University researchers team with industry to bring new technologies to Nevada

With its new Industry/Faculty Partnering Clinic, the Technology Transfer Office for the University and the Desert Research Institute is engaging the community in the work of scientists who are helping develop new technologies for Nevada.

The new clinic is one of three programs the Technology Transfer Office has instituted to engage the community in an effort to enhance technology transfer, economic development, and the relationship between the institutions and the local business community. Tech transfer is the practice of transferring scientific findings from one organization to another for further development so that new products or processes in such areas as medicine, educational tools, electronic devices or renewable energy can become available to the public.

“We’ll get business involved early in all phases of technology development and marketing,” said Ryan Heck, director of the Technology Transfer Office. “These programs will lay the foundation for new technologies that have real potential for success in the marketplace, increase our ability to find the right partner to get the technologies to market.”

Teams that include community mentors, faculty members and science and business students have begun reaching out to companies who have products in areas of faculty technical expertise. The goal is for faculty to learn about company technology needs and industry trends so that faculty can develop research proposals that will lead to new products.

“We have matched mentors and researchers for the four technologies of focus for this first session, we are looking for more for future clinics, as well as people to help with our other community engagement programs,” Heck said. “It’s exciting to see the enthusiasm local industry experts have to participate with us. We’ve been fortunate to gather significant support from members of the Northern Nevada SCORE program—a service association of retired executives—and other members of the business community.”

The four technologies for the first session of the partnering clinic include water purification and energy production systems, computer algorithms to aid in drug discovery, and plants genetically engineered to produce gasoline and enzymes to produce insect pheromones and flavorants/fragrances. The other two community programs that Heck has instituted are “Industry on Campus,” which will bring faculty and industry representatives together to share technology interests and identify potential faculty-industry partnerships; and “Community Support Network,” a virtual panel of community business experts who review technology summary briefs and provide feedback on the value proposition of the technology and/or suggest relationship links in the local community.

A distillation system patented by the University is powered by this salt-gradient solar pond that traps solar heat at the bottom of the pond where the brine can reach and sustain temperatures greater than 195 degrees. The collected thermal energy powers the distillation system, which is designed to increase water clarity and quality in lakes. Francisco Suarez, a student in the graduate program of hydrological sciences, shows off the pond that also can be used directly for heating or for other low-temperature thermal applications. The membrane distillation system was developed by Amy Childress, chair of the Department of Civil and Environmental Engineering, and a participant in the inaugural Industry/Faculty Partnering Clinic.

—Mike Wolterbeek ’02
Maragakis visits White House

President Barack Obama greeted a roomful of engineering deans at the White House Feb. 8 with a pledge to "use the bully pulpit to emphasize how important your work is."

College of Engineering Dean Manos Maragakis attended the White House Engineering Education reception, which celebrated the efforts of engineering deans for their commitment to retain and graduate more engineering students.

After the event, Maragakis said: "It’s a new era for engineering education. Engineering has been recognized as a national priority, and the University is ready to take advantage of it.'

Maragakis and other deans from leading engineering programs were invited to attend the event where the creation of a unique partnership to measure, evaluate and celebrate excellence in retention, graduation and diversity in engineering education was announced.

President Obama also pledged to create 10,000 new engineers each year above the normal annual total, Maragakis said. "This would be a doubling of the engineering workforce in only a decade."

The annual number of engineering graduates in the country has stagnated to around 120,000. By comparison, nations such as China and India produce greater numbers of engineers, with universities there featuring 50 percent of majors in areas such as science and engineering.

"The President of the United States has now said, 'This is a priority because this country is about technology, it is about innovation, and this is how we must grow the economy.'"

"This is a strong message. I don’t care about the politics of it. This is the first time in 50 years that this country is talking about, as a national priority, creating more engineers."

Maragakis referred to President Kennedy’s 1961 challenge to send a man to the Moon. "President Kennedy helped make engineering cool again," Maragakis noted.

"It is indeed a great honor to have participated in this event and to represent an institution that values and fosters excellence in engineering education," Maragakis said.

Maragakis added that it is not just engineering that makes the University’s role so crucial. Science, business, education and the liberal arts all contribute in key ways to creating the most well-rounded graduates possible.

To see a video of President Obama addressing the deans, visit: http://vimeo.com/36550987.

—John Trent ’85/’87, ’00M.A.

