



**Arizona State University Accomplishments**  
**FY2003 to date**  
**Updated: 9/27/2010**

On July 1, 2002, Arizona State University initiated its transformation into an educational model that would serve as a new option for American higher education. Our New American University mission was to prove that a university can be simultaneously excellent and broadly inclusive; that it should engage in use-inspired, as well as curiosity-driven, research; and that it can take significant responsibility for the economic, cultural and environmental health of the communities it serves. In August 2008, *Newsweek* recognized the university's success by calling ASU "one of the most radical redesigns in higher learning."

### **Academic Excellence and Access**

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We measure ourselves by who we include, not who we exclude. We are committed to the belief that no qualified Arizona student should be denied access to a college education, so we have simultaneously pursued expanding institutional access while increasing academic rigor and quality.

In FY2002, ASU was an emerging public institution, with an uneven academic reputation. Since that time, we have received widespread external recognition for achievements in academic excellence.

- **Top university:** ASU was named among the best universities in the nation and the world by a number of different ranking organizations.
  - The Academic Ranking of World Universities, compiled by Shanghai Jiao Tong University, ranked ASU as 81<sup>st</sup> among the top 100 universities in the world. This assessment compares 1,200 higher education institutions worldwide and is considered one of the most prominent world university rankings.
  - The *Times Higher Education* 2010 ranking, using data supplied by Thomson Reuters, placed ASU in the top 200 in the world, using measures of excellence from all three core elements of a university's mission: research, teaching and knowledge transfer.
  - *U.S. News & World Report* ranked ASU in the top tier of national universities in 2008, 2009, 2010 and 2011. It was ranked fourth among "Up and Coming Schools," in 2009 and 2010, and second in the 2011 edition of "America's Best Colleges" – a ranking highlighting schools to watch in terms of promising and innovative changes in academics, faculty, students, campus life, diversity and facilities.
  - A *Wall Street Journal* ranking published in Sept. 2010 named ASU number 5 in the nation among corporate recruiters for producing the best-qualified graduates – those that are the most prepared and academically well-rounded, who fit in well with the companies' cultures and produce the best track records.
  - In 2009, *Forbes* placed ASU in the No. 28 spot on its list of 100 of "America's Best Colleges," based on students' satisfaction with their course instruction, indicators of their post-graduate employment success, four-year graduation rates, student and faculty success in competitive academic and research awards, and the four-year debt load for typical student borrowers.
  - Arizona State University was selected by *G.I. Jobs* magazine as a "Military Friendly School for 2010." The list honors the top 15 percent of colleges, universities and trade schools that are doing the most to embrace America's veterans as students.

- ASU is one of the nation's 50 "Best Value" public colleges and universities according to *The Princeton Review*, one of America's most widely known education services and test preparation companies. *The Princeton Review* calls ASU "a leading research institution and a dynamic public university" and commends it for its "outstanding honors college" and leadership in entrepreneurial education.
  - ASU ranked 18th in the nation among all colleges and universities chosen by international students, according to a report released from the Institute of International Education. ASU had 3,549 international students enrolled fall 2009, up from 3,478 the previous year. Although the university doesn't do any recruiting overseas, ASU continues to draw students from more than 120 countries because of the breadth of its programs and its increasing reputation.
  - ASU has been recognized as a national leader in advancing an agenda of stewardship and responsibility for the future of the planet. It has received the following related awards:
    - *Princeton Review* Green Honor Roll: July 2008, July 2009 and Aug. 2010. Also listed in the *Princeton Review Guide to Green Colleges*, April 2010.
    - *College Sustainability Report Card 2010*
    - *Sierra Magazine "Cool Schools"*: Nov. 2007, Aug. 2008, Aug. 2009.
    - *Kaplan College Guide 2009* Top 25 Green Colleges: Aug. 2008
  - In 2010, *Time Magazine* named ASU President Michael Crow as one of the 10 best college presidents in the U.S. based on the achievements of ASU under his leadership.
- **Top programs:** Individual academic programs at ASU also have been ranked among the best in the nation:
  - The W.P. Carey MBA program, various programs in the Mary Lou Fulton Institute and Graduate School of Education, and the School of Criminology and Criminal Justice, all were rated in the top 25 programs in the nation by *U.S. News & World Report*.
  - The Ira A. Fulton Schools of Engineering were ranked in the top 10 percent of all undergraduate engineering programs, and their graduate programs were ranked in the top 50 in the nation by *U.S. News & World Report*.
  - The School of Public Affairs is ranked in top 25 in the nation by *U.S. News & World Report*. Several programs within the school are also ranked in the top 25: city management and urban policy (6<sup>th</sup>), public management (8<sup>th</sup>), public finance and budgeting (18<sup>th</sup>) and nonprofit management (23<sup>rd</sup>).
  - The Herberger Institute for Design and the Arts was ranked number 30 in the nation in 2008 in fine arts programs by *U.S. News & World Report*. Its industrial design program entered the top 10 in 2008. Its graduate printmaking program has been in the top seven since 2003, and its photography program has been in the top 10 since 2002.
  - The Herberger Institute's undergraduate interior design program was ranked 9th and its graduate program 6th by *America's Best Architecture & Design Schools* in 2008. The industrial design undergraduate program was ranked 13th and graduate program ranked 10th.
  - For the fifth consecutive year, students in the Walter Cronkite School of Journalism and Mass Communication at ASU finished first in the Society of Professional Journalists' Mark of Excellence awards and for the second time in four years finished first in the nation in the broadcast news portion of the prestigious Hearst Journalism Awards, often referred to as the Pulitzers of college journalism. In addition, Cronkite students dominated the 2010 Broadcast Education Association contest that honors the best student work in broadcast and

