New Programs Prepare Students for Changing Workplace

More Degrees, Certificates to Ready Grads for Global Economy

When students returned to classes this fall, they had several new degrees, certificates and concentrations from which to choose.

UMass Lowell recently added new programs including a doctoral degree in criminology and criminal justice, and bachelor’s and master’s degrees in peace and conflict resolution. New professional master’s degrees in pharmaceutical biochemistry, chemistry, polymer sciences and atmospheric sciences allow students to complete an advanced degree without a thesis.

The new programs reflect changes that are reshaping the workplace and the world and will prepare students for 21st-century careers with hands-on learning, exposure to cutting-edge technology and opportunities for international study.

“UMass Lowell continuously updates its programs to reflect the shifting demands of the marketplace so our graduates are prepared to become leaders in their chosen professions,” says UMass Lowell Chancellor Marty Meehan.

“Whether a student wants to pursue a career solving some of the most vexing political or societal conflicts of our time, or advance pharmaceutical discovery or drive innovation in laboratories or boardrooms, the new programs will provide the opportunities to get the education and develop the skills needed to meet those challenges,” he said.

Also new this fall are leadership options for graduate-degree program offerings jointly by UMass Lowell’s Francis College of Engineering and the College of Management in chemical, civil and environmental, energy, computer, electrical, mechanical and plastics engineering. The new degrees combine disciplines to allow students to get relevant engineering education and work experience while also learning critical business, communications and strategy skills.

Some of the other new programs for undergraduates this fall include concentrations in the environment and society, Asian studies and supply chain and operations management. New interdisciplinary undergraduate minors will be available in joint military studies, peace and conflict resolution and work, labor and society.
Federal Grant Funds Asthma-Prevention Efforts

Project Targets High Childhood Asthma Rates in Lowell

Childhood asthma has hit Lowell hard. Thirteen percent of children in the city have the respiratory illness, compared to 10.5 percent statewide and 9 percent nationwide, according to the Massachusetts Department of Public Health. UMass Lowell researchers and community health workers are teaming up to help public housing residents and property managers fight this childhood asthma epidemic, thanks to a grant from the U.S. Department of Housing and Urban Development.

The $425,000 grant will fund research, outreach and education as part of UMass Lowell’s Healthy Homes Program, which aims to identify and eliminate potential environmental triggers for asthma, a chronic disease of the airways that causes wheezing, coughing and shortness of breath.

In addition to the health implications, there are significant economic, educational and social costs related to asthma, says David Turcotte, the UMass Lowell professor leading the Healthy Homes Program.

Partners Reach Out

The University is partnering with the Lowell Community Health Center and the Coalition for a Better Acre to reach out to families living in public housing whose children suffer from asthma. Workers will collect dust and other environmental samples to test in the lab.

The team will review the results and develop a plan to eliminate triggers asthma triggers such as dust mites, pesticides, mold, chemical cleaners and tobacco smoke.

A big part of the project will be educating residents, property managers and maintenance staff about reducing the use of chemical pesticides by taking simple steps like sealing holes in buildings, fixing water leaks and eliminating food sources to help control rodent and insect populations, Turcotte says. Workers will conduct follow-up visits to track the health outcomes, gathering data on the frequency of school absences and asthma-related doctor visits.

Prof. David Turcotte will lead the HUD-funded project to reduce triggers of childhood asthma in Lowell public housing.

Tuition Waived for Top Community College Students

Program Targets Academic Achievers

Starting this fall, high-achieving community college graduates can pursue a bachelor’s degree at UMass Lowell tuition-free.

Massachusetts state community college students who have earned an associate’s degree in an approved program with a 3.0 or better grade point average will be eligible for a full tuition discount when they transfer to UMass Lowell. Students who maintain a 3.0 average at UMass Lowell will be eligible for the discount for up to four semesters, the typical length of time needed to finish a bachelor’s degree.

Free tuition is just one of the benefits of the new UMass Lowell Massachusetts Advantage Plus (MAP) Program for public community college students. MAP also offers priority class registration and advising, co-op and internship opportunities and guaranteed campus housing.

