n its long and rich history, NAU has always been identified with strong cross-cultural and international influences. The presence of a large Native American population, the historical and growing presence of Latinos, and the railroad and highways that bring tourists from all over the world to visit the many natural wonders in our backyard have all left their mark on our identity as an institution of higher education. It is no wonder that an international ethic seems deeply rooted among our faculty and staff and even in our local community.

NAU’s evolution into a leading comprehensive institution in the Southwest and even in the United States demands that we find ways to translate this international heritage and ethic into a more intentional and explicit commitment in our curriculum. In fact, we have every reason to claim an international identity as one of NAU’s marks of distinction. The recently completed strategic planning process was the perfect opportunity to move in this direction. Among the seven strategic goals that emerged in the strategic planning process, the university community embraced global engagement, affirming the institution’s intention to “advance the internationalization of the university to prepare students for global citizenship.” The strategy for this goal is articulated as “cultivation[ing] an educational community that promotes awareness of a diverse and changing world.”

This kind of language reflects the realization that global engagement means more than cross-cultural talent shows or serving food from around the world. It means building a campus community around global learning goals. It means infusing global perspectives into all areas of the curriculum and helping students to make connections between what they learn and how they live. It also means that learning about diversity, quite naturally, means learning about the world, and learning about the world is in effect learning about diversity.

The obvious next step after making global engagement an institutional priority is the convening of a university-wide task force to broaden international activity throughout various aspects of campus life. President Haeger, Vice-Provost Charles and I recently launched this important committee, with subcommittees that will explore various dimensions of global engagement in terms of the curriculum, the faculty, student development, community engagement, infrastructure and alumni relations/development. This will be a highly participatory and communicative process, with all constituents briefed regularly and invited to comment on the progress of the effort. Vice-Provost Charles will work closely with this task force to help in the realization of its goals.

We anticipate that at the end of the process, recommendations will be made to the provost and the president that when implemented will transform NAU into a global campus in every respect. NAU is well poised to make the next step. The size and history of the campus and local community, the commitment of significant numbers of faculty, the visionary leadership of administrators, and the challenges and opportunities we now face make this almost inevitable. As a global campus, NAU will provide an academic experience for students that is both relevant to the times in which we live and responsive to the needs of students. We look forward with excitement to this transformation.
A Vision for Global Education at NAU

By Dr. Harvey Charles

Although the buzz about global education has grown more intense on college campuses over the past five years, the approach to global education varies widely from campus to campus. Some institutions define it in terms of recruiting international students to their campuses, others define it in terms of study abroad participation among their students, and still others see it in terms of faculty exchanges or winning international grants and contracts. All these approaches are indeed related to global education, but they reflect only a narrow understanding of all that is encompassed by this topic.

I like to think of global education as an orientation to knowledge and to the human condition, an orientation that, according to Cornwell and Stoddard (2006), embraces multiple ways of knowing, utilizing different methods of inquiry and analysis. In effect, this orientation at its very core is global rather than local or national, and all of the global activities mentioned above that are usually thought of as defining global education can be better understood as being in support of global learning. This takes on greater urgency in light of our long history of insularity and parochialism in our outlook as a nation, and the marginal status of second-language instruction and global studies, particularly at the elementary and high school levels, have severely handicapped our ability to understand contemporary challenges and opportunities we face in global terms.

This global epistemology that must become more central to the culture of the academy requires that the curriculum be at the center of any serious global education agenda. It means that our students must engage in substantive ways with global perspectives, not just in one course that may be a graduation requirement (and possibly perceived as a burden to overcome as quickly as possible), but in regular and systematic encounters throughout the curriculum and throughout their academic experience at the institution. In fact, the call for a global epistemology is very much related to the imperative that the education we offer be relevant to the times in which we live. The colonial college prepared educated orthodox laymen and clergymen for that era; the mid-19th century produced the land grant colleges to offer specialized training in agriculture as a way of reversing economic ills; the age of the Enlightenment saw significant steps to expand the curriculum and to remove the fetters of religion on free thinking (Brubacher and Rudy, 1976).

What then are the urgent issues of our times to which the education we offer must respond? It seems to me that there are three. First is a concern with being able to negotiate the very context of our lives, which is global in every respect. Second is the recognition that a global context is diverse by its very nature, and that diversity enriches our experience both in the classroom and the community. The final issue has to do with the idea of environmental sustainability or the future of our global home. This question, probably even more significantly than the previous two, concerns human survival, and what could possibly be more important?

Clearly, the Center for International Education is not the lone voice at NAU arguing that global education must be a response to these urgent issues. Global engagement was identified as one of seven strategic goals embraced by the university. A Task Force on Global Education (see page 19 for list of names) has been formed and charged by both the president and the provost to generate recommendations that will transform NAU into a globally engaged university in all aspects of its operations. This is a wonderful development not only because such a process is unprecedented in NAU’s history, but because it will underscore the important work involving global education currently being done and to which dozens of faculty are already committed all across the campus. This is the happy secret that I have discovered since coming to NAU, a secret that will soon be exposed as the NAU community reaches forward to embrace the identity of a global campus.

This, the first biannual newsletter from the recently reorganized Center for International Education, will focus on a range of faculty activity that puts the spotlight on global education, both in terms of teaching and learning. From business education with a global perspective to capacity building among underrepresented STEM populations, from faculty teaching abroad experiences to international education for our nursing majors, from a transnational approach to women and gender studies to our high-altitude training program that brings international athletes to our campus, NAU’s global engagement is broad and deep. As we engage in deliberations over the next 12 to 18 months about how we will transform the NAU experience to guarantee that each student will be prepared for global citizenship, it is my hope that faculty, staff and alumni will support this effort. This process will require sound ideas, strong leadership and generous giving to ultimately institutionalize a progressive vision for global education at NAU. I welcome your engagement in this process.

REFERENCES

Cornwell, Grant H. and Stoddard, Eve Walsh. Freedom, diversity, and global citizenship. Liberal Education, 92(2), 26–33.

Increasingly, the world is becoming the platform upon which research investigations are formulated, implemented and evaluated. Basic and applied scientific challenges are ultimately related to providing data-driven solutions for common problems faced by peoples across the globe, such as global hunger, health and disease, energy availability and utilization, pollution, and bioscience. International research collaborations afford scientists the opportunity to form special-purpose working groups whose efforts are targeted at investigating academic hypotheses and translating basic research into applied solutions. Some of these collaborative investigations are generic and some are country-specific. This is the case with the Discovery Research Laboratories (DRL) at Northern Arizona University (NAU), which has partnered to set up international scientific collaborations to address issues of global significance.

One of the critical issues that the DRL and its partners have taken on is the predicted global shortage of rice due to increases in Asia’s population, which is expected to surge from 3.6 billion to 4 billion by 2025. This increase will exert pressure to provide important food staples such as rice. One-fifth to one-third of the world’s food supply does not reach the dinner table because rodents, specifically rice-field rats, damage rice crops in the field before harvest. Annual pre-harvest losses of Southeast Asian rice crops is conservatively estimated to range from 5 percent to 17 percent. Notably, a loss of 6 percent translates to approximately 36 tons, enough rice to feed 215 million people (roughly the population of Indonesia) for one year. Since rat damage is generally patchy, it is not unusual for families or villages to lose more than 50 percent of their rice crops to these rodents.