multimedia reporting. Judges in that competition named Cronkite NewsWatch the best student newscast in the country.

- ASU ranked second only to Babson as the most entrepreneurial university in the U.S., according to the 2009 Global Student Entrepreneur Awards, the world's premier competition for students who own and run businesses while attending college.
- The Sandra Day O'Connor College of Law was rated among the top 40 law schools in the nation by *U.S. News & World Report* and was number 16 among public law schools. Its legal research and writing program was ranked in the top 10, and its Lodestar Dispute Resolution Program was ranked in the top 15.
- The College of Nursing and Health Innovation ranked 32 out of 396 (top 8%) of graduate nursing programs in the country as well as ranked 13<sup>th</sup> for their pediatric nurse practitioner program by *U.S. News & World Report* in 2008.
- The College of Nursing & Health Innovation was ranked 11<sup>th</sup> in NIH funding among colleges of nursing in 2009.
- Barrett, the Honors College, was named – in the most recent thorough assessment and ranking of all 64 honors colleges in the United States done in 2005 by researchers at *Readers Digest* – one of the top three honors colleges in the nation. *Readers Digest* called the three "America's Best Honors Colleges".
- In the natural sciences, *U.S. News & World Report* ranked ASU's graduate programs as follows: earth sciences, 17<sup>th</sup> in 2010; audiology, 19<sup>th</sup> in 2008 and 24<sup>th</sup> in 2004; speech and language pathology, 18<sup>th</sup> in 2008 and 22<sup>nd</sup> in 2004; clinical psychology, 22<sup>nd</sup> in 2008 and 38<sup>th</sup> in 2004.
- The degree programs in counseling and counseling psychology were ranked 16<sup>th</sup> by *U. S. News & World Report* in 2010, 12<sup>th</sup> in 2009 and 11<sup>th</sup> in 2008.
- The anthropology program in the School of Human Evolution and Social Change was ranked in the top 5 in the *Chronicle of Higher Education's* last Faculty Scholarly Productivity Index in 2007. The program was fourth in the Center for a Public Anthropology's 2006 national ranking of public outreach in anthropology departments.

**World-class faculty:** ASU increased its number of faculty who have received the highest awards in their fields by adding 179 new award recipients, fellows or academy members since the end of FY2002. At the end of FY2010, there were:

- 3 Nobel laureates, all since FY2002. ASU faculty and researchers also contributed to the Intergovernmental Panel on Climate Change (IPCC), which shared the 2007 Nobel Peace Prize with Al Gore.
- 9 members of the American Academy of Arts and Sciences, 7 since FY2002 (350 percent growth)
- 11 members of the National Academy of Engineering, 9 since FY2002 (450 percent growth)
- 11 members of the National Academy of Sciences, 10 since FY2002 (1,000 percent growth)
- 2 members of the Institute of Medicine, both hired since FY2002
- 4 members of the National Academy of Education, 2 since FY2002 (200 percent growth)
- 3 members of the National Academy of Public Administration, 2 since FY2002 (200 percent growth)
- 2 members of the Royal Society, both hired since FY2002

- 63 American Association for the Advancement of Science Fellows, 43 since FY2002 (215 percent growth)
- 5 Sloan Research Fellows, 1 since FY2002 (25 percent growth)
- 3 Pulitzer Prize winners; 1 since FY2002 (50 percent growth)
- 87 Fulbright American Scholars, 61 since FY2002 (235 percent growth)
- 26 Guggenheim Fellows, 18 since FY2002 (225 percent growth)
- 18 IEEE Fellows, 7 since FY2002 (64 percent growth)
- 7 American Council of Learned Societies Fellows, 2 since FY2002 (40 percent growth)
- 17 recipients of Ford Foundation Fellowships, 9 since FY2002 (113 percent growth)

