress and growth for the University's technology commercialization program. There were 32 new faculty invention disclosures, 17 patent applications, nine patents issued, four license agreements completed, and over \$6 million in licensing income generated. In addition, the University's Office of Commercial Ventures and Intellectual Property (CVIP) assisted in eight industry-sponsored research agreements, which yielded an additional \$521,000 in R&D for the University. The \$6 million in licensing income represents the most ever earned by the University in a single quarter.

Contact: Bill Rosenberg, Deputy Executive Director, CVIP (508) 856-1626

Benchmarking the State of the Economy

Summer Benchmarks Released

The summer 2001 issue of *Massachusetts Benchmarks* was released in July. Professor Alan Clayton-Matthews of UMass Boston finds that the Massachusetts economy has come to a virtual halt, but the outlook shows hope of improvement by year's end. The issue includes Professor Robert Farrant and Shawn Barry's analysis of the Commonwealth's manufacturing industry and its transformation from low-technology to high-technology goods. The regional article discusses the resort industry's impact on employment patterns in the Cape and Islands region and efforts under way to invigorate the year-round economy. All issues of *Massachusetts Benchmarks* can be found on-line at www.massbenchmarks.org.

Contact: Michael Goodman, UMass Donahue Institute
(617) 287-7040

Study of the Medical Device Industry Released

Alan Clayton-Matthews of UMass Boston has completed a study of the medical device industry in Massachusetts. Funded by the Massachusetts Medical Device Industry Council (MassMEDIC) and the UMass Economic Project, the executive summary was presented at MassMEDIC's annual meeting on May 7, 2001. Clayton-Matthews found that the industry consists of 264 manufacturing establishments, with nearly 21,000 employees, a payroll of almost \$1 billion, and shipments valued at \$4 billion. In a national context, the study finds that Massachusetts is second only to Minnesota in the production of medical devices. The study concludes that the medical device industry in Massachusetts forms the largest part of the state's medical science sector, which also includes biotechnology and pharmaceuticals. The release of the study attracted press coverage in *The Boston Globe*, *The Boston Herald*, *Boston Business Journal*, and on WBUR Radio.

Contact: Alan Clayton-Matthews, Assistant Professor of Public Policy, UMass Boston (617) 287-6945

Key Contacts

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This and past issues of *In Brief*
can be found on the Web at
www.umassp.edu/admin/news/inbrief

Upcoming Events

July 9 – Aug 4 UMass Lowell

Engineering in Mass Collaborative (EiMC) DesignCamp

DesignCamp offers nine one-week camp sessions for students in grades 5 through 10. More than 400 children are expected to attend. For information, call Pamela Jahngen-Provencal, EiMC (978)934-2571.

October 29 Needham Sheraton Hotel, Needham

Engineering in Massachusetts Collaborative (EiMC) Semi-Annual Meeting

This meeting will focus on the Commonwealth's growing need for a skilled workforce in the fields of science, engineering, and technology, and how industry can be more aware of its role in educating the future workforce. For information, call Pamela Jahngen-Provencal, EiMC (978)934-2571.

November 7–8 Campus Center, UMass Amherst

Food Science Symposium

Hosted by UMass Amherst's Department of Food Science, this symposium, titled "Food Science and Health: Towards a National Rational Health Policy" features leaders from the U.S. FDA and health and safety organizations from around the country. Find more information or register online at www.umass.edu/foodsci/fspolicysymp.html.