Damage from rice-field rats includes not only what they eat, but the larger losses from contamination with feces. It is estimated that 25 adult rats eat or damage a half-ton of grain and produce some 375,000 droppings in one year. With an unusually high litter size, one pair of rodents can produce more than 600 offspring in three months, with their reproduction linked to the food supply peaking just before each rice harvest.

Current means of controlling rat populations in rice fields include trapping, bounty hunting, and baiting with poisons that contaminate the rice, enter the food chain, and cause painful death in the rats. Additionally, rats are becoming resistant or averse to eating the poisons.

To address this important issue, Northern Arizona University researchers Drs. Cheryl Dyer, Cathy Propper and Loretta Mayer (Biological Sciences), Timothy Vail (Chemistry and Biochemistry), and Constance Smith (Psychology) have teamed up with Dr. Lyn Hinds of the Commonwealth Scientific and Research Organization (CSIRO) in Canberra, Australia, and Dr. Grant Singleton of the International Rice Research Institute in Manila, the Philippines. Both international investigators contribute to a larger organization, the Invasive Animal Cooperative Research Center, supported by the Australian government and led by Dr. Tony Peacock.

NAU researcher Dr. Loretta Mayer, creator of ContraPest™, a safe, rapidly inactivated chemical with no side effects except the sterilization of female rodents, is co-inventor with Dr. Patricia Hoyer of the University of Arizona of platform technology that has been licensed to a local Flagstaff biotechnology company, SenesTech, Inc. The technology has been investigated for over 16 years with more than $21 million in funding to better understand the ovarian-specific reproductive effects of the active ingredient in ContraPest™. The NAU team of researchers are pursuing applied investigations to devise a product that will attenuate the overpopulation of rice-field rats in Southeast Asia and globally.

This research involves initial proof of concept work at NAU, including breeding studies under Dr. Dyer, chemical studies with Dr. Vail, and behavioral studies with Dr. Smith, followed by testing in the major Indonesian rice-field rat species under Dr. Hinds at CSIRO in Australia. Once successful
A Journey in International Education

By Dr. Roy D. Morey

I first learned about the world from my father, who joined the Navy at the turn of the 20th century. By the time he was 21 years old, he had served in Japan, the Philippines and China. Little did I know that 80 years later I would be moving to Beijing to assume the role of Resident Representative of the United Nations Development Programme for China.

I did not start my career with the intent of joining the UN and leading an international life. Rather, there were a series of life-changing events that nudged me in that direction. The first of these was when my wife, Delores, and I enrolled at NAU (Arizona State College, Flagstaff, at that time) in the fall of 1955. Flagstaff was a small, isolated town, but we felt connected with the rest of the country because the famed Route 66 ran right through town and along the west side of the campus. The school was also very small (fewer than 1,000 students), but it was not without an impressive faculty. Several professors opened a whole new intellectual world I had never before explored.

Delores and I were married our senior year, and after graduation in June 1959, we left Flagstaff pulling a U-Haul trailer to Tucson, where we moved into a 33-foot house trailer (not a manufactured home!) that we occupied for the next five years. I enrolled as a graduate student in the Department of Government at the University of Arizona. My last year in graduate school (1964), I received the American Political Science Association Congressional Fellowship to spend a year as a legislative assistant on Capitol Hill.

With a newly minted Ph.D. in hand, I moved to Washington with Delores and our daughter Diana, which proved to be another life-changing event. In fact, the experience was so important that Delores and I have recently established a Washington Internship Award to provide an NAU student with the same opportunity to live and work in Washington that we enjoyed. The award will be administered by the Department of Political Science.

After an exciting year as a congressional staff member, I joined the faculty of Denison University, a small liberal arts college in Granville, Ohio. This move introduced an international dimension into our lives. In 1962, Denison had joined a consortium of 12 midwestern liberal arts colleges called the Great Lakes Colleges Association (GLCA). Among other activities, GLCA established the Japan Study Program at Waseda University in Tokyo. In this program, students from the 12 schools study the language before and during their yearlong stay in the country. They live with Japanese host families and enroll in classes taught in both English and Japanese. Each year a faculty member from one of the 12 schools is selected as program director and I received this post for the 1968–69 academic year. As director, I served as an academic advisor, taught a course, gave several university-wide lectures (thankfully in English), and undertook a research project that involved interviewing members of the Japanese Diet. It was a life-changing event for me and for my family, and especially for the students. I learned the value of a study abroad program. Our daughter Carolyn had the same experience when years later she spent her junior year studying in Paris while enrolled as a student at Denison.

In 1971 I left the academic world to join the White House staff as staff assistant to President Richard Nixon. It was an exciting two years, but I had a strong desire to become involved in international affairs and I took an appointment as Deputy Assistant Secretary of State for International Organization Affairs. For the next four years I coordinated U.S. economic and social policy in various UN organizations. With this experience in hand, I joined the United Nations Development Programme (UNDP) in 1978. For the next 22 years, I served in Thailand, Samoa, China and Vietnam.

The point of this bio sketch is to illustrate the important impact that international education had on my life and that of my family. Believe it or not, it was the time spent in Japan on the GLCA program that planted the seed that eventually took root and led to a life that took me all over the world.

The importance of international education was summarized recently by Richard Levin, the president of Yale University. He said, “I believe that for personal success in life, in a much more interdependent world, the capacity to understand another culture has to become one of the prerequisites of an educated person.” Fortunately, NAU fully shares that point of view.

Dr. Morey is an alumnus of NAU and a member of the Board of Directors of the Northern Arizona University Foundation.
International Exchange and Nursing Education

By Profs. Karen Plager and Margaret Conger

The current nursing shortage in the United States is fairly well known. What is not so well known is that there is actually a global nursing shortage and it affects countries irrespective of their level of development. The extent of this crisis has severe implications for achieving the United Nations Millennium Development Goals for reducing poverty by 2015 (International Council of Nurses/Florence Nightingale International Foundation [ICN/FNIF], 2006). Three of the eight goals involve health: reducing infant and under-five mortality by two-thirds; reducing maternal mortality by three-fourths; and stopping/reversing HIV/AIDS, tuberculosis and malaria epidemics (ICN/FNIF, 2006). Strategies to reduce this shortage include preparing more nurses and nursing educators as well as increasing awareness about the impact of globalization on the profession and on the health of people globally.

Northern Arizona University School of Nursing (NAU-SON) has been developing opportunities for international exchanges and learning experiences for faculty and students for a number of years. The benefits of such opportunities include 1) increasing understanding of diverse cultures, clients and health-care systems; 2) promoting exchange of nursing knowledge; 3) enhancing the profession of nursing in other countries; and 4) preparing for the global workforce. This article describes some exciting programs that we have been developing in nursing.

In recent years, two members of our nursing faculty devoted their sabbatical leaves to international endeavors that opened up doors for international collaborations on global nursing education. In 2000 Dr. Marge Conger spent the spring semester in the Netherlands, Sweden, Norway and Scotland studying the differences among health-care systems related to services for the elderly. She participated in the Hanze University International Intensive Nursing Program in Groningen, the Netherlands. NAU was the only nursing school in the United States invited to participate in this two-week program where nursing practices are compared and contrasted across countries. Two members of the nursing faculty and two or three nursing students have participated in this program each year since 2001. The exchange provides an enriched learning environment for both groups of faculty and students. In addition, Dr. Conger has developed the Summer Intensive Program through collaborations with European nursing colleagues. The effort focuses on cultural competence with diverse cultural groups and health-care delivery in rural and remote areas. The Summer Intensive Program will be offered for the third time in July 2008, has provided opportunities to share and learn with colleagues from Lithuania, Czech Republic, the Netherlands and Madagascar. Each year features a weekend cultural immersion field trip to the Navajo Nation.

