$1.2 million grant from Department of Energy for first-ever geothermal energy training program

The U.S. Department of Energy has awarded the University a $1.2 million grant to develop and operate the National Geothermal Institute, a consortium of top geothermal schools, including the Massachusetts Institute of Technology, Cornell University, Stanford University, the Oregon Institute of Technology, the University of Utah and possibly others as the program expands.

The national institute for geothermal science and technology will attract students, professors and industry professionals from around the country to learn everything from the basics to the latest in geothermal energy production with a series of short courses and other curriculum. The institute is envisioned to augment the University of Nevada’s Great Basin Center for Geothermal Energy by providing relevant research and trained graduates for the geothermal industry.

“The University is a natural location for this new national institute since so much of the current U.S. geothermal production is centered in Nevada, and since the University is becoming a leader in discovering new technologies for exploration, production and development of geothermal resources,” Gina Tempel, associate dean of the College of Science, said.

For the past 20 years, the schools in the consortium have all been at the leading edge of geothermal research and education. Separately, no one institution has had the critical mass to have a geothermal degree program, so this new venture will effectively be the first university training program of its kind in the country, including industry collaboration to ensure specific expertise in geothermal can be developed.

The consortium is designed to transform and grow the national energy infrastructure to utilize America’s vast geothermal resource base. It creates a centrally located, convening organization for developing and conducting geothermal instructional programs.

A series of eight, one-week courses with additional field trips and a project is expected. Courses could include:

- Introduction to Geothermal Energy Utilization
- Geothermal Business Principles
- Public Policy, Permitting and Environmental Issues
- Exploration
- Reservoir Engineering and Management
- Power Plant Design and Construction
- Direct Use

The Redfield Campus of the University, with its state-of-the-art classroom facilities, conference centers and laboratories, will serve as the institute’s hub.

The National Geothermal Institute will educate and train the next generation of scientists, engineers, plant operators and policy makers. There will be broad participation of faculty, staff and students from the consortium of universities, along with scientists and other professionals from industry and national laboratories.

—Mike Wolterbeek ’02
Mentors help regional youth succeed

A specialized, intensive mentoring program continues to help young people from low-income families set their sights on college and become the first in their families to earn a degree. The University’s Dean’s Future Scholars Program is seeing 75 to 80 percent of its participants graduate from Reno-area high schools each year, which is nearly double the overall, county-wide graduation rate.

Most Dean’s Future Scholars are identified in sixth grade. As they progress through middle and high school, they attend on-campus programs and activities to gain a familiarity with the surroundings. The highlight for many is the summer academic opportunities at the University. Through the summer program, about 25 current University students work as mentors and tutors, supporting the nearly 225 Dean’s Future Scholars on campus.

“The program began with a simple idea: before middle- and high-school students can consider teaching as a career, they must first believe that college is a possibility,” said College of Education Emeritus Dean William Sparkman, who founded the program in 2000. “Over its history, Dean’s Future Scholars has come full-circle in several regards. Many of the program’s mentors were part of the program prior to their own graduation from high school. Leslie Anne Serra is the first Dean’s Future Scholars participant to graduate from the University. After earning her degree in December 2009, she is pursuing a master’s degree through the College of Education.

“A lot of us have experienced what they go through, and we are really passionate because of it,” Serra said. “We know mentors can have a big impact. If it wasn’t for Dean’s Future Scholars, I wouldn’t be here today.”

The Dean’s Future Scholars Program is made possible through the generous financial support of Phil and Jennifer Satre, Nevadaworks, USA Funds, AT&T Aspire Program, Nevada’s GEAR-UP Program, Washoe County Education Alliance, Robert Thimot and the Nevada Public Education Foundation.

—Jane Tors ’82
University students earned top-10 finishes and several trophies in a round of competitions held this spring around the country, providing students with the chance to build strong teamwork skills and real-world professional experience.

Nevada nearly swept the Governor’s Cup awards in April, with teams from the University taking home six of the seven awards presented in the statewide annual collegiate business plan competition presented by Nevada’s Center for Entrepreneurship and Technology. The winning business plans ranged from an environmentally friendly recording label to a process that turns recycled paper into ethanol. The first- and second-place winners of the graduate and undergraduate competitions travelled to Las Vegas to compete against students from Arkansas and Oklahoma for awards totaling $90,000 in the Tri-State Awards May 18.