In addition, since FY2002 ASU's young faculty have been recognized as those who will lead the advancement of scholarship in their fields for the future with the following awards:

- 57 recipients of the National Science Foundation Early Career Development Award
- 1 recipient of the Department of Energy Early Career Principal Investigator Program Award
- 1 recipient of the Department of the Army Young Investigator Program
- 6 recipients of Presidential Early Career Awards for Scientists and Engineers

**World-class students:** ASU students also excelled in record numbers.

- The fall 2010 freshman class numbered a record 9,523. Median SAT score for the entering class is a record 1110, with almost a third of Arizona freshmen in the top 10 percent of their high school class. Thirty-four percent of the class comes from diverse ethnic backgrounds, up from 26 percent five years ago.
- Nearly 6,300 new students transferred to ASU from a community college or other university in fall 2010. The all-time record is due, in part, to the strong partnerships ASU has formed with community college systems throughout Arizona.
- About 3,000 students are now enrolled in academic programs offered through ASU Online, a 64 percent increase over FY2010.
- ASU is the top-ranked public university for students being named to *USA Today's* All-USA Academic First Team.
- ASU has produced 112 Fulbright Scholars since FY2002 and is one of the top 10 producers of Fulbright Scholars in the U.S.
- ASU ranks 3<sup>rd</sup> in the nation in producing 3 Truman Scholars since FY2002.
- ASU is 5<sup>th</sup> in the nation in the production of Marshall Scholars since FY2002 with 5 awards.
- 613 National Merit Scholars were enrolled at ASU in fall 2009, a 62 percent increase over fall 2002.
- 362 National Hispanic Scholars were enrolled at ASU in fall 2009, up 383 percent since 2002. ASU has been more successful in attracting these top scholars than any other school.

- ASU is the top school in the nation in winning National Security Education Program grants to study abroad in countries of critical interest to U.S. security with 75 recipients since FY2002.
- The majority of eligible Flinn Scholars choose ASU, with 12 of 17 attending in FY2010.
- 65 Bill and Melinda Gates Millennium Scholars were enrolled in FY2010; a total of 140 have attended ASU since the program's inception.

**Degree production and persistence:** ASU awarded an estimated 16,400 degrees in 2009-2010, up 45 percent from 2001-2002. The six-year graduation rate for the freshman cohort entering 2003 was 56 percent, up almost 14 percent from the 49.2 percent rate for the cohort that entered in fall 1995 and almost 13 percent higher than the average for all public universities in the U.S. Freshman persistence in fall 2010 increased to 83 percent, more than 8 percent higher than in fall 2002.

**ASU ranked as top school for diversity:** From fall 2002 to fall 2008, we greatly increased access to the university, at the same time more closely reflecting the demographics of Arizona in our faculty, staff and student populations. ASU was ranked as one of the top institutions for ethnic minorities by top publications focused on diversity:

- ASU was cited several times among the top 25 institutions in the United States in "The Condition of Latinos in Education: Fact Book 2008" by Excelencia in Education. ASU was ranked 24 among the top 25 colleges and universities enrolling Latinos during the 2006-2007 academic year. The university also was ranked 24th for awarding bachelor's degrees to Latinos and 17th for awarding engineering bachelor's degrees to Latinos.
- According to the Top 100 Graduate Degree Producers published in July 2008 in *Diverse Issues in Higher Education*, ASU ranks No. 5 for American Indian doctorates, 21 for Hispanic doctorates, 30 for American Indian master's degrees and 43 for total minority doctorates.
- ASU is among universities with the highest numbers of National Hispanic Scholars in the country. In 2009, there were 362 National Hispanic Scholars enrolled at ASU compared with 75 in 2002.

**Growth in student ethnic diversity:** While enrollment increased 22.7 percent, from 55,491 in fall 2002 to 68,064 in fall 2009, minority enrollment as percentage of total student population increased by 61.9 percent to 32 percent of the total student body.

- The number of African-American students grew from 1,768 (3.2 percent of total students) to 3,257 (4.8 percent of total), an 84.2 percent increase.
- The number of American Indian students grew from 1,166 (2.1 percent of total) to 1,484 (2.2 percent of total), a 27.3 percent increase.
- The number of Asian-American students grew from 2,535 (4.6 percent of total) to 3,935 (5.9 percent of total), a 55.2 percent increase.
- The number of Hispanic students grew from 6,018 (10.8 percent of total) to 9,924 (14.6 percent of total), a 64.9 percent increase.