Dr. Karen Plager spent part of her sabbatical year in November 2005 working with Dr. Razanandrianina Julie, the director of a small Lutheran nursing school in Madagascar, for a needs assessment of that school. The goal of the needs assessment was to ensure that nursing and midwifery education is relevant to social and community needs in Madagascar by preparing graduates to work in many health-care settings on the island. As part of that work, Dr. Plager and Dr. Julie traveled to Kenya and Tanzania to learn how nursing and health care have developed in other East African countries. That collaboration led to additional opportunities to further the development of the nursing profession in Madagascar, including inviting Dr. Julie and Mrs. Claudine, Chief Nursing Officer of Madagascar, to participate in our 2007 Summer Intensive Program. From this visit to the United States, a proposal resulted for an NAU-SON consultation initiative for development of Madagascar’s first master’s degree program in nursing science, a huge asset to developing the nursing workforce in that country. This initiative holds potential for student and faculty exchanges in the future.

In summer 2007, five NAU nursing and health science students participated in the first offering of the course Field Study in Public and Community Health in Kenya. The focus of this course was a community assessment of local Maasai villages with the long-range goal of working with these communities to develop low-cost public and environmental health programs to improve villagers’ health and well-being. The course was developed as a collaborative effort between NAU School of Nursing and the Department of Health Sciences, the School for Field Studies (the nexus organization for the course), Boston University School of Public Health, and Moi University (Kenya) Department of Public Health. This program will be an ongoing study abroad opportunity with the

Continued on page 17
Melding Transnational Feminism and International Education

By Prof. Frances Reimer

NAU’s Women’s and Gender Studies Program (WGS) is interdisciplinary, with three main foci: gender and the Colorado Plateau; U.S. ethnic and indigenous women; and transnational feminisms. The focus on transnational feminism provides a unique lens on international education; it politicizes international education in its critiques of capitalism and militarism and its incorporation of positions of class, race, gender and sexual orientation in analyses of oppressive practices. Positioned at the intersections of nationhood, race, gender, sexuality and economics, transnational feminism inquires into the social, political and economic conditions of emergent global capitalism. By concentrating on globalization, economic liberalization policies, violence against women, human trafficking, information and communication technologies (ICTs), gender and development, media issues of concern to women, poverty, HIV/AIDS, and microfinance, transnational feminism interrogates idealist notions of a “global sisterhood,” while building a foundation for more just and constructive relationships among women across the globe.

Our long-standing commitment to transnational feminism is apparent in WGS and affiliated faculty, classes and programming. Our faculty members, associates and affiliates bring diverse cultural backgrounds, disciplinary knowledge and methodological expertise to the classroom. Balancing the local and the global, theory and activism, they bring the focus on transnational feminism to the classes they offer. WGS 260 Third World Women examines women, gender constructions, histories and contemporary issues in postcolonial settings in Africa, Asia and/or Latin America. During the spring 2008 semester, WGS 260 will concentrate on women and HIV/AIDS in the third world.

The course looks specifically at the sociocultural norms that make women more vulnerable to HIV/AIDS in the developing world. WGS 360 Transnational Feminisms focuses on the histories, theories, geographies, practices and global contexts of non-Western feminisms. This past fall, WGS 360 looked specifically at women and development. The course examined the policies and programs for gender equality, and the advancement of women at the global, regional and national levels. At the graduate level, WGS 601 Sex/Politics/Reproduction highlights the overlaps and interconnections between private practices and public policies to underscore the competing constructions of sex and reproduction in a global context. In addition to these WGS classes, we sponsor special topics that have included Women, War, and the Middle East; Islamic Feminism; Women and Latin America; Women, Gender and Human Rights; and Indigenous Women, as well as discipline-based classes, including ANT 302 Women in Islamic Cultures, CJ 515 World Indigenous Peoples and Justice, ENG 351 Colonial and Postcolonial Literatures, HIS 297 Women in Asia, HIS 460 Gender and Nationalisms, and POS 683 Global Human Rights.

The programming WGS sponsors on campus also supports our focus on transnational feminism. This fall, WGS took the lead role in hosting Cecilia Santiago Vera, who spoke on “Fair Trade and Community Resistance” in Mexico. Dr. Vera’s work is centered on gender and intercultural studies. She has worked with displaced indigenous populations, particularly with survivors of state-sponsored military and paramilitary violence. Complementing Dr. Vera’s presentation, WGS sponsored the showing of Maquilapolis, a film on women’s resistance to the working conditions in Mexico’s maquiladoras.

Supporting our focus on transnational feminisms, Women’s and Gender Studies offers a range of opportunities for study abroad. WGS students have the option of studying in Australia, Canada, Chile, the Netherlands, Norway, New Zealand and Great Britain. Jane Berkman studied at London Metropolitan University from September through December 2006. “I
International Studies and Climate Change

By Profs. George Koch and Bruce Hungate

At Northern Arizona University (NAU), international studies involve much more than going abroad. They also include efforts here on the home campus to tackle environmental issues of global importance. Nowhere is this more apparent than in the area of climate change, where all sectors of the NAU community have joined forces to reduce NAU’s contribution to global warming.

In early 2007, at the urging of student leaders, NAU President John Haeger became a leading signatory to the American College and University Presidents Climate Commitment (ACUPCC). The ACUPCC, which now has more than 450 member institutions, recognizes “. . . that colleges and universities must exercise leadership in their communities and throughout society by modeling ways to eliminate global warming emissions, and by providing the knowledge and educated graduates to achieve climate neutrality.”

Climate neutrality is an ambitious goal, but NAU has already made major progress, thanks to the work of students in an exciting new Climate Mitigation class. In spring 2007, students from programs in biology, economics, mechanical engineering, environmental sciences and forestry produced an inventory of NAU’s greenhouse gas emissions since 1991 associated with four major sectors: electricity, natural gas, transportation, and waste and land management. They then analyzed the benefits and costs of diverse strategies to reduce the campus carbon footprint.

The Climate Mitigation students found that NAU’s annual emissions total about 80,000 metric tons of carbon dioxide. Electricity use accounts for nearly 50 percent, transportation and natural gas use are just under 25 percent each, and waste contributes the remainder. Surprisingly, NAU’s total emissions have risen only slightly since 1991, despite a sizable increase in the area of campus buildings. It’s likely that the university’s commitment to new energy-efficient “green” buildings gets the credit here. The flagship example is the new Advanced Research and Development building (ARD), which incorporates the latest in passive solar and other energy-saving technologies, and receives 20 percent of its electricity from a 160-kilowatt photovoltaic array donated by Arizona Public Service. The ARD building has garnered the highest platinum certification from the Leadership in Energy and Environmental Design (LEED) rating system.

Students in the Climate Mitigation class proposed emissions-reduction strategies ranging from simple changes to vending machines to ambitious plans for a new biomass energy plant. The university listened carefully and is already taking action. All vending machines will now include an “energy miser” feature to reduce electricity use, and a “yellow bike” program began in fall 2007 that provides more than 100 free bicycles to reduce on-campus car traffic. With help from the 2008 Climate Mitigation class, the university is now analyzing the cost and emissions savings of a major biomass energy plant supplied by local forest-thinning operations. NAU students who travel to Ghana for study abroad get firsthand experience in the importance of biofuels for providing heat and cooking fuel, and they can appreciate the importance of energy-environment issues in both high-tech and subsistence economies.