The new MAP program is the latest move by UMass Lowell to make community college students’ transfer process as seamless as possible and encourage academic success once they enroll. UMass Lowell has long participated in a statewide program that guarantees admission for community college students who have a 2.5 grade point average and are enrolled in an approved program.

This year alone, 777 students from 15 Massachusetts public community colleges transferred to UMass Lowell. The University has a solid track record of success with transfer students: 78 percent continue after their first year and 70 percent graduate within four years.

For more on the Massachusetts Advantage Plus program, visit www.uml.edu/MAP

Calendar Snapshot

For the full roster of upcoming events, go to www.uml.edu/media/calendar.

“The Housing Market and the Macro Economy”

Karl Chase, co-author of the Chase-Shiller Index, discusses the relationship between home prices and the economy. Monday, Oct. 3, noon, at the UMass Lowell Inn & Conference Center, 50 Warren Street

Women’s Field Hockey

Watch the national champions take on Adelphi University. Wednesday, Oct. 12, 7 p.m. at Cushing Field, North Campus

Chancellor Meehan to Moderate Primary Debate

Chancellor Marty Meehan will moderate a debate among Democratic primary candidates for the U.S. Senate on Tuesday, Oct. 4, at 7 p.m. in Durgin Hall Auditorium, 35 Wilder St., Lowell. The event is co-sponsored by the UMass Lowell Center for Public Opinion and the Boston Herald as well as the UMass Lowell Public Science Club. Those wishing to attend should respond by Sept. 27 to debate@uml.edu.
**Education Students Get Hands-on Experience**

**Teachers-in-Training Tutor African Immigrant Students**

“Jonathan is his name and he says he doesn’t like math.”

That was how Graduate School of Education (GSE) student Alicia Arzuaga was introduced to the Lowell public school student she would tutor.

“I raised my hand [and said], ‘I will tutor him,’” Arzuaga says. “That is the student I want to reach.”

Arzuaga is one of about 25 GSE students in Assist. Prof. Elizabeth Bifuh-Ambe’s Teaching Reading in the Content Areas course—all of whom spent Tuesday afternoons tutoring middle- and high-school students at Christ Jubilee International Ministries (CJIM) in Lowell this spring.

“I had been aware of the challenges that some immigrant students of African origin were facing in public schools in Lowell,” says Bifuh-Ambe. “Christ Jubilee International Ministries had started an initiative to find solutions to the educational problems we lack the financial and human resources necessary to achieve their goals.”

**High-Tech Bus Puts Students on Road to Nursing**

**Mobile Lab to Travel to Local Schools**

The problem: The U.S. nursing shortage is projected to grow to 260,000 registered nurses by 2025 because of the aging baby-boomer population.

One solution: Noelle and Hal.

Who?

They are the two realistic mannequins aboard UMass Lowell’s new 34-foot bus—a traveling simulation laboratory—that were created to help encourage more teenagers in Lowell and Lawrence to consider careers in nursing.

By simulating human functions such as breathing, crying and talking, as well as some medical conditions, the high-tech mannequins—birth mother “Noelle” and newborn “Hal”—offer students an intriguing way to find out if the nursing profession is right for them.

The U.S. Department of Health and Human Services awarded UMass Lowell nearly $300,000 for a mobile nursing laboratory to reach out to diverse and underserved populations in the Merrimack Valley.

Move for Nursing’s Future” mobile laboratory to reach out to diverse and underserved populations in the Merrimack Valley.

“Despite the current down economy, the shortage of nurses is still expected to be significant as the population ages,” says nursing Prof. Jacqueline Dowling, who is the project’s lead manager. “With this mobile laboratory, we’re able to bring the technology into the community and have the students interact with the patient simulators in a way that will engage them.”

Nursing faculty will drive the bus to schools and community centers in Lowell and Lawrence to demonstrate what it’s like to work in the nursing profession and explain how to get started in the career. The faculty members expect to reach hundreds of high school and community college students per year.

The bus will also be used as an adjunct simulation laboratory for existing UMass Lowell students.