Clayton Middle School students don Nevada gear

Clayton Middle School in Reno sets aside its uniform policy on Fridays and allows students to wear college and university gear. These “College Days” are intended to help Clayton’s 655 students visualize themselves as college students.

After learning about the Clayton initiative, ASUN and the University’s Student Services Division decided to show their support—in a big way. At an all-school assembly on Dec. 23, every Clayton student was presented a Nevada T-shirt, donated by the University’s student-owned store, the Nevada Wolf Shop.

“The sixth-grade and middle-school years are the ideal time to reach out and help young scholars prepare themselves for higher education,” said Shannon Ellis, vice president of student affairs at the University. “We want these students to know their options include the tier-one University in their hometown.”

“It’s about getting kids to believe in themselves,” Clayton Principal Bruce Meissner ’94

Wold Pack mascot Alphie at Clayton Middle School’s “College Days” assembly. The University’s student-owned store, the Nevada Wolf Shop, donated 655 T-shirts to the school.

(history) recently told the Reno Gazette-Journal, which reported on the “College Days” and Clayton’s transition into a Pre-Advanced Placement Academy.

Wolf Pack mascot Alphie, ASUN President Casey Stiteler, representatives of the University’s Alumni Association Advisory Council and University faculty and staff members helped distribute the T-shirts with Clayton teachers, staff and parent volunteers.

“Our University is amazing, and I want all of these students to be reminded of that every time they wear their new shirts,” Stiteler said.

—Jane Tors ’82
New University renewable energy, public policy graduate certificate available

An online graduate certificate in renewable energy that provides an opportunity to study the policies and practices in the diverse fields of renewable energy is now being offered at the Nevada.

“With an emphasis on renewable energy by the Governor’s Task Force on Economic Development, this should be a popular program,” said Nancy LaTourrette of the College of Engineering. “The program provides a breadth of understanding of the different aspects of renewable energy in a traditional semester-long time frame.”

The online, 12-credit certificate is designed for professionals, including business staff and managers, practicing engineers, government regulators and others interested in developing knowledge in the diverse fields of renewable energy or who may be impacted by policies and practices relating to renewable energy. The multi-disciplinary curriculum includes elements of several engineering disciplines as well as science, business and policy/political science.

The first three courses, which were offered this spring, are Alternate Energy Fundamentals, Public Policy Analysis and Fundamentals of Biofuels.

“The development of this program has been an objective for two to three years,” said Manos Maragakis, dean of the College of Engineering. “This new certificate program can have a significant impact on workforce development and advancement in the field of renewable energy for Nevada. We’re pleased to be able to offer this valuable program that relates to a core economic emphasis for the state.”

Other courses for the multi-institutional program include Operation of Contemporary Power Systems; Solar and Renewable Energy Utilization; Practicum in Biofuels; Renewable Energy Policy; and Business Issues in Sustainability and Renewable Energy. Additional courses are planned in geothermal and wind energy.

The graduate certificate in renewable energy is a collaboration among the colleges of Engineering, Business, Science and Liberal Arts at Nevada and the Desert Research Institute and the University of Nevada, Las Vegas.

Funding comes through a Department of Energy Nevada Renewable Energy Consortium grant administered by the Nevada System of Higher Education and NV Energy.

The University of Nevada, Reno was one of the first in the country to offer a multi-disciplinary renewable energy minor degree in 2007.

NV Energy, through Sierra Pacific Resources Foundation, donated $500,000 to create the industry-education partnership that allowed the College of Engineering to develop the undergraduate program.

The renewable energy minor provides students with technical skills, economic and political background, and analysis and design skills that will help them to apply the knowledge gained in their major to the important national issues of alternative and renewable energy.

“This graduate certificate is a logical extension to the renewable energy minor degree,” Maragakis said. “With our collaborative renewable energy center at the University, our work with other institutions and comprehensive research in alternative energy, it’s exciting to be able to grow curriculum that contributes to economic development.”

Course designers and instructors are experts in their respective renewable energy-related fields at Nevada research institutions.

For admission, enrollment and course requirements, please visit www.extendedstudies.unr.edu/energyonline, or call (775) 784-6925.

—Mike Wolterbeek ’02
Special Collections ‘revives’ University students Joe McDonald and Leola Lewis

In 1911, a young Joe McDonald and Leola Lewis, a freshman and junior, were meeting at University of Nevada’s Morrill Hall to study in the basement library, living the day-to-day life of college students, doing the typical activities that college students did—without the Internet, without technology, without social media. McDonald and Lewis, just starting to court, probably would have had Facebook pages if they could have. The University’s Special Collections and University Archives provides a new opportunity, 99 years later, for Joe, who would become president of Reno Newspapers, Inc., and Leola, his wife-to-be, to have those pages.