Among other important lessons, students in the Climate Mitigation class discovered that air travel is a large part of transportation-related emissions. Increased use of videoconferencing to substitute for faculty travel to professional meetings could reduce these carbon emissions. Travel abroad also incurs a significant carbon debt for an international student; a single round-trip flight to Germany accounts for as much emissions as driving a car 12,000 miles. Once abroad, however, an international student may rely more on public transportation, use more energy-efficient appliances, and generally have a lower-energy lifestyle than here in the U.S. How might these experiences abroad contribute to efforts here on the home campus?

The Climate Mitigation class is one example of a growing trend at NAU to bridge what have traditionally been separate disciplines to educate students in the complexities of today’s real-world issues, including international stewardship of the global environment. The political science and environmental sciences programs embrace this perspective; students in these majors take courses in global environmental politics, globalization.

Continued on page 16

The proportion of NAU’s travel-related emissions due to the university’s fleet operations, student commuters, faculty and staff commuters, and air travel by faculty and staff for purposes related to university business. Student travel for recreation and vacation and transportation for delivery of good or products are not included.
Engineering Without Borders: Improving Lives and Learning

By Prof. Paul Trotta

Engineers Without Borders at Northern Arizona University (EWB-NAU) is a student club formed to improve the quality of life by partnering with developing communities in the implementation of environmentally and culturally sustainable projects. The NAU group currently has more than 40 active members, about 50 percent engineering majors. Many other departments and majors also are represented, making EWB-NAU one of the most academically diverse organizations on campus.

EWB-NAU is just one chapter of the national organization, Engineers Without Borders USA, which was founded in 2000 at the University of Colorado in Boulder (CU). Since 2000, 250 chapters have sprung up around the country. EWB was started by Dr. Bernard Amadei, a professor of civil engineering at CU, who learned of a village in Belize where children were not able to attend school as they were busy fetching water all day long. Dr. Amadei led a team of eight students to Belize, where they worked with the community to improve the infrastructure.

In 2006, EWB-NAU became an official student club. By December of that year, the club had been officially awarded a project in Yua, Ghana, by EWB’s national team. Yua lacks many of the comforts so often taken for granted in the United States, such as access to water and electricity. In this northeastern Ghanaian community, child mortality hovers at around 8 percent, due largely to readily preventable waterborne illnesses.

In the summer of 2007, four students and their faculty advisor visited Yua to conduct a feasibility study, the first of many trips planned over the next five years. Each member of the assessment team was greatly moved by the experience of working with the people of Yua. The community welcomed the group warmly, as more than 500 people came to sing and dance to celebrate their arrival. Ultimately, however, this is a cooperative project, so forming a strong relationship with Yua was the most important goal of the trip. Prior to the arrival of EWB-NAU, the people of Yua had established the Yua Development Organization (YUDO) to serve as a representative committee to ensure that the needs of all Yua people are considered and communicated to the team.

The 16-day assessment trip gave the team the opportunity to learn firsthand how needs differ in the developing world. By conducting meetings and holding interviews, as well as through GPS mapping and water-quality testing, the team members enhanced their skills in a real-world environment. As the project matures, they expect that many current and future NAU students will get the opportunity to learn new skills and put their knowledge to the test while helping improve the quality of life in Yua. This project has also given the team the chance to partner with successful nongovernmental organizations (NGOs) in Ghana, such as the Ghanaian People’s Network and Afrikids. Through meetings with these NGOs and with YUDO, as well as with the chief executive of Yua’s district and several other Ghanaian government organizations, the team determined that new boreholes and water-storage capacity is the first priority. Future aspects of the project include electricity for the school, toilets, and microfinance projects to help increase community income.

In addition to preparing for their next trip to Ghana, team members are very busy with other projects: building

Continued on page 18
NAU’s Global Reputation for High Altitude Training

By Natalie Harlan

The Center for High Altitude Training, located at 2,135m elevation here on the campus of Northern Arizona University, is one of the world’s leading multisport altitude-training centers for international and domestic athletes. The program started up more than a decade ago when university representatives and community leaders recognized an opportunity to attract more international athletes to Flagstaff. The first team hosted by the center was the Norwegian Canoeing Association. Norwegian paddlers engaged in a three-week training camp on Lake Mary in 1994, establishing NAU as the place “where the world comes to train.”

Although the formal administration of teams began in the mid-1990s, athletes from around the world traditionally have come to Flagstaff dating as far back as the 1960s. According to the center’s head distance coach and altitude physiologist, Dr. Jack Daniels, Olympic medalists Billy Mills, Jim Ryun and George Young all trained in Flagstaff during their preparation for the 1968 Olympic Games in Mexico City (2,240m). “One of the greatest advantages that Flagstaff has as an ideal altitude training site is an abundance of resources available for endurance athletes in a variety of Olympic sports,” says Daniels.

In 2004, the center received the attention of the United States Olympic Committee (USOC) and the university was designated an official U.S. Olympic Training Site. Programming expanded to include offerings for youth through the university’s second Olympic designation as home to a Community Olympic Development Program. Subsequently, the university was named an official U.S. Olympic Community Partner. As a Community Partner, the university provides residents across the state of Arizona the message of Olympic values through educational outreach to schools and community-based organizations. NAU is the only university in the nation to have all three prestigious Olympic designations.

One of the unique benefits the center brings to the Olympic movement is the integration of foreign athletes with teams from other countries and with their domestic counterparts in daily training experience. The USOC embraces a global perspective consistent with NAU’s commitment to global engagement and this program puts into practice the strategic initiatives of both organizations. For institutions to be leaders in today’s sports industry, both NAU and the USOC acknowledge not just the opportunity but the necessity of opening up the barriers that inhibit cross-cultural exchange and actively engaging in international education and awareness.

On our mountain campus, foreign and domestic athletes train side by side. This is a simple matter of scheduling, achievable in any shared-use facility. Of significance is the social atmosphere surrounding the activity and the perspective within which training occurs. Elite sport is inherently competitive. But the training atmosphere at NAU manifests itself in open observation, hands-on learning, collegial camaraderie, and an appreciation of the differences, not just in athletes but also in people, that enrich and develop the human experience.

Business has grown over the years to make Flagstaff a premier altitude-training destination for athletes in endurance-based sports. More than 5,000 participants from 40 countries have trained on the university campus, providing NAU students with abundant opportunities to meet people from a variety of countries, to help the visiting athletes as they face the challenges of being in a foreign land, and to dream of their own international travel experiences down the road.

NAU student interns at the center assist with team management, honing their cultural sensitivity skills by working daily with a clientele accustomed to different food, currency, language, time zone, geography and climate. This is not just an opportunity for accommodation of these differences, but of learning from them and laying a foundation for global citizenship.

The student body also is a welcoming agent to the many athletes who are temporary members of the NAU family. Most altitude camps last three to four weeks, providing ample time for athletes to get acquainted with student workers at training facilities like the Wall Aquatic Center, to mingle with students while dining at Hot Spot at the Union, or to work out among students, faculty and staff at the Recreation Center.

Based on current bookings at the center, this spring will bring swimmers from Japan, France, Slovenia, Denmark and Switzerland; triathletes and middle-distance runners from Canada; a Paralympian wheelchair track athlete from Spain; and marathoners from Japan and the United States. All these athletes will be preparing for the 2008 Olympic Games in Beijing. Viewers around the globe will marvel at spectacular performances of athleticism when they watch the Games in August. But here at NAU, we will cheer for our many new friends who have helped open up a world of possibilities to us.