Strong backs and strong engineering propelled Nevada students to a win at April’s Mid-Pacific Conference concrete canoe competition in Chico, Calif. After dominating the race portion of the contest with three first-place finishes and two second-place finishes, the team took first in the final product portion, second in the oral presentation and third in the technical paper portion of the event. The team travelled with their canoe, “Battle Born,” to San Luis Obispo, Calif., for the 23rd Annual ASCE National Concrete Canoe Competition June 17-19. The team battled 21 teams in wind and choppy waters to finish second place overall, the highest average overall placement of any team in the history of the National Concrete Canoe Competition following their fifth consecutive year of national competition.

The University’s Integrated Marketing Communications team placed first in their regional competition for the sixth time in 11 years, earning a spot in the national competition held in Orlando, Fla., June 10-12.

The team’s task was to create an advertising campaign for State Farm Insurance Company that changes the perception of the company in the eyes of 18- to 25-year-olds. They prepared a 20-minute presentation enhanced by multimedia elements including social networking, videos, flash animation and even iPhone applications.

Nevada’s student debate duo of Max Alderman and Matt Hogan earned ninth place out of 186 teams at the National Parliamentary Debate Association’s Championship Tournament in March. In addition, Alderman took second and Hogan took fourth in the individual speaking category, competing again 370 other debaters. Hogan was one of three students chosen nationally to represent the United States in the annual “U.S. vs. Irish” debate that kicked off the tournament. Two Nevada pairs—Alderman and Hogan and teammates Elia Pirtle and Travis Salley—were also chosen to compete in the National Parliamentary Tournament of Excellence, which accepts only the top 64 debate pairs in the country. Alderman and Hogan took seventh in that competition.

Students from all four successful competition teams valued the chance to use their education for projects that reflect their intended careers, and for the opportunity to work as a team to continue Nevada’s tradition of excellence in the competitions.

As IMC team adviser and assistant journalism professor Bob Felten said, “We’re preparing these students to be the best professionals in the nation.”

—Skyler Dillon ’10
Researchers to test renewable-energy system at local treatment plant

A successful University renewable-energy research project is moving from the lab to the real world in a demonstration-scale system to turn wastewater sludge into electricity.

The new patent-pending, low-cost, energy-efficient technology is scheduled to be set up in the Truckee Meadows Water Reclamation Facility this summer following the recent signing of an interlocal agreement with the cities of Reno and Sparks, operators of the wastewater plant.

“We’re designing, building and assembling a continuous-feed system that will ultimately be used to generate electricity,” Chuck Coronella, principal investigator for the research project and an associate professor of chemical engineering, said. “We’ll run experiments throughout the summer, creating a usable dried product from the sludge.”

The experimental carbon-neutral system will process 20 pounds of sludge per hour, drying it at modest temperatures into solid fuel that will be analyzed for its suitability to be used for fuel through gasification and, in a commercial operation, ultimately conversion to electricity. The refrigerator-size demonstration unit will help researchers determine the optimum conditions for a commercial-sized operation.

“The beauty of this process is that it’s designed to be all on-site, saving trucking costs and disposal fees for the sludge,” Victor Vasquez, a University faculty member in chemical engineering, said. “It uses waste heat from the process to drive the electrical generation. It also keeps the sludge out of the landfill.”

Estimates, which will be further refined through the research, show that a full-scale system could potentially generate 14,000 kilowatt-hours per day to help power the local reclamation facility.

“Economically, this makes sense,” Coronella said. “Treatment plants have to get rid of the sludge, and what better way than to process it on-site and use the renewable energy to lower operating costs.” Coronella added, “This demonstration gives the University an opportunity to involve students in development of waste-to-energy technology, which ultimately will benefit the community. It’s a win-win for everyone involved.”

The project is one of many of the University’s renewable-energy research areas that have commercial potential to help Nevada’s economy grow. The project is supported in part by the University’s Technology Transfer Office.

