New South Campus Building Scheduled to Open in 2013

A new $40 million classroom facility is on the rise on the University’s South campus.

The Health and Social Sciences (HSS) Building whose formal groundbreaking is scheduled for April 21, is the latest shovel in the turf for a campus on the move.

It will serve as an academic anchor on South – as the new Emerging Technologies and Innovation Center will on North – for the first major transformation of the campus in more than three decades. It will provide a home for students in three of the most popular majors at UMass Lowell: psychology, nursing and criminology.

Acquisitions over the past 18 months include the UMass Lowell Inn & Conference Center, the Tsongas Center at UMass Lowell and University Crossing (formerly St. Joseph’s Hospital.) All are helping to expand the space needed to house a campus with 30 percent more students than in 2007. Two new parking garages are planned to deal with the crunch that growth has brought.

The funds for the HSS Building were secured through the Higher Education Bond Bill of 2008, which was initiated by the then-chair of the Higher Education Committee, Rep. Kevin Murphy, and supported by Rep. Thomas Golden, Rep. David Nangle and former Sen. Steven Panagiotakos.

“The buildings and new acquisitions are vibrant additions that are overdue, and clearly we are growing. What we build now suits all who follow in the coming years,” says Chancellor Marty Meehan.

The construction project is financed by the Commonwealth and managed by its Division of Capital Asset Management, the state’s real estate arm, led by Commissioner Carole Cornelison.

The HSS Building will spread 69,000 square feet over four floors at total cost of about $40 million. It will contain seven classrooms, 16 seminar/project rooms, eight conference rooms and 72 faculty offices. It is slated for completion by the end of 2013. Its maximum capacity includes 893 students and 139 staff and faculty.

Since early March, when a chain link fence surrounded a swatch of green at the corner of Wilder and Broadway streets, changes to the walkways and bus stops have ensured safety without service interruption. The heaviest construction is scheduled for the summer months, before the fall semester arrives.

The physical transformation is an outward sign that University officials hope will engender pride among students, staff and faculty, all of whom are invited to a ceremonial groundbreaking and reception, starting at 2 p.m. on April 21.

“This architectural rendering depicts the new Health and Social Sciences Building currently being constructed on South Campus, at the corner of Wilder and Broadway streets.


**Preventing Brain Injury in Soldiers**

Professors Develop Helmet Sensors

Traumatic brain injury is just one of the many dangers facing American soldiers in Iraq and Afghanistan. It can occur when the head is struck suddenly and violently by the blast from an artillery shell or roadside bomb.

A team of UMass Lowell researchers hopes to better protect soldiers’ heads.

Prof. Xingwei Wang of the Electrical and Computer Engineering Department and Profs. Christopher Niezrecki and Julie Chen of the Mechanical Engineering Department recently received a $30,000 grant from Raytheon to develop a new optical pressure-sensor network for evaluating the structural design of soldiers’ helmets.

“This monitoring system will study the effects of blasts on the helmet or skull,” says Wang. “The data collected will be used to evaluate, and therefore improve, helmet design to better protect soldiers from traumatic brain injury.”

Moderate to severe brain injury can cause a host of neurological problems, including headaches, confusion, slurred speech, memory loss, seizures, loss of coordination and coma.

The researchers’ sensors can be mounted on the outside and inside surfaces of the helmet as well as on top of the skull to understand the propagation of the shock wave and its effects on the helmet and brain.

Lab tests performed at the U.S. Army Natick Soldier Systems Center show that the new sensors have better responses than commercially available electrical and acoustic pressure sensors.

Wang says with modifications, the sensors can also be used to evaluate helmets in sports.

**Djwan Scott Gives Back to Diverse Nursing Students**

Student Recognized for Leadership, Mentoring

Nursing master’s student Djwan Scott accepted the Excellence in Nursing Education/Teaching award from the New England Black Regional Black Nurses Association recently. She was lauded for her leadership and teaching of diverse and disadvantaged students in UMass Lowell’s Bring Diversity to Nursing program.