Natalie Harlan is NAU’s Director of High Altitude Sports Training.
MBA at NAU: Meeting the Challenges of the Global Business Environment

By Profs. Joseph Anderson and Jane Thompson

Modern business education must expose and sensitize students to what’s going on in the global environment. In addition, it should reinforce conceptual and theoretical topics with real-world examples and applications. Faced with these challenges, the intense one-year MBA program in the W. A. Franke College of Business at NAU has included an international component for the last seven years. The core faculty in the MBA program and the director have worked together to provide students with a valuable international experience, within the constraints of time, space and budget. Any in-person international experience has had to be close, quick and reasonable in terms of cost.

The solution turned out to be “right next door,” so to speak. One of the largest manufacturing centers in the region is Mexicali, Sonora, Mexico. Mexicali is a city of 1.5 million inhabitants. The economy is strongly supported by numerous maquiladora manufacturers and other companies, producing all manner of goods to supply both North and South America, and even some other parts of the world. With the help of IAMSA, a Mexicali industrial-park developer, NAU’s MBA students have traveled to Mexico each year to visit manufacturers engaged in international operations. The entire class, along with faculty representatives, the director, and occasionally staff, spend three days visiting different companies and observing their operations.

Over the years, the plants visited by MBA classes have represented a wide variety of industries, from agriculture to high-tech manufacturing. Companies hosting recent visits include Sony’s TV factory, Mitsubishi’s large-screen TV factory, the Kenworth truck plant, and the massive Bimbo Bakery, among many others.

The visit to Mexico occurs in the middle of the fall semester, after the MBA core courses have covered international culture and global awareness topics, and after the students have read and analyzed The Toyota Way, which exposes them to Toyota’s world-class manufacturing operations, lean production techniques and corporate culture. The Mexicali visit allows students to observe in person some of the global trends and techniques that they have been reading about and discussing in class. In addition, as the MBAs continue their program of study upon their return from Mexico, their experiences in Mexicali frequently influence their appreciation of other topics of discussion.

This year’s MBA class visited both the Sony TV plant and the Bimbo Bakery. However, before crossing the border, the students also toured the Wal-Mart distribution center in Buckeye, Arizona, where they could observe a highly automated operation that they could then use to compare and contrast with the Mexican facilities they would soon be visiting.

The Sony plant produces the entire Bravia brand of flat-screen TVs that the corporation sells in North and South America. The plant reflects many state-of-the-art Japanese and international management and manufacturing techniques for high-tech products. After visiting Sony, one student commented, “Sony’s operations appear to be a good example of a Toyota-Way-like process. Seeing in real life examples of just-in-time inventory control was especially enlightening.”

Bimbo Bakery, in contrast, is a Mexican multinational company with more traditional management and manufacturing processes; it produces more bread, cookies and other baked snacks than any other single company in North America. After visiting Bimbo, another student remarked, “I saw Bimbo’s manufacturing process as an example of the tradeoff between capital and labor. Their operation seemed to be somewhat inefficient, but the low cost of labor makes it more economical for them to use more workers. We have had classroom discussions on this issue, but seeing it in actual practice makes it hit home.”

In both examples, the students were introduced to the firms by members of management, who discussed the structure, history and operations of the respective companies. After the initial presentation, the students were escorted by company employees on an extensive tour of the facilities during which they could see the products going from raw materials to

Continued on next page
Teaching Abroad: Embracing Difference

By Prof. Anne Medill

I was selected to teach at the University of Alicante in Alicante, Spain, for the spring 2008 semester through the University Studies Abroad Consortium (USAC) program affiliated with NAU. Before this I had never really entertained the idea of teaching and living abroad, although I have many years of experience working cross-culturally with different populations in the Southwest. The timing of this opportunity seemed right. Having been in the classroom for 14 years, I knew that I needed to challenge myself on some level so that I could continue to be effective and have new information to share with the students, particularly this generation, because they are in many ways truly the first generation of global citizens.

In Spain I am much like a freshman or sophomore on a university campus. I have had to learn new ways of doing everyday tasks, including: how to get to the university, my classroom and any other place I need to go; cooking and eating differently; adjusting to a new time frame; as lunch is from 2 to 4 p.m. and dinner is from 9 to 10 p.m., with the evening social life starting at 10 p.m. and continuing through to the next morning if you so choose; how to communicate to get to campus. I know that once I return to the classroom at NAU I will make a greater effort to support the students to ensure that they feel welcome and that they are making connections.

Alicante, Spain

This experience has also reinforced my own awareness of the importance of looking at things as different, not as good or bad. You could be tempted to make comparisons between your country of residence and the country where you are living and teaching. But I believe this approach would hamper your ability to embrace fully another way of living. For example, personal space has a much different meaning here. People will kiss you on both cheeks when meeting you for the first time or share your food without necessarily asking first. When one of the male faculty members kissed me during our initial meeting, I was not sure how to respond: I kissed him back and hoped my flushed face did not give too much away. At the bus stop there is no line; everyone just gets on because they trust you will get on the bus sooner or later. In Alicante, families tend to live outdoors as much as they can with as many people as they can. The sense of community is evident in the morning, the afternoon and the evening, when families gather in open public spaces. I have observed a difference between our more insular way of living and their communal style. I have started to sit on a bench in the park to watch children, the elderly and parents in the afternoon. Nursing homes are not a common alternative to in-home care for the elderly. One of the professors explained that placing your parents in out-of-home care is not at the present time embraced as a viable option. This is due to tradition and in part because many of the elderly remain in their own homes, which are in very close proximity to the homes of their adult children.

Energy use in the homes and public buildings is also different. Most homes in Alicante don’t have a clothes dryer or central heat, and the lights are on timers in public places. I have learned to use clothespins again and now enjoy the rhythm of hanging my clothes out to dry. I have learned to wear more clothes and appreciate a room when it warms up. I have also learned to relax if the light goes out in a public stairwell and know there is a switch somewhere. I have learned

MBA at NAU ... Continued from previous page

finished goods, packaged and ready for distribution and sale. Finally, they met again with a management representative who answered their questions and gave them more in-depth information to build upon what they had seen on the plant tours. When asked for the most memorable part of the trip, one student responded, “The visit to Sony because it showed me how a modern manufacturing company managed its operations. It allowed me to see how the concepts and techniques that we had been studying were actually applied.”

While the MBA international experience is admittedly limited, it has definitely served to reinforce classroom topics with real-world observations and experience. It remains a high point in the MBA calendar each year, generating enthusiastic response from both students and the participating faculty. Given the constraints, it also is a concrete symbol of the commitment of NAU and the W. A. Franke College of Business to acknowledge the importance of the global environment for our students.

Joseph Anderson is Professor of Business Administration and Jane Thompson is Director of the MBA Program in the W. A. Franke College of Business at NAU.
Fulbright Recipients Among NAU Faculty

NAU faculty have long been among the approximately 800 American faculty who receive the Fulbright award for teaching and/or research abroad each year. The Fulbright program is one of the nation’s most prestigious scholarships and since 1947, has been both sending Americans overseas and welcoming faculty from other nations to American college and university campuses. Such opportunities are transformative in many ways, both to the individual faculty and to their work as teachers and scholars. International teaching and research activity is becoming increasingly important as global education becomes more of an imperative on the campus. Faculty cannot be expected to infuse global perspectives in the curriculum without having international experiences themselves that can influence their efforts to frame the content of their courses in global terms.

