University’s Nerve Center Testing NASA’s Latest Humanoid Robot

C-3PO? Old school. The new robot around campus is Valkyrie, a state-of-the-art NASA prototype that is joining the university’s robotics testing lab this month. Researchers will study how the human-like machine can assist astronauts in space exploration.

The R5 robot—NASA’s newest humanoid prototype—will stay at the New England Robotics Validation and Experimentation (NERVE) Center for the next two years as part of a research collaboration between UMass Lowell and Northeastern University. NASA will help fund the study with up to $500,000 and will provide technical support.

“Advances in robotics, including human-robotic collaboration, are critical to developing the capabilities required for our journey to Mars,” says Steve Jurczyk, associate administrator for the NASA Space Technology Mission Directorate.

Valkyrie stands 6 feet, 2 inches tall and weighs about 300 pounds. Its head contains high-resolution sensors that operate in three modes—laser, 3-D stereo and video—to enable the robot to visualize and map its surroundings, while the torso is equipped with hazard cameras to allow it to navigate around obstacles. There are also video cameras mounted on the forearms, knees and legs so the robot operator can see what R5 is doing or where it is heading.

R5’s hands, arms, pelvis and legs have a total of 44 “degrees of freedom” (rotational movements), giving the robot the dexterity to operate tools and perform a wide variety of tasks and experiments.

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New Graduate Program in Public Humanities and Arts Administration Offered

M.P.A. Also Offers Human Service Management and Justice Administration Tracks

For those who dream of running a museum, managing a community arts program or bringing literary history alive on the web, the university is offering a distinctive new graduate program: a master’s in public administration with a concentration in public humanities and the arts.

While a few private colleges in New England offer master’s degrees in arts administration, museum studies or public humanities, UMass Lowell is bringing all three under one roof at a public school price.

Public humanities brings history, literature, philosophy and the arts to the general public, not just by traditional means, but through web-based lectures, exhibits and performances such as TED Talks or the Smithsonian Institution’s online art libraries.

The Lowell area boasts a wealth of cultural institutions, from the Lowell National Historical Park to the Cultural Organization of Lowell, where students can volunteer or work, a requirement for the degree.

Core courses during the first year will focus on accounting and budgeting, public administration, organizational leadership and data analysis. The second year, students will take more classes in their specialties.

The new M.P.A. program will offer two other tracks as well, in human service management and justice administration. The program will have a soft launch in fall 2016, when seniors in the College of Fine Arts, Humanities and Social Sciences can start taking courses that will count toward both their bachelor’s and master’s degrees and others may enroll part-time. Full launch is set for fall 2017.

New Endowed Funds Benefit Student-Veterans

“Two Alumni Support New Vets”

That’s how William Darling ’93 explains his decision to endow a new scholarship to benefit student-veterans in the Manning School of Business. He could also be speaking for Ken Classon ’71, who created a similar scholarship in the Francis College of Engineering—and for UMass Lowell as a whole, which has developed a national reputation as a “military-friendly” school.

Darling, who attended UMass Lowell on an ROTC scholarship, served as an Army officer stateside and in Korea and Honduras, and then as a civilian contractor in Afghanistan. Classon served in the U.S. Air Force from 1963 to 1966, got his degree at Lowell Tech on the G.I. Bill and went on to a four-decade career with the Bechtel Corporation.

“Endowing a scholarship was an excellent way to support UMass Lowell and at the same time to help veterans,” he says.

The Pershing Fund also helps veterans, by providing them with interest-free loans that “can mean the difference between a vet staying in school, or quitting and finding work to make ends meet,” notes Brig. Gen. Gary Connor ’78, ’80, a Pershing Fund supporter. “And because many of our veterans are supporting a spouse and children while earning their degree, these loans can impact entire families.”

University Police Officers, Staff Honored with Statewide Awards

Officer Connors Steps Up in Absence of Stricken Partner

Whether it’s educating new employees and international students about campus safety at orientation meetings, handing out free cups of joe and striking up conversations at “Coffee with the Cops” events, or giving criminal justice interns an inside look at police work, the UMass Lowell Campus Resource Officer team of Joe Brown and Jeff Connors is a familiar—and important—part of the university community.

Brown has been out of work since August, recovering from a massive heart attack. During his absence, Connors has not only carried on the work of the community policing programs, but he has also served as the liaison between the police department and Brown’s family. For his efforts, Connors was one of four members of the department to be honored at the Massachusetts Association of Campus Law Enforcement Administrators’ 28th annual awards ceremony, held recently at Tufts University.

“Officer Brown was the primary coordinator of the successful intern program, and Officer Connors never dropped that ball on this and other community policing programs,” says UMass Lowell Police Chief Randy Brashears, who nominated Connors for the Outstanding Contribution to Campus Public Safety award.

Other honorees include:

- Officer Bill Emmons received a Heroic Action award after helping to resuscitate a university employee who had collapsed at Pinanski Hall in December.
- Officer Ed Davis received a Heroic Action award after working with Lowell police to apprehend three suspects following an off-campus incident in March.
- Ken Wilson, manager for security and dispatch operations, received an Administrative Initiative award for his cost-saving work in expanding the role of the contract security firm Securitas on campus.