Special Collections staff has spent much time researching the lives of McDonald and Lewis, with support, photos and manuscripts provided by the McDonald family. The research has explored where they lived in Reno when they attended the University and when they married each other nearly 100 years ago. Through Facebook postings, Donnelyn Curtis, director of Special Collections, and her team have resurrected their lives and personalities, shared their moments and memories from what the couple left behind in photos and writings, and from Reno and campus newspaper stories and other historical accounts.

Curtis saw Facebook as an opportunity to teach and engage students in history by reliving the lives of two undergraduates at the University just setting out to pursue their careers and raise their family.

“I had the strangest dream. I walked up the little hill above campus and there were these huge brick buildings—like cathedrals! I walked up some stairs into one of them called a ‘Knowledge Center’ and there was a counter that said ‘library services’ but it wasn’t a library, because people were eating, and talking and laughing, and I didn’t see bookshelves.” — Joe McDonald, Facebook post

“We thought that it would be interesting to resurrect Joe and Leola and relive their younger years,” Curtis said. “Everyone is on Facebook, especially students. It gives current-day students a chance to know what happened historically on campus and to experience the vivid lives of the couple.”

Special Collections plans to expand into other time periods using more Nevada alumni. The department is doing two things: first, imagining what real individuals who lived in the past would have done with Facebook and related technologies such as digital photography and audio/video; and second, imagining that their Facebook friends could go back in time through learning about and interacting with them.

“It’s awaking to learn about my grandparents’ years as students at the University and how their experiences shaped them as a couple,” said Margaret McDonald, one of the McDonalds’ granddaughters. “We are learning about the history of Reno through their eyes as typical college students at the time.”

Curtis said she would like to experiment with having graduates from the late 1950s and early 1960s maintain their own Facebook pages for their college-aged selves. The idea is to replicate the alumni’s social lives of the time through Facebook and share their memories as though they were students, with technical support and some digital historical content from Special Collections and University Archives.

Joe and Leola’s pages have been receiving more attention lately.

“It seems that their friends are really interested in finding out how life was back then,” Curtis said. “They are eager to see the development in their career and relationship as well as the University’s history itself.

“It’s an experiment, and we’ll keep it going as long as it is useful and interesting,” Curtis added. “In talking to a few people, I think they are enjoying reading the updates and seeing the photos. We’re working on how to add more audio and video.”

Special Collections received approval from Joe’s granddaughter, Peggy McDonald, to carry out the project. The department gladly accepts materials that document Nevada and University history.

For more information, contact Curtis at (775) 682-5669 or dcurtis@unr.edu, or “friend” Joe McDonald and Leola Lewis on Facebook to keep up with their past.

—Natalie Savidge ’04
A downhill racer on her way up

Andrea Napoli freely admits that there are two Andreas, really.

On the one hand, there is the meticulous, process-driven, planning-minded Andrea. This is the person who can look at a stretch of road and see the unassuming blacktop come alive before her eyes with the possibility of multiple uses for pedestrians, automobiles and bike users.

It’s the same Andrea who can be out with friends on a mountain bike ride along the ridges near her old home in Lake Tahoe, riding for fun, yet also thinking of the ride in terms of another building block, another natural progression, in her skill as a mountain biker.

“When I ride for fun,” Napoli says, “I’m pretty conservative and generally don’t take a lot of chances, for better or worse, I suppose. I’m more about ‘baby steps’ and working up to things to build my confidence.”

When Napoli races, however, an entirely different Andrea surfaces.

“Downhilling,” Napoli, who won the USA Cycling Collegiate Mountain Bike National Championship in downhill in late October, says, “requires a lot of confidence. When I’m racing, I feel totally different. It’s like I don’t have time to think and I just do it. I often get in a zone when I’m racing where I’m just too distracted to pay attention to my ‘self-preservation’ voice … who’s probably screaming at me.”

Either way, having two sides, one a bit methodical and one a bit intuitive, one brimming with long-term plans and professional ideas and the other full of the passion and simplicity of a single, thrilling moment, has made Napoli an extremely well-rounded individual.