During the 2007-08 academic year, four NAU faculty were recipients of the Fulbright award. They are as follows:

Gretchen Knudson Gee is a visiting professor in the Department of Political Science and was awarded a teaching Fulbright to Albania. She is currently teaching political science at the University of Tirana. Prof. Gee is interested in Albania’s efforts to transition away from its old political and economic system rooted in communism to the new world system. Through her classes, her students will learn more about the American political system and American political involvement in the world. At the same time, she and her family will learn much more about another non-western culture and in all likelihood, much more about themselves.

David Kitterman participated in the Fulbright German Studies Seminar in summer of 2007. Prof. Kitterman is an Associate Professor in History. Convened in both Brussels and Berlin, this Seminar focused on the European Union and Germany’s role as the rotating President of the enlarging EU (at that time). Participants heard from Members of the European Parliament, officials of the EU Council and Commission, US embassy officials, and with experts on EU politics, economics and education. Highlights included meetings with Daniel Cohn-Bendit, 1960s student activist and now a member of the European Parliament, with Mr. Oezdemir, a German-Turkish MEP and with a panel of German MPs at the German Bundestag representing all political parties. According to Prof. Kitterman, this visit greatly enlarged his understanding and teaching capabilities of German and EU affairs.

Pin Ng is an Associate Professor in the Department of Economics in the W. A. Franke College of Business. He is currently based at Hong Kong Baptist University on a teaching and research Fulbright appointment. He is teaching a graduate level Advance Econometric course and an undergraduate Statistics for Economics course. In addition, his research activities involve working with colleagues in the Geography department on applying quantile regression analysis to Geography. He will also travel to Taiwan this semester to give talks at the Academic Sinica and the National Dong Hwa University.

Abraham Springer, Associate Professor in Geology, spent fall, 2007 in Canada as a Fulbright Visiting Chair in Water and Environment. He was hosted by the University of Lethbridge in Alberta and worked on a project titled “The Ecohydrology of Springs in Western Canada.” His work will further our understanding of how the diverse geology, biology, aquatic invertebrate species and human impact affects flowing springs.

Fulbright Opportunities

Since 1947, the Fulbright Scholar Program has been providing opportunities for U.S. scholars to engage in teaching and/or research in various countries around the world. Similar opportunities have been provided to visiting scholars to teach/research at American institutions. NAU counts many among the ranks of its faculty who have secured Fulbright scholarships over the years. This continues to be an excellent way to acquire international insights and experiences; to collaborate in teaching/research with colleagues in their home countries; and to transfer these experiences into courses at NAU, thus making the curriculum more vibrant, more relevant and more global in outlook. Application deadline is August 1, 2008. Apart from the traditional Fulbright Scholar Program, we wish to encourage faculty to also consider applying for the Fulbright Senior Specialist Program and the Fulbright Distinguished Chairs Program.

If interested, please visit the center to discuss this matter with Vice Provost Charles. You may also visit the Fulbright Scholar Program Web site at www.cies.org for more information.
Although little known, space law has historically had a profound influence on the global political economy. Since the 1950s, space law has driven global space-industry creation and has fostered industry success. More importantly, U.S. domestic space law has historically had a dramatic impact on space commercialization, especially since the U.S. rise to power in the post–Cold War era.

In a nutshell, it is useful to see space activities as contextualized within three distinct historical periods. U.S. law has been used as an instrument during all of these periods to influence industry emergence. For example, during the first epoch (1957–79) the U.S. Congress passed the Communications Satellite Act of 1962 for the purpose of commercializing space satellite technologies. President Kennedy had “charged his administration with the need to develop a coherent and cohesive policy with respect to communications satellites” and by July 1961 he called for joint ownership with other nations of a communications satellite system, nondiscriminatory access for all countries of the world, and a constructive role for the United Nations in international space communications. This effort is still smiled upon by the international community today. Shares were offered to the international community when the Communications Satellite Corporation (Comsat) developed into Intelsat via a U.S.-led international agreement, and many nations participated in space commerce associated with this burgeoning technology. Around the world, people use cell phones, the Internet, and money-transfer systems, while many nations enjoy increased GNP due to these space industries.

During the second epoch (1980–90) the Reagan administration introduced a series of initiatives to foster space commercialization and to encourage private industry participation in satellite telecommunications, as well as space launch and transportation technologies. Also during this period, space lawmaking shifted from the United Nations to the domestic sphere as a norm. Thus there is a prevalent pattern within the outer-space community whereby U.S. laws and policies foster industry growth, followed by international acceptance. U.S.-led space-commercialization practices began in the 1980s and became wide accepted during the 1990s. Since the end of the Cold War, globalization and free-market ideology have been dominant, and as a result, the international acceptance of commercialization of space has grown stronger. The widespread uniform acceptance of space commercialization practices operates in ways akin to international custom. With the success of the satellite telecommunications industries, the geostationary orbit has already become colonized or “developed.”

An even more telling example of the influential role that U.S. law has played in shaping space industries occurred during the third epoch (1991–2004) when Intelsat and Inmarsat⁴, which are both international intergovernmental organizations, were privatized through a U.S. law called the ORBIT Act of 2000. The overall legislative intent was to restructure the two intergovernmental organizations in order to further commercialize the satellite industry.

Commercial industries such as satellite telecommunications, remote sensing, space transportation and launch systems, which have become prevalent in the global economy, are the outcomes of U.S. space laws and policies, setting the pace for space commercialization trends. A key factor in these developments at the international level was the advent of the post–Cold War era, commencing with the fall of the Soviet Union as the other space superpower.

Many scholars have noted that today both free-market ideology and globalization practices are dominant and are influencing widespread acceptance of matching legal principles. The infrastructure for this process is rapidly being put into place. In 2004, for example, in accordance with the President’s Commission Report, a new policy was instituted that lays the foundation of U.S. development of the outer-space territory.² Also in 2004, the passage of a new

Continued on page 18
Linguistic Anthropology and Global Understanding

By Prof. Jim Wilce

Linguistic anthropology, which explores the interaction of language, society and culture, is a dynamic discipline. It turns out to be relevant to the interests and concerns of people across the whole university—from the origin and maintenance of inequality to the production of beauty in the form of verbal art. Yet, until 2005, linguistic anthropology was relatively unknown at Northern Arizona University (NAU).

The three-year speaker series, “Language Across the Univers(ity),” has helped to make the productivity, insights and explanatory power of linguistic anthropology plain to our university community. Each speaker has made clear the relevance of linguistic anthropology to a unique part of the world (“the universe”) and a particular discipline beyond anthropology within “the university”—this is the title’s double reference. Currently in its last semester, the series has brought 11 of the best representatives of the discipline to the mountain campus, where they have spoken to hundreds of students, faculty and other residents of northern Arizona. Overall, the series—funded by the Tucson-based Salus Mundi Foundation and a number of NAU entities—has greatly increased the appreciation of the university and the broader community for the power and multifunctionality of language; the role of discourse in relation to pressing issues of inequality, injustice, health, politics and identity; and the contribution linguistic anthropologists are making to the scholarly world in general, and to the world at large.

