UMass Lowell Ranked a National Leader in Online Education

Bachelor’s and Graduate Programs Earn High Marks

UMass Lowell’s online education programs are among the top in the nation, according to new rankings released by U.S. News & World Report.

The university’s online graduate programs in criminal justice and information technology are ranked in the top 10 in the nation and are No. 1 among those offered by all public institutions in New England.

Also earning high marks were the university’s online bachelor’s degrees, coming in at No. 2 in New England and in the top 25 in the nation among more than 200 public and private programs ranked.

Enrollments in UMass Lowell’s online programs, launched more than 20 years ago under the direction of now-Chancellor Jacquie Moloney, exceed 25,000 annually.

“These consistently high rankings nationally and regionally demonstrate that UMass Lowell is a proven leader in innovative, excellent online education. By offering students programs and support services that are geared to their needs and connect directly to our on-campus academic departments, we are able to provide them with a full learning experience,” says Moloney, an internationally recognized expert in online education. “In addition, we work directly with businesses to help advance employees’ skills through online degrees, certificates and specialized programs.”

Of the eight categories ranked by U.S. News & World Report, UMass Lowell was included among the top online programs in the nation in seven.

Ranked No. 5 in the nation, the criminal justice online programs include options in cybersecurity, homeland defense and international security.

The university ranks No. 10 in the nation in online information technology graduate programs, which include a range of options, from a master of science degree to graduate certificates in specializations within the field.

Online graduate programs in education offered by UMass Lowell are the top-ranked in New England and in the top 20 in the nation. The university’s online graduate degrees in engineering are the highest-ranked of any public program in Massachusetts. In business, UMass Lowell’s online MBA and programs in accounting, finance and new venture creation are among the top public programs in the nation, according to U.S. News & World Report.

UMass Lowell also ranked highly in online options for veterans, including No. 20 in the nation for online bachelor’s degrees.

UMass Lowell offers more than 60 online programs, including associate, bachelor’s, master’s and doctoral degrees, as well as a range of undergraduate and graduate certificates.

The rankings were determined based on factors such as affordability, strength of academic programs and faculty, strong support services for students, financial aid and technology that provides flexibility and ease for students, according to U.S. News & World Report.
White House Reporter Kicks Off Learning in Retirement Series

Journalist Shares View from Front Row to History

Jonathan Lemire, White House correspondent for the Associated Press, offered an insider’s view of presidential politics in the kickoff event of UMass Lowell’s Learning in Retirement Association (LIRA) winter intercession program.

In his talk, “On the Road with #45,” Lemire described the “breakneck pace” of covering the Trump White House. He’s reported on the president’s treks to Saudi Arabia, Israel, the Vatican, Europe and Asia. On this beat, things never get predictable.

“It’s everything from exhausting to exhilarating,” said Lemire, who grew up in Lowell. “But if you’re in this business, this is the brass ring.”

For Lemire, his visit to campus was a sort of homecoming. He grew up a River Hawks hockey fan, and his mother, Susan, is the university’s coordinator of advisory services and is a member of the LIRA curriculum committee. She introduced him to a packed hall in O’Leary Library.

Lemire said his job as a journalist puts him at “the front row of history,” a position he takes seriously.

“In an age of unprecedented disinformation and fake news and attacks on the media, that task has never been more important,” he said.

His talk was the first in this winter’s events hosted by LIRA, a partnership between the university’s offices of Alumni Relations and Community Relations. LIRA offers college-level educational opportunities for the retired and semiretired. This winter’s program runs through Feb. 27 and features events on topics ranging from climate change and labor history to book and semiretired. This winter’s program runs through Feb. 27 and features events on topics ranging from climate change and labor history to book discussions. For information, visit www.uml.edu/community/LIRA.

Grad Student Wins Award for Work on Cancer Diagnosis Tool

Imaging Device Could Lead to Improved Skin Cancer Treatment

Tyler Iorizzo, a Ph.D. student in the Department of Physics and Applied Physics, has won international recognition for his contribution to developing an imaging device that could lead to improved diagnosis and treatment of certain skin cancers.

Iorizzo was one of seven university researchers from North America and Europe who received an Educational Award from Edmund Optics, one of the world’s leading suppliers of high-precision equipment for the optical industry.

Iorizzo is part of a team that developed a device called an optical polarization imager, or OPI, that could help doctors identify the margins of nonmelanoma skin cancer prior to surgery, allowing them to remove the malignant tumor with more precision and resulting in less complication and quicker recovery for the patient.