In December, Napoli, a graduate student in the Department of Geography’s Land Use Policy Program and a member of the Nevada Cycling team, was named the recipient of the Joshua Kuck Memorial Scholarship, a national award given through the USA Cycling Development Foundation in honor of outstanding achievements in the areas of cycling safety, advocacy and education.

“I feel very strongly about making biking safer in communities,” she notes. “I’m doing what I can to contribute here in Reno.

In visiting other bike- and pedestrian-friendly communities, Napoli has been struck by the fact that she would often see entire families out on the road, biking or walking, together.

“Biking is such a great form of transportation and exercise, and because we’ve been designing our streets to only accommodate automobiles for so long, the safety of those biking and walking is jeopardized … First and foremost, improvements need to be made to allow cyclists to feel safe. If that happens, more people are likely to give it a try.”

“Introducing people to biking at an early age helps, too, which is why I volunteer for the Reno Kiwanis Kids’ Bike Program,” she says. “I help refurbish bikes to be given to kids.”

She plans to help with the Kiwanis’ bike safety classes this spring.

Thanks to her participation with the University’s cycling team over the past two seasons, Napoli says her enjoyment and appreciation of the sport has never been greater.

“It certainly has made bike racing a lot of fun,” she says of being part of the team. “Some of the races that I compete in outside of collegiate racing have competitors who take themselves very seriously, which can take away from the fun of racing. College racing and the team aspect of it all, however, is such a welcoming environment.

“We all want to win, of course, but the team atmosphere is more about having a good time rather than killing your competition,” she adds. “It could be your first time on a bike and you’re dead last in the race, but your Nevada teammates are going to yell and scream for you just as loud as they did for the Wolf that won it. That’s how we roll.”

Napoli will graduate in May and would like to land a job doing biking and pedestrian planning, preferably in the Reno-Tahoe area.

Her number one deciding factor if she must relocate: “Are there good trails? At least I know I have my priorities straight,” Napoli says.

—John Trent ’85/87, ’00M.A.
The University of Nevada, Reno Ranger Challenge team, whose motto is, "I will do today what you won't, so that I can do tomorrow what you can't." TOP ROW: Micah Gill (junior), Kevin Beck (freshman), Chris Wallace (sophomore), Brandon Castinado (sophomore), Michael Colyer (sophomore), Chris Imus (freshman). BOTTOM ROW: Cameron Ripley (freshman), Jasmin Herrera (senior), Jacob Ziolkowski (sophomore), Zachary Betts (senior), Jerel Abas (junior), Mary-Ann Ong (freshman).

Nevada ROTC cadets to participate in cultural understanding program

Twelve cadets from the University’s Army ROTC program have been chosen to travel abroad this summer as part of the U.S. Army’s Cultural Understanding and Language Proficiency Program. The students will volunteer in a variety of countries, including Vietnam, Tajikistan, Singapore, Rwanda, the Philippines, Namibia, Mali, Honduras, Guatemala, Croatia and Cambodia. They will teach English to children, work with those who have disabilities, rebuild weak infrastructure and work with foreign militaries.

The U.S. Army funds the monthlong program, which includes a stipend for the students.

Travis Salley, a junior majoring in music, said he applied to the program to learn a new point of view. He will spend his summer in Singapore.

"It will provide me with a perspective of cultural and societal norms outside of my American way of life," Salley said.

Korean ambassador visits northern Nevada

Asian trade issues, including the Free Trade Agreement signed by President Barack Obama in October, are often discussed by state leaders trying to find ways to improve Nevada’s economy. Nevadans had a rare opportunity to hear about Asian trade and economic issues firsthand from the ambassador from the Republic of Korea to the United States, Han Duk-soo, as well as the former ambassador from the United States to the Republic of Korea, Kathleen Stephens.

The two held a discussion and answered questions at a presentation moderated by economics professor Thomas Cargill at the Joe Crowley Student Union Theater Dec. 1.

Before his appointment as ambassador in January 2009, Han served as the 38th prime minister of the Republic of Korea, chairman of the Presidential Committee on Facilitating the United States-Korea Free Trade Agreement, minister of finance and economy, and president of the Korea Institute for Industrial Economics and Trade. Stephens served as ambassador from September 2008 until October 2011 and is a career minister in the U.S. Foreign Service. Before serving as ambassador, she was principal deputy assistant secretary of state for the U.S. Bureau of East Asian and Pacific Affairs, responsible for overall bureau management and public diplomacy and for management of U.S. relations with Japan and Korea.