Series speakers have addressed a range of issues northern Arizona and NAU care about. The last two—Charles Briggs (February 2008) and Michael Silverstein (April 4, 2008)—are challenging our understanding of power, politics and rhetoric. Silverstein and James Collins (fall 2006) both describe the role of language in the United States. Like the lecture by Briggs, Collins’s talk stimulated discussion of prejudice and inequality. The particular concern of Collins is with multilingualism and education in this era of large-scale international immigration, while in his lecture Briggs uncovered extremely troubling patterns in the discourse of Venezuelan public-health officials and journalists during a horrific cholera epidemic in the 1990s. Official and journalistic rhetoric about indigenous peoples that circulated widely during the epidemic ended up blaming its victims, who were disproportionately indigenous. Briggs, who has worked with one of these indigenous communities for 20 years, also showed that blaming indigenous peoples, ethnic minorities, and the poor for their health problems occurs in the United States, and not just in Venezuela.

The very first two lectures, in fall 2005, also concerned indigenous peoples—this time in our own state of Arizona. Indigenous identity was the theme of Eleanor Nevins’s lecture, the first in the series. Nevins showed how a sophisticated understanding of White Mountain Apache society and culture is crucial to formulating appropriate interventions to help revive the Apache language. David Samuels demonstrated that contemporary Native Americans signal their identities not only through “traditional” means, but through the nuances and emotions with which they perform country-western music, more often associated with Euro-Americans.

Series speakers have greatly enhanced the global perspective of the university community. William Beeman’s description of Shia passion plays in Iran, and Steve Caton’s riveting description of the political, religious and cultural life of poetry in the Middle Eastern nation of Yemen, added to our understanding of global Islam. Judy Irvine—like Beeman, appearing in spring 2006—demonstrated the insidious influence of colonial-era linguists, who helped impose arbitrary national boundaries and erase evidence of multilingualism within each linguistic community. Bambi Schieffelin and Webb Keane (fall 2007), both working in Oceania, raised important issues about the cultural and linguistic changes associated with the global spread of Christianity.

All of the lectures to date are now available on VHS tape at Cline Library.

Jim Wilce is Professor of Anthropology at NAU.
Professional Capacity Building in Underrepresented STEM Populations through International Faculty Exchange

By Profs. Gypsy Denzine and Rand Decker

STEM! We’ve all heard it—Science, Technology, Engineering and Math. Rallying more students to postsecondary education in these scientific, technical and professional fields needs impetus. We agree on this. We all talk about it. Rallying students who are underrepresented in both scientific and technical education, as well as the workforce, commands even more attention.

But just as the transfer of research discovery to valued consumer product is wrought with disconnects, so is the path from postsecondary to a college education in the technical and professional fields.

Dr. Gypsy Denzine, Associate Dean of Education, and Dr. Rand Decker, Professor of Civil Engineering, are working to change this, along with their valued partners at NAU’s Center for International Education.

Dean Denzine and Professor Decker are engaged in a suite of nested activities focused primarily on Hispanic/Latino students. The regional population of young Hispanics who are poised to enter any university, including and perhaps especially NAU, is expanding rapidly. It should be noted, however, that most of these efforts are scalable and applicable to other underrepresented populations that have in common a first language other than English.

Dean Denzine and Professor Decker’s efforts are fueled with support, both financial and intellectual, from a portion of NAU’s $1.14 million Engineering Talent Pipeline (ETP) award from the William and Flora Hewlett Foundation’s Engineering Schools of the West Initiative (ESWI). The Hewlett ESWI award engaged nine western engineering programs with the challenge to increase the number, quality and diversity of STEM-capable graduates on their campuses. The Hewlett Foundation’s net investment has been nearly $12 million and includes grants to Boise State University, Colorado School of Mines, Montana State University, New Mexico State University, Northern Arizona University, Oregon State University, University of Nevada, Reno, University of Utah and University of Wyoming. After a competitive award cycle, the Hewlett Foundation proactively brought the investigators of these nine award schools together on a regular basis to share ideas and results and to “multiply” their impacts.

As a consequence, Dean Denzine, along with a handful of other ESWI College of Education faculty and staff, has successfully engaged the Hewlett ESWI activities, all the while bringing her perspective of STEM primary and secondary teacher preparation to the floor. She’s presented and published on the topic, and is now a recently minted member of the American Society of Engineering Education (ASEE).

Professor Decker is active in outreach and recruitment of Hispanic high-school students from Arizona’s Verde Valley through his ongoing “Rally” efforts at their schools. These are annual “zeroth” college recruiting meetings held at the students’ high schools, conducted in Spanish, and presented for the benefit of both the students and their families. More often than not, this is the first time the families have ever imagined having a college graduate in their future. Students from NAU’s chapter of the Society of Professional Hispanic Engineers (SHPE) join Professor Decker in these efforts and bring credibility to the message that Spanish-language students are succeeding and can succeed in technical, scientific or other professional postsecondary education at NAU.

Both Dean Denzine and Professor Decker recognize that cultural and language-based support, role models and fresh ideas are essential to the long-term success of these efforts. Thus they are actively seeking a partner university in Mexico for building a transcultural “learning cluster” of faculty and staff scholars and their students, which includes

Continued on page 16
suit of learning clusters should, by design, continue to grow and eventually exceed the life span of both Dean Denzine and Professor Decker’s initial involvement and impetus.

The NAU’s Center for International Education, and specifically its Vice Provost, Harvey Charles, is an active partner in these efforts. Vice Provost Charles is searching out potential host universities in Mexico and will serve as NAU’s first line of contact and protocol. Like Dean Denzine and Professor Decker, Vice Provost Charles recognizes that finding a Mexican university willing to serve in an exchange role with a U.S. university such as NAU should not be the challenge. The challenge is to find the right exchange university, so that the two-way value of the exchange relationship with NAU is near-optimal and its longevity assured.

The net result of this international exchange will be a long-lived, rich, bilateral campus-to-campus exchange environment for faculty, staff and students that supports learning clusters in STEM, STEM teacher preparation, and communities of scholars focused on research questions of interest to our campuses, and by way of extrapolation, the U.S. and Mexico. In the deepest sense, the results of these exchanges should and will inform NAU’s curriculum. This, along with the presence of Mexican faculty, staff and students on the NAU campus, and culturally informed curricular content resulting from NAU faculty, staff and student exchanges to Mexico, will—to great benefit—increase the number and quality of NAU’s Hispanic/Spanish language students and graduates.

Gypsy Denzine is Associate Dean, College of Education, at NAU. Rand Decker is Professor of Civil and Environmental Engineering at NAU.
International Exchange and Nursing Education

Continued from page 5

next course taking place July 7 to August 8, 2008. Plans are in progress to develop a similar public and environmental health course in Costa Rica for summer 2009.

A final initiative in progress in the School of Nursing is the development of a collaboration with the University of San Carlos, Guatemala, by Kate Timbers, a member of our faculty. This endeavor is an opportunity for Spanish immersion and supervised work in health clinics run by Los Médicos Voladores (the Flying Doctors). Both undergraduate nursing and nurse practitioner students will be eligible for this study abroad opportunity. Hand in hand with these international initiatives is the need for ongoing curricular review to fit international experiences into the curriculum, fundraising to support faculty and student travel, and the ongoing process of developing cultural competency among faculty and students working in the U.S. or abroad.

NAU School of Nursing is abuzz with exciting possibilities for student and faculty study abroad and exchanges. We are acutely aware that ultimately the collaborations we are developing will expand our horizons, knowledge, sense of cooperation, and understanding of the multitude of health concerns around the world. Our work to date demonstrates the commonalities we have to build on with nursing colleagues globally.

Karen Plager is Associate Professor of Nursing at NAU. Margaret Conger is Professor Emerita, NAU School of Nursing.

References


International Collaborations ...