“Imaging with the OPI is completely harmless and noninvasive. It doesn’t use X-ray or high-intensity laser, so it’s perfectly safe for the patient and the doctor,” says Iorizzo, who conducts his research at the university’s Advanced Biophotonics Laboratory. Asst. Prof. of Physics Anna Yaroslavskaya, who is the director and founder of the Advanced Biophotonics Laboratory and inventor of the OPI technology, says there is currently no comparable tool available on the market.

Iorizzo’s Silver Prize award consists of $7,500 worth of Edmund Optics products that will be used in the Advanced Biophotonics Lab.

Yaroslavsky has several awarded and pending patents for the OPI technology. She and her research team will be applying for industry and federal funding to continue and expand clinical trials for the OPI. Their goal is to commercialize the technology.

Business Professor Researches Tech’s Impact on Charitable Giving

Studies Examine How ‘Cashless Society’ Impacts Donations

As mobile payment apps like Venmo and PayPal gain in popularity and more people go “cashless,” what’s the upshot for charitable organizations that depend on cash donations? Or for street performers and panhandlers who count on passers-by to drop money in the hat?

It’s a question that Spencer Ross, assistant professor of marketing, entrepreneurship and innovation in the Manning School of Business, has been researching ever since he saw a panhandler in downtown Boston holding a sign that included his PayPal username.

Through a series of studies at the Manning Behavioral Lab and Participant System, Ross is examining the impact of technology on charitable giving. He is conducting the research with Sommer Kapitain, a colleague at the Auckland University of Technology in New Zealand.

For one study, which was funded by the Donohue Center for Business Ethics and Social Responsibility, the professors hired a street performer to play guitar on Newbury Street in Boston over three days. Passers-by had the option of using cash or Venmo. Of the 12,000 people who walked by, about 100 people gave around $300 in cash donations. The performer only received two donations via Venmo for a total of $4.

The researchers also ran an experiment where students were shown a picture of a man holding up a sign with credit card, cash or Venmo donation options. They found that people were more likely to donate cash, but when they donated using an app, they donated more.

Ross is the subject of research by Asst. Prof. Spencer Ross.

The research is ongoing. Ross hopes to eventually publish the results in the Journal of Consumer Research.
Scientists Design New Material to Harness Power of Light

Technology Will Speed Up Computing

Scientists have long known that synthetic materials—called metamaterials—can manipulate electromagnetic waves such as visible light to make them behave in ways that cannot be found in nature. That has led to breakthroughs such as super-high-resolution imaging. Now, UMass Lowell is part of a research team that is taking the technology of manipulating light in a new direction.

The team, which includes collaborators from King’s College London, Paris Diderot University and the University of Hartford, has created a new class of metamaterial that can be “tuned” to change the color of light.

This technology could someday enable on-chip optical communication in computer processors, leading to smaller, faster, cheaper and more power-efficient computer chips with wider bandwidth and better data storage, among other improvements. On-chip optical communication can also create more efficient fiber-optic telecommunication networks.

The researchers developed a new metamaterial that reshapes the flow of photons.

“Today’s computer chips use electrons for computing. Electrons are good because they’re tiny,” says Prof. Viktor Podolsky of the Department of Physics and Applied Physics, who is the project’s principal investigator at UMass Lowell. “However, the frequency of electrons is not fast enough. Light is a combination of tiny particles called photons, which don’t have mass. As a result, photons could potentially increase the chip’s processing speed.”

By converting electrical signals into pulses of light, on-chip optical communication will replace obsolete copper wires found on conventional silicon chips, Podolsky adds.

Physics Prof. Viktor Podolsky is part of a research team that’s developed new material that may lead to faster, more power-efficient computer chips.

University Forges New Corporate Connections

New Program Gives Students Greater Access to Co-ops and Internships

Last fall, iRobot donated four of its Create robots to UMass Lowell for use by the student Robotics Club. The Create—first cousin to iRobot’s wildly popular Roomba vacuum—enables students to program behaviors, sounds and movements on a mobile robot the size of a deep-dish pizza.

As the first company to sign on with the Career and Co-op Center’s new Corporate Connections program, iRobot is strengthening its already-tight bond with UML computer science, engineering and business students. For an annual membership fee, iRobot gets greater visibility on campus and enhanced support for its recruiting efforts. And students get their feet in the door of the country’s leading consumer robot company.

Since the program launched, 12 students were selected for internships and professional co-op placements.