— Mike Wolterbeek ‘02

Chuck Coronella and Victor Vasquez, have developed a patent-pending fluid-bed system to dry wastewater sludge to be used for conversion to energy through a gasification and generation process.
Students attend Nevada from Europe via live-Web classroom

Scientists and students in the highly specialized world of plasma physics virtually attended the University from around the world this spring to learn the latest in plasma spectroscopy from Roberto Mancini, professor and chair of the physics department. He used an interactive, real-time, web-based classroom.

Sixteen students attended the graduate-level, high-energy density plasma spectroscopy course in the classroom on campus, while 30 participants attended from such prestigious institutions as Lawrence Livermore National Laboratory; the University of Rochester; University of Las Palmas in Spain; Ecole Polytechnique in France; Trinity College in Ireland; Imperial College in England; University of California, San Diego; Colorado State University; University of Texas, Austin; and Los Alamos National Laboratory.

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Mancini showed graphs, equations and other content over the Web while explaining how to measure the fundamental properties of plasma or how a spectrometer can distinguish temperatures in the 100,000-plus degree range.

“The system made it easier to conduct class in a more traditional style over the Internet. It was a very rewarding teaching experience.”

The course content was based on experience Mancini gained from 20 years of research and teaching.

“Not many institutions have this kind of class,” he said.

—Mike Wolterbeck ‘02
The Art of Print

Opening late May and running through August, University Libraries Special Collections in conjunction with Artown presents “The Art of the Print.”

Experience printmaking as a vibrant contemporary art form through two related exhibits: “Prints from the Book Arts Collection” and “Human Mannerisms: Prints and Book Arts” by Eunkang Koh, assistant professor of printmaking at the University since 1986.

“Prints from the Book Arts Collection” portrays examples of different types of prints and printmaking found within the Special Collections Book Arts Collection, some bound into books and others from collections of related prints in portfolios, including work by artist Leonard Baskin. The exhibit includes a selection of prints and artists’ books by one of Nevada’s rising stars, along with tools and plates she uses in her work. Koh holds a bachelor’s and master’s from Hong-Ik University in Seoul, Korea and a master of fine arts from California State University, Long Beach.

Her narrative prints center on human/animal combinations of fantastical new creatures, participating in a world where “they exist without knowing who and how they are.”

Curator of the exhibit and director of Special Collections Donnellon Curtis says “Artown gives the University the opportunity to share art from our book collection with the larger community.” Exhibits will be located in the Whittemore Gallery on the first floor of the Mathewson-IGT Knowledge Center and in the Special Collections gallery on the third floor.

—Angela Bakker

Chris Cheney named dean of College of Education

Chris Cheney has been named dean of the College of Education. Cheney is professor of special education and chair of the department of educational specialties, a role she has filled since the department’s founding in 2003.

Cheney’s commitment to her students and to teaching is exemplified by her award-winning teaching record. In 2002 Cheney was awarded the F. Donald Tibbitts Memorial Distinguished Teacher Award, which is presented annually and is considered the University’s most prestigious teaching award. Cheney was awarded the Regents Undergraduate Advisor Award in 2001 by the Nevada Board of Regents. She is also a past winner of two important College of Education awards, the Outstanding Outreach, National Education Week Award and the Cashell Outstanding Instructor Award.

“Chris has dedicated her career to preparing tomorrow’s teachers, and she is an outstanding teacher herself,” said Marc Johnson, University provost. “She has contributed to the body of knowledge for her field of study through grant-supported projects and numerous publications, and she has an impressive record of University service and leadership within the College of Education.”

Cheney earned her bachelor’s degree in psychology and master’s degree in special education from The College of William and Mary in Williamsburg, Va. She spent five years working in public school systems, and earned her Ed.D. in special education from Indiana University. She came to the University of Nevada, Reno in 1984 as an assistant professor of special education in the Department of Curriculum and Instruction, and went on to help create the department she chairs today.

Cheney’s appointment as dean is a two-year appointment. She replaces William Sparkman, who has served as the college’s dean since 1998 and announced his decision to step down and return to the faculty as of July 1, 2010.

—Jane Tors ’82