In addition to working full time as a registered nurse at Brigham and Women’s Hospital in Boston and pursuing her master’s degree in gerontology, Scott works 18 hours a week mentoring, tutoring and counseling 36 students in the program.

“In my role, I build relationships with students, understand their backgrounds and help them gain insight into the nursing profession,” said Scott at a recognition ceremony. "This is what I love—sharing my knowledge with students who are embarking on a journey I once struggled with.”

Now in its third year, the Bring Diversity to Nursing program recruits diverse people in the Merrimack Valley and supports their success with tutoring, technology, scholarships and mentoring. The goal is to graduate future nurses who can effectively interact with patients across cultures, ensuring the delivery of the best possible care.

**Startups Raise $5 Million in Private Funding**

Products Address Health Needs

Four startup medical device companies have raised more than $5 million in private funding since they became associated with the Massachusetts Medical Device Development Center (M2D2), the UMass Lowell-UMass Medical School initiative that bridges the gap between the invention and production of new medical devices.

The four companies received “FastLane” awards under an M2D2 program that helps companies progress so they can secure venture capital and other external investment. Massachusetts Technology Collaborative’s John Adams Innovation Institute (JAII) funded the program.

Strong Return on Investment

The four companies raised $5,055,000 in private funds, for a 10 to 1 return on investment from the JAII $500,000 award to M2D2.

“The medical device industry is crucial to Massachusetts’ future,” says Prof. Stephen McCarthy, co-director of M2D2. “At a time when private fundraising has become more challenging, FastLane grants provide critical support to help move these companies forward.”

M2D2 also provided business plan development, market assessment, prototype development, engineering and design help and clinical trial assistance.

The four FastLane recipients and their products are:

- Aura Medsystems Inc., which is developing a light-based platform for sealing wounds to reduce scarring and infection;
- MedicalMetrix Inc., which is developing a device to improve prostate cancer screening;
- MoMelan Technologies Inc., which is developing a device that stretches skin for improved skin grafting and
- TheraTorr, which is developing an ultra low-pressure air mattress designed to prevent bed sores.

UMass Lowell Leads New England in Rising Graduation Rate

UMass Lowell leads New England public research institutions in increasing the percentage of students who successfully complete their degrees.

A recent report by the Chronicle of Higher Education found that UMass Lowell had the largest increase in graduation rates for students from 2003 to 2008 among public research institutions in the region. The increase also placed UMass Lowell at No. 24 in the nation among more than 150 colleges and universities included in the report.

“This increase in graduation rates is an important one as it shows that UMass Lowell is not only committed to seeing its students complete their degrees, but that we have the tools in place to help more do so,” says Chancellor Marty Meehan.
Nuclear Engineering Professor Offers Insights on Crisis in Japan

Gil Brown Serves as Expert to News Media

Reporters have been turning to Nuclear Engineering Prof. Gil Brown for his expertise and perspective about the damaged nuclear-power plants in Japan.

He has been interviewed by media outlets from across the country, including TV stations WBUR, NECN, Fox 25 and WCBS; radio stations WBUR, WBZ, WRKO and WCAP-AM; the Lowell Sun; the Eagle Tribune; the New Bedford Standard-Times; the Cape Cod Times; national radio network IRN; the National Journal; Time magazine and the Washington Post.

“We need to demystify the nuclear power process and be cautious” about making sweeping statements, says Brown. “The situation is a moving target—it’s the middle of the storm—and too soon to draw conclusions about lessons learned.”

Brown points out that the Japanese plants survived an earthquake far beyond their designed limits. The reactors shut down power production exactly as they should, bringing the core temperatures down dramatically. But the tsunami damaged the emergency generator system is designed to circulate cooling water over the still-hot fuel rods.

“The Japanese are doing what they can to contain the radioactivity, using the emergency procedures that are known and rehearsed,” says Brown.