“Our students adore their co-ops at iRobot because they’re given real mission-driven assignments,” says Greg Denon, assistant dean of student affairs for career development. “The co-op becomes like an extended interview, showing how they take initiative and problem-solve.” Today, more than 40 UML alumni work at the Bedford company.

As part of the Corporate Connections program, Denon meets twice yearly with iRobot to discuss the company’s short- and long-term workforce needs. Participating companies also get to host on-campus events, preferred scheduling for recruiting sessions, high-visibility sponsor recognition and other benefits. For more information, contact Michael Tith, director of corporate and foundation relations, at 978-934-6659 or michael_tith@uml.edu.

Results Could Lead to Improved Osteoporosis Treatments

Osteoporosis, a bone disease that can result in painful fractures, is often thought of as a woman’s disease. But men get it too—just usually later in life than women.

Segment the population even further, and researchers find that Puerto Rican men who live on the U.S. mainland are at much greater risk of thinning bones than previously thought.

To evaluate bone health risks among this population, the National Institutes of Health has awarded Prof. Katherine Tucker of the Biomedical and Nutritional Sciences Department a $2.6 million grant. Along with Asst. Profs. Kelsey Mangano and Sabrina Noel, she will assess bone strength and nutrition among Puerto Rican men and women. They expect that the research could lead to improvements in treatments for all people who suffer from osteoporosis.

This study is among the first of its kind to examine whether differences in bone strength between adults with and without Type 2 diabetes are due in part to compounds called advanced glycation end products (AGEs).

Found in many foods and formed when meats are grilled, roasted, seared, fried or baked, AGEs contribute to increased oxidant stress and inflammation, which are linked to the recent epidemics of diabetes and cardiovascular disease.

“Studying the relation of AGEs to bone health is novel among humans,” says Tucker, who also leads the Center for Population Health. “We expect that the research results will provide insight for developing interventions to prevent bone loss and fracture risk in adults.”

Early this year, Tucker also received a $3.9 million NIH grant to study the effect of highly processed foods on dementia in this same population.

As part of the new Corporate Connections program, Prof. Holly Yanco (center) and members of the Robotics Department welcomed Bobby Nerbone (center right), iRobot’s talent acquisitions adviser, to campus.

Prof. Katherine Tucker is leading a $2.6 million study into osteoporosis risks among Puerto Rican men living in the Boston area.

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Program Expands as Students Gain Experience and Rack Up Earnings

When chemical engineering major Kelsey Martin landed a six-month co-op job with medical technology company Getinge Group in her junior year, she expected to develop technical skills while getting her foot in the door with a potential future employer.

Earning thousands of dollars from the full-time position was another great benefit.

“The co-op absolutely changed my life,” says Martin, who continued working at Getinge’s Merrimack, N.H., location when her co-op was complete—right through her graduation last May.

Martin is now an associate product development engineer for the company.

Martin’s experience is a familiar one for the hundreds of students who take advantage of the university’s Professional Cooperative Education program each year.

Since the 2013-14 academic year, more than 1,300 undergrads from the Francis College of Engineering, the Kennedy College of Sciences and the Manning School of Business have landed co-op positions at nearly 350 companies. With an average hourly wage of $19.70 and average six-month earnings of $18,505, students have collectively earned $24.4 million in co-op pay over the past five years.

Director of Cooperative Education Rae Perry says participation in the program skyrocketed from 28 students in 2009-10 to a record 431 students last year.

Students have landed co-op jobs at emerging businesses and Fortune 500 companies. They have worked in a variety of roles, including marketing, analytics, supply chain, human resources, engineering and computer science.

Kronos, which ranks No. 44 on Glassdoor’s annual list of the Top 100 Best Places to Work in the U.S., has hired 86 UML co-op students since 2010. Nearly 200 of the 1,500 local employees at the multinational time-management software and cloud solutions company are UML grads.

At Vicor, an Andover-based company that makes modular power converters, 66 UML students have been hired for co-op positions since 2013.

As one of “many” UML alumni working in technical operations at Vicor, Director of Operations Engineering Steve Sadler says it’s no coincidence that the company turns to the Francis College of Engineering to fill many of its 17 co-op positions every six months.

“We find the UML students come in ready and willing to work on anything we assign to them,” says Sadler, who earned a bachelor’s degree in industrial technology from UML in 1987.

In a survey of 2017 graduates, the Career & Co-op Center found that 95 percent of former co-op students were employed “upon or soon after” graduation. An additional 4 percent went on to graduate school.

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“The employment numbers are very good for our co-op students,” says Perry, who adds that local employers, particularly alumni, “are thrilled that we are in the co-op business.”