Continued from page 3

baits have been created, the product will be tested in closed fields at the Rice Field Research Station in West Java by Dr. Singleton and Dr. Hinds, followed by open-field tests at sites in Southeast Asia.

This collaborative, international research effort contains a multinational training component. Hands-on, real-world experience in basic academic research, applied research, and industry is invaluable for undergraduate and graduate students to prepare them to succeed and compete meaningfully in a global job force. Students learn to communicate effectively with people from other cultures and backgrounds and to understand problems outside the United States. Similarly, international research sensitizes students to the potential humanitarian impacts of their work, increasing their retention in scientific fields.

The collaborative efforts of NAU and international researchers and students in addressing rodent-caused rice crop damage highlights the importance of expanding the scope of our research and translating locally developed solutions into real-world global applications.

Loretta P. Mayer is Assistant Research Professor and Robert G. Audet is Laboratory Manager in the Department of Biological Sciences at NAU.

Women’s and Gender Studies

Continued from page 6

always knew that I wanted to study abroad,” Berkman explained. “Because I felt that it would be such an important part of my college education for me to see what the world looks like from outside the U.S. We are so central, so dominant a country, and I was curious to find out what the U.S., the most powerful country in the world, looked like from the outside.” Kristin Cook studied at the University of Waikato, in New Zealand, from February through November 2006. Cook posited that “Women’s Studies students often think that we’re the only ones who do feminism. It’s vital to go to a place where you can see that that people do feminism in ways we might sometimes never even consider doing.”

To quote from the WGS Web page, by melding international education with transnational feminism “in classrooms and conference sessions, on the river and in canyons, in our writing and discussions, on-line and face-to-face, we rediscover our histories, explore contemporary realities, interrogate text, confront oppression, and imagine possibilities.”

Frances Reimer is Director of the Women’s and Gender Studies Program at NAU.

Teaching abroad

Continued from page 11

a lot about proactive energy efficiency from the families in Alicante and other places I have visited in Spain.

I know I will continue to learn new things about Spain and the people of Spain as the semester continues. I will eat more tapas, drink more sangria, kiss more cheeks, and learn from the staff and faculty at USAC, Alicante. But most important, I will continue to cultivate an appreciation for the differences between cultural groups within Spain and the United States. I know I will be able to discuss the concept of difference or diversity with many more practical examples once I return to the classroom at NAU. I also know I will encourage other faculty and students to step out of their current comfort zone in order to learn new things about themselves and their place in a global community.

Anne Medill is an Associate Professor in the Department of Sociology and Social Work at NAU.
Engineering: Improving Lives and Learning

Continued from page 8

a structure to bolster ecotourism at the paleontological find in Terapa, Mexico; providing solar power to a school in Puerto Lobos, Mexico; and working on furnishing solar power, irrigation and water treatment to an off-the-grid animal sanctuary outside of Payson, Arizona. They recently hosted the EWB Mountain Region Workshop, which attracted participants from MIT to UCLA. The workshop focused on hands-on learning of technologies applicable to developing communities, as well as the social implications of humanitarian engineering.

Currently, all EWB-USA chapters must raise funds at the local level to implement projects. EWB-NAU members work hard throughout the academic year so that individual student financial contributions can be kept to a minimum, ensuring that no one misses out on such great learning opportunities due to financial strain. In addition to the support from NAU, fundraising includes activities such as working concession stands at sports events, grant writing, a silent auction and casino night, an art show, benefit concerts, and selling Equal Exchange coffee and chocolates for the holiday season.

For more information on how you can help, or on the projects themselves, please visit www.ewb-nau.org. Paul Trotta is Professor of Civil and Environmental Engineering at NAU.

U.S. Space Law

Continued from page 13

U.S. law3 facilitated the legality of private space travel in the industry now called “space tourism.” In addition, the NASA Authorization Act of 2005 made funding available to carry out the New Vision U.S. Space Exploration Policy.4 To a large extent, this policy calls for more participation from the private sector in space exploration and other programs. Already, a critical number of space entrepreneurs have paved the way for new space industries, as they did during the satellite telecommunications revolution of the 1980s and 1990s. These entrepreneurial endeavors include space tourism (private space travel), private spaceship development, commercial space reports, commercial space mining and commercial space settlement, only the beginning of a new trend toward further space commercialization and privatization.

As the industrialized world increasingly looks to outer space as a source of resources that may be diminishing or unavailable on earth, and as outer space is increasingly viewed as a site for commercial activity, this will undoubtedly become another locus of contestation among nations, just as borders, the oceans, water and oil have become on earth. There is no doubt that our lives will be touched as these conflicts play out in the future. Part of learning about our world and seeking to understand ourselves in relation to global dynamics will increasingly involve learning about the colonization and exploitation of outer space. The economy of outer space has indeed become the new frontier.

Edythe Weeks is Visiting Professor in the Department of Political Science, teaches in the Ethnic Studies program, and serves as Pre-Law Advisement Coordinator at NAU.

ENDNOTES


4 National Aeronautics and Space Administration Authorization Act of 2005, Public Law 109-155, (109th Congress, 1st Session); former Senate Bill 1281 (and former House bill H. R. 3070) passed on December 17, 2005, and was approved by the House with bipartisan support. In delivering a speech on the House floor in support of this bill, Representative Ken Calvert indicated that the bill “represents the first time that the President’s Vision for Space Exploration has been fully endorsed by both Houses of Congress . . . .” See “NASA Authorization Act Headed to the President’s Desk,” December 22, 2005, press release by Representative Calvert at spaceref.com/news.
The arrival of the new Vice Provost for International Education was only one of the changes the Center for International Education experienced over the past few months. It soon became clear that a reorganization of the Center was necessary in order to respond to the demands, largely driven by the university strategic plan, for a broader and more robust global presence in the curriculum and on the campus. Four offices were created within the Center and staff were either reassigned or hired to provide leadership of these new offices. This new configuration, although very traditional, creates a system that is more easily understood by the campus community, as well as more accountable and transparent. The long-vacant China Coordinator position was recently filled by Daniel Palm. He will work closely with the various ongoing initiatives in China. The new offices and staff are as follows:

**Office of Study Abroad**
- Matt Geisler
  - Assistant Director
- Marilyn Allen
- Jenn Grove
- Shaya Straw
- Javier Trejo

**Office of International Students and Scholar Services**
- Assistant Director position vacant
- Ruth Ellis
- Angela Roberts
- Diana Junius

**Business Operations**
- Sheila Anders
  - Administrative Director
- Kathy Fox
- Sheri Gordon
- Kevin Hirschi
- Lisa Richardson
- Sara Sullivan
- Matthew Thomas

**Office of International Recruiting & Admissions**
- Mandy Hansen
  - Assistant Director
- Nancy Curry
- Jacob Eavis
- Diane Kober
- Daniel Palm
- Chris Peltier
- Jiang Xia

The Vice Provost, Dr. Harvey Charles, who is also Director of the Center for International Education, is spearheading CIE’s strategic global alliances, works directly with faculty on various global initiatives, provides leadership on the Task Force for Global Education and is currently designing a development agenda to help secure more resources to support the ambitious global agenda ahead.
During the 2007-08 academic year, NAU faculty hosted a total of 28 visiting scholars from around the world. These scholars make valuable contributions to the mission of the university by engaging in research collaboration with NAU faculty and by enriching the academic milieu of our classrooms. On the right is a list of these scholars, their host faculty members, the departments in which they were based, and their countries of origin.