Pointing out that every U.S. plant is likely now checking its own design tolerances, emergency procedures and ability to operate under blackout conditions, Brown says, “It’s time to review and reflect, not time to panic. Plants that were safe last week are safe this week.”

Students Surf, Skydive and Ski

Outdoor Program Serves 500 Every Year


Sounds more like scenes from a Patagonia catalog than from a UMass Lowell student’s day-to-day life. But thanks to the University’s Outdoor Adventure Program, all of those activities are available to students at little cost.

“In February and March alone, we led ice climbing, winter hiking, cross-country skiing and downhill skiing trips,” says Peter Murray, director of Campus Recreation.

Upcoming trips will feature skydiving, rock climbing, kayaking and surfing.

This year, the University also began offering trips to national parks. Over Columbus Day weekend, guides took 10 students to Acadia National Park in Maine for a three-day camping trip. During Spring Break, a group of 11 tackled the Grand Canyon.

More than 500 UMass Lowell students take part in the program, which Murray says is the most extensive in the five-campus system.

Patrick O’Connell, a senior majoring in business administration, has participated in an overnight backpacking trip, two white-water rafting trips and one winter hike.

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Sound Recording Technology Program Graduates Award-Winning Music Professionals

Mark Donahue and Adam Ayan, both UMass Lowell alumni, won three Grammy awards between them this year.

Graduates of the Sound Recording Technology (SRT) program, Donahue ’07 won two statuettes and Ayan ’97 took home one from the ceremony held in Los Angeles on Feb. 13. The Grammy is music’s highest honor.

Boston-based Donahue won for Best Engineered Album, Classical and Best Orchestral Performance, bringing his total to four (he earned one Grammy each at the 2007 and 2009 Grammys). Ayan won for his work on Keith Urban’s “Til Summer Comes Around.” He works at Gateway Mastering & DVD in Portland, Maine, and also has four lifetime wins.

Both men are among the elite in a profession known for requiring ears of gold and technical smarts to match, and both credit SRT for getting them where they are.

UMass Lowell Lessons Lead to Gold

The University’s alumni are quick to reflect upon the SRT program’s lessons.

“I do a lot of speaking engagements,” said Ayan by phone, between sessions. “And when people ask about my career path, I tell everybody, hands-down, go to UMass Lowell’s SRT program.”

Ayan, 35, has been at Gateway since 1998. His first Grammy (Best Historical Album) came in 2005 for his work on a Jelly Roll Morton box set. He has also won Latin Grammys for his work with Juan Luis Guerra. He has worked on recordings by the Rolling Stones, Madonna and Brian Wilson, and was the engineer on a pair of Pearl Jam remasters due next month. He says he loves, in particular, working with the Foo Fighters.

Donahue, 42, who is chief mastering engineer at Soundmirror Inc. in Jamaica Plain, has a long history with the University.

He began taking classes in 1986, and finally got his diploma in 2007, the same year he won his first Grammy. He took his last class in 1999, thanks largely to being too busy for classes after landing an internship at Soundmirror in 1992.

“Basically, SRT got me where I am,” says Donahue.

Student Becomes Teacher

Donahue taught a class in mastering in the SRT program last year and hopes to return to teach again. But he hits the road to record projects and masters more than 200 recordings each year. While he’s a wiz at recording symphony orchestras, he masters every style from rock to hip-hop to country.

Ayan is active in local Portland causes, including The Portland Music Foundation, which he founded in 2006 to help local musicians and their community.

He says it’s not just ears that are important in his work, but knowing technology, and learning the art of temperament.

“You’re dealing with all sides of a project: producers, engineers, record labels and the artists, to get what they want,” he says.

UMass Lowell Alumni Take Home Grammys…Again

Sound engineers Mark Donahue ’07 and Dirk Sobotka arrive at the 53rd annual Grammy Awards in Los Angeles. The pair shared the Grammy for Best Engineered Album, Classical and Best Orchestral Performance.

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