**University Acquires State-of-the-Art Electron Microscope**

A brand-new, state-of-the-art electron microscope is further separating UMass Lowell from its peers. The Aura focused ion-beam scanning electron microscope (FIB-SEM), manufactured by optics leader Carl Zeiss, will greatly enhance the University’s research capabilities in the areas of nano materials and biological sciences. The microscope can resolve details as tiny as one nanometer, or a billionth of a meter, and magnify views up to a million times. UMass Lowell is one of only a handful of educational institutions in the Northeast that has this advanced capability. The purchase of the $1.3 million microscope was made possible in part by a $1.15 million grant from the National Science Foundation.

UMass Lowell’s brand-new Aura focused ion-beam scanning electron microscope made by Carl Zeiss is located at the Materials Characterization Laboratory on the North Campus.

UMass Lowell Online Breaks Record

UMass Lowell saw a record-breaking 18,558 online enrollments in the last academic year, up more than 10 percent over the previous year.

Fifteen years ago, UMass Lowell was among the first institutions in the nation to offer students the option to take classes online, delivering eight courses to about 80 students. Programs include fully online bachelor’s degrees in fields like liberal arts, psychology and information technology. Online graduate study options include 10 master’s degrees and a variety of certificates.

UMass Lowell has captured international awards for the quality of its online instruction and programs, such as the graduate certificate in behavioral intervention in autism.

“UMass Lowell introduced online learning so that busy people can get the education they need to achieve their professional and personal goals,” said Executive Vice Chancellor Jacqueline Moloney, the program’s founder. “The tremendous growth over the last 15 years shows how the convenience, quality and breadth of what the university offers add up to success for our students.”

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Summer Projects Give UMass Lowell a New Look

New Construction On Target, Lots of Smaller Renovations Across Campus

The hammers were swinging all summer as two major projects—the construction of the Emerging Technologies and Innovation Center (ETIC) on North Campus and the Health and Social Sciences (HSS) Building on South—as well as a myriad of major renovations took shape.

The 84,000-square-foot ETIC will bring together world-renowned and next-generation research leaders to develop solutions to complex scientific challenges facing society today—energy, health, environment, communications and security.

A two-story atrium will spill light into the building and serve as a grand entrance. The first floor lobby will be home to a new National Plastics Museum. Outside, an open terrace overlooks the Merrimack River and the quad provides green space for informal gatherings.

Within its four stories, ETIC will provide core facilities for use in fundamental and translational research. The building design meets critical criteria for temperature, humidity and vibration. It will house Class 100, Class 1000 and Class 10,000 cleanroom spaces, wet lab and engineering lab space, and a plastics processing high bay.

The building is scheduled for completion in August 2012.

New South Campus Building on the Rise

The Health and Social Sciences Building will provide much needed additional instructional space and faculty offices. The four-story atrium lobby space with skylights will promote student and faculty interactions. It will be four stories high and span 69,000 gross square feet. It will house seven classrooms, 16 seminar/project rooms, eight conference rooms and 72 faculty offices.

The building will open for first day of classes of the Spring 2013 semester.

O’Leary Library Takes New Shape

Meanwhile, O’Leary Library on South Campus is being retooled as the O’Leary Learning Commons. The first floor of O’Leary Library offers students a beautiful new resource: A Library Learning Commons with comfortable, relaxed learning spaces, the latest technology and software, and access to the information and assistance they need to study, collaborate, conduct research and write papers. A Starbucks on the same floor is a great new plus too.

The fourth floor of O’Leary has been renovated and offers a beautiful new reading room with wireless access and more than 100 seats for quiet study, along with Access Services (circulation, interlibrary loan, reserves.) The book collections of Art, Music and non-circulation reference materials are also housed on the fourth floor.

In addition, The Centers for Learning and Academic Support Services (tutoring and advising) has newly upgraded spaces on the first floor of O’Leary Library, where professional and support staff are available for consultation and assistance.

The building has been designed with a LEED Silver rating and is slated to open for the Spring 2013 semester.

But That’s Not All

Other projects and improvements completed or well on their way to completion around campus include upgraded classrooms, residence spaces, faculty offices and labs. A myriad of deferred maintenance projects are helping to make the campus greener, more cost-effective and more efficient.

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