UMass Lowell Police Department members, from left, Deputy Chief Ron Dickenson, Officer Jeff Connors, Officer Ed Davis, Officer Bill Emmons, Officer Ken Wilson and Chief Randy Brashears at the MACLEA ceremony at Tufts University.

Learning with Purpose
Giver Hawks Donate to Three Lowell Nonprofits

Honors Seminar Focuses Philanthropy on Mentoring Projects

At the end of the fall semester, students in an Honors College seminar on philanthropy divided $10,000 among local nonprofits that applied to them for grants.

This year’s winners were three Lowell charities with programs that help children through mentoring, the focus chosen by the class.

The Cambodian Mutual Assistance Association of Greater Lowell won $3,500 for its Rising Stars program, which will send at least 60 children ages 8 to 16 to summer camp and also train young adults to serve as their counselors.

The Boys and Girls Club of Greater Lowell won $4,000 for its Diplomas to Degrees program, which helps high school students prepare for college.

The class also awarded $2,500 to Project LEARN for the Compass Program at Lowell High School, which teams up with community organizations to offer extracurricular learning opportunities, from a photography club to experiences in nature.

The honors seminar, “Experiencing Philanthropy,” was offered last year for the first time and is taught by Nancy Lippe, a nonprofit professional. Students come up with their own ideas for nonprofits, perform community service together, decide on a focus for soliciting grant proposals, reach out to local nonprofits and evaluate the proposals. The money they award is provided by the Learning by Giving foundation, a national organization.

The New England Consortium Wins $7.6 Million Grant

Expanded Training for Hazardous Material Workers

The National Institute for Environmental Health Sciences has awarded The New England Consortium a $7.6 million grant to protect the health and safety of workers responding to hazardous-materials and climate-change crises.

As it has for 28 years, TNEC will continue to train employees engaged in hazardous waste operations and emergency response. This new round of funding—$7,635,459 over five years—also expands training to workers who respond to natural disasters caused by climate change.

TNEC is a program of UMass Lowell and a participant in the university’s Climate Change Initiative, which addresses climate change through research and education.

The new direction for TNEC grew from discoveries made in the aftermath of 2012’s Hurricane Sandy. TNEC found that sanitation and other public health workers were exposed to mold and other biological and chemical hazards because of the disposal of property destroyed by floodwaters.

With a supplemental grant from the National Institute for Environmental Health Sciences, TNEC’s partner, the Civil Service Employees Association, trained New York public employees on how to safely clean up hazardous conditions in disaster recovery efforts. The success of this training led to the five-year funding for the new Hazmat Disaster Preparedness Training Program.

The Civil Service Employees Association will train 1,000 members per year who work in building trades, sanitation, maintenance, health care and education. TNEC will provide training to workers around New England, offering programs in English, Spanish and Portuguese.

Federal Funding has Helped 350 Students

When Erica Lancaster was an undergraduate public health student, she worked two part-time jobs to stay afloat. Now as a graduate student in the Master of Public Health epidemiology program, she can concentrate on her schoolwork, thanks to a federal grant awarded to the university from the National Institute for Occupational Safety and Health.

The $2 million, five-year grant continues a 25-year tradition at UMass Lowell, supporting graduate students in their public health and occupational health and safety studies.

“I get financial assistance to help with all the things I need so that I can stay focused 100 percent on school,” says Lancaster, who was one of 13 students accepted into the program this year. The students receive tuition, fees and a stipend from the grant to pursue master’s or doctoral degrees in occupational health and safety specialties.

“Winning this extremely competitive national grant was a strong endorsement of the academic standing and hard work of our students, faculty and staff,” says Prof. David Kriebel of Work Environment, who led the team effort to win the grant.

Since the funding began in 1990, more than 350 students have graduated from UMass Lowell occupational health and safety programs.
Hands-on Experience with Electric Automaker Boosts Career Prospects

Immediately after earning a plastics engineering degree in December, Kevin Newland started a highly coveted job at one of the most innovative and buzz-worthy companies in the world: Tesla Motors.

How did he do it?

“There’s no way I would ever get a job at Tesla right out of school without having interned here first,” says Newland, who now works as a materials engineer at the luxury electric automaker’s global headquarters in Palo Alto, Calif.

Newland, of Hopkinton, was one of three students from the Francis College of Engineering to intern at Tesla in the past year, joining plastics engineering major David Cacciola of Saugus and mechanical engineering major Amy Tibbetts of Billerica.

Cacciola, who interned as a materials engineer at Tesla Motors to boost their careers.

“Road Scholars: Engineering Students Intern at Tesla

Engineering grad Kevin Newland, left, and seniors David Cacciola and Amy Tibbetts are using their internships at Tesla Motors to boost their careers.

David Cacciola interned as a material engineer at Tesla Motors last year, researching and analyzing new materials for the Model X crossover SUV.

“I thought I’d be the only one out there, but to meet two other people that know exactly where you’re from and have walked through the same halls as you, it was so comforting,” says Tibbetts, who has been interested in cars for as long as she can remember.

While Cacciola didn’t work directly with Newland and Tibbetts, he did have a UMass Lowell alumna on his team: materials engineer Sharanya Madhavan, who earned a master of science degree in plastics engineering in 2008.

“It was nice having other UMass Lowell students around,” Cacciola says. “We are definitely becoming known around the country.”