The ambassadors came at the invitation of Cargill and the Department of Economics in the College of Business. Greg Mosier, dean of the college, and Elliott Parker, chair of the department, also attended.

“We are very happy that Dr. Cargill was able to arrange for us to host this rare opportunity in Nevada to discuss Asian trade and economic issues,” Mosier said. “His experience and relationships with those involved in these issues has made this discussion possible.”

Cargill has been a visiting scholar at the Comptroller of the Currency at the U.S. Treasury, Bank of Japan, Japanese Ministry of Finance, Japanese Ministry of Posts and Telecommunications, Federal Reserve Bank of San Francisco, Federal Deposit Insurance Corporation, East-West Center at the University of Hawaii and the Bank of Korea. He has served as a consultant to the National Credit Union Administration, the World Bank, Central Intelligence Agency and the International Monetary Fund.

Cargill framed the discussion around three topics:
- Current Asian trade and economic issues, including the Free Trade Agreement, export-based versus domestic-driven economic development, housing bubbles in Korea and the United States, and demographic challenges facing many Asian countries.
- Asian security issues, including China’s increasing influence throughout Asia and North Korea’s support of Iran’s nuclear/missile program.
- The Pacific Century, the idea that the 21st century will be dominated, especially economically, by the states in the Asia-Pacific region.

—Claudene Wharton, ’86, ’99M.A.

The presenters at the event, left to right, included College of Business Dean Greg Mosier, former Ambassador Kathleen Stephens, economics professor Thomas Cargill and Ambassador Han Duk-soo.

University Honor’s Program student IVON PADILLA-RODRIGUEZ took a chance when she submitted a video in the Dr. Pepper’s Million Dollar Tuition Giveaway explaining why she deserved scholarship money. That chance led to Padilla-Rodriguez winning a $100,000 scholarship after beating out thousands of other applicants. With the scholarship money, the English and history major now has the financial ability to fulfill her dream of attending law school. Padilla-Rodriguez attended the United States Hispanic Leadership Institute Conference in Chicago this spring, and as a freshman ran for College of Liberal Arts senator for ASUN.

With a master’s of arts in writing already under her belt, CRYSTAL COLOMBINI is no stranger to the academic world. Named the 2012 Undergraduate Student Regent Scholar by the Nevada Board of Regents, Colombini will complete a doctorate degree in English with a focus in rhetoric and composition this spring. Colombini taught English abroad in several locations, including China and Greece, before becoming a graduate student at Nevada. During her time at the University, Colombini has taught many English classes, presented numerous seminars and co-authored several articles, all while maintaining a consistently high GPA.

—Megan Akers, Class of 2013
Two Nevada students awarded prestigious Gilman International Scholarships

While most Nevada students were enjoying their winter break, third-year student Sophie Glogovac was preparing for the trip of a lifetime. She is spending her spring semester studying abroad in Costa Rica.

Glogovac and fellow Nevada student Ashley Walker were recently awarded the Benjamin A. Gilman International Scholarship by the U.S. Department of State, Bureau of Educational and Cultural Affairs and the Institute of International Education. They were two of the 31 University Studies Abroad Consortium students selected this semester from nearly a thousand who applied throughout the country.

The Gilman Scholarship is open to undergraduate students who are U.S. citizens, have been awarded a Federal Pell Grant and are applying for or are accepted into a study abroad program.

“The Gilman Scholarship is a wonderful award, said McKenzi Swinehart, scholarship program adviser for USAC. “Hundreds of students around the country benefit each year.” Scholarship recipients are able to choose their destination and area of study. Glogovac will be using the award to study Spanish in Costa Rica, while Walker will study both French and Spanish in Europe.

Glogovac left for Costa Rica in mid-January and will spend five months there. Her coursework will allow her to fully immerse in the Spanish language and the Central American culture.

“I am looking forward to meeting all of the locals and broadening my use of the Spanish language,” Glogovac said.

Under the terms of the scholarship, all recipients are required to perform a service project promoting the scholarship program and international education at their home institution or in their local community. For her service project, Glogovac plans to create a funding branch within the Dean’s Future Scholars to search for funding and grant opportunities for first generation, low-income students to study abroad.

To learn more the scholarship and study abroad programs, please contact Kelly Corrigan, (775) 784-6569 or corrigan@unr.edu; or, visit the USAC website at http://usac.unr.edu.

—Rachel Sa-Onoy, student writer

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