**Growth in student economic diversity:** From FY2003 through FY2008, ASU made major progress in delivering on its promise that no Arizona student be denied access to a college education based on ability to pay:

- Pell grant recipients (first-time freshmen) increased 83 percent from FY2003 to FY2009, from 1,209 to 2,214 students.



- Low-income Arizona freshman enrollment increased by 873 percent during that time period.
- In May 2009, the university announced the President Barack Obama Scholars program, which more than tripled the number of students from families with the greatest financial need who are eligible for financial aid that covers the full cost of college attendance.
- In FY2009, ASU awarded a record \$635 million in financial aid, \$238.6 million in the form of scholarships and grants to 35,741 recipients.
- Average indebtedness of ASU undergraduates continues to be below the national average of \$22,700 (per College Board). Spring 2008 bachelor degree recipients who were Arizona residents had an average loan debt of \$16,330.
- In FY2009, 68 percent of ASU undergraduate students received financial aid. The average student financial aid package for full-time Arizona resident undergraduate students with need was \$9,515.

**Growth in faculty/staff ethnic diversity:** Minority employees as a percentage of total employees (excluding graduate assistants) increased by 24.2 percent to 25 percent of the total from FY2003 to FY2009.

- The number of African-Americans grew from 300 (3.5 percent of total employees) to 345 (3.8 percent of total), a 15 percent increase.
- The number of American Indians declined from 153 (1.8 percent of total) to 143 (1.6 percent of total).
- The number of Asian-Americans grew from 455 (5.3 percent of total) to 734 (8 percent of total), a 61.3 percent increase.
- The number of Hispanics grew from 937 (10.9 percent of total) to 1,070 (11.6 percent of total), a 14.2 percent increase.

From FY2003 to FY2009, total tenure/tenure-track faculty grew from 1,671 to 1,841, a 10.2 percent increase. Minority tenured/tenure-track faculty increased 24 percent, from 18.5 percent to 22.9 percent of total.

- The number of African-Americans remained steady at 45 (2.4 percent of total).
- The number of American Indians grew from 16 to 19, an 18.8 percent increase (1 percent of total).
- The number of Asian-Americans grew from 132 (7.9 percent of total) to 210 (11.4 percent of total), a 44.4 percent increase.
- The number of Hispanics grew from 116 (6.9 percent of total) to 148 (8 percent of total), a 15.8 percent increase.

## **Research Matters**

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One of the principle tenets of our New American mission is that faculty should engage in research that is use-inspired, as well as curiosity-driven. We also believe that discovery and education are inseparable, two halves of the same whole, and that the work of the university should advance the interests—social, cultural, economic and environmental—of the communities we serve.

Since July 1, 2002, ASU research expenditures have grown almost 150 percent, from \$132.9 million in fiscal year 2002 to \$332.1 million in fiscal year 2010. In the past year, ASU sought more than \$1.8 billion in proposals, a 38 percent increase over the previous year. The university received more than \$347 million in awards, a 33 percent increase over last year.

### **2009-2010**

In 2003, we established **Arizona Science and Technology Enterprises LLC (AzTE)** to accelerate the rate of technology transfer from university research laboratories to the marketplace. Arizona Science and Technology Enterprises LLC (AzTE) established a new record for invention disclosures for the university with 187, placing ASU ahead of Stanford and MIT (including Lincoln Labs) per \$10 million of research based on the most recent publicly-available data.

Since its inception in 2005, the **Edson Student Entrepreneur Initiative** has provided office space, training, support – and more than \$1.2 million in seed funding – to promising ASU student ventures.

The Virginia C. Piper Charitable Trust awarded a \$2.5 million grant to develop the **Center for Sustainable Health at the Biodesign Institute**.

ASU's **Mary Lou Fulton Teachers College** has committed to transform teaching into a profession of first choice through partnerships, extended student teaching and curriculum changes including increasing time spent learning subject content. The college received an unprecedented investment of \$19 million from a private donor to launch a new initiative called the Sanford Education Project which will allow ASU to adapt Teach For America's most successful tools to attract, prepare, support and retain more highly effective teachers.

The National Science Foundation awarded an Innovation through Institutional Integration grant to develop **the Modeling Institute**, a multidisciplinary team of ASU researchers with the Center for Research on Education in Science, Mathematics, Engineering and Technology (CRESMET).

ASU has developed the **Center for Convergence of Physical Science and Cancer Biology**, funded by the National Institutes of Health's National Cancer Institute (NCI). The NCI appealed to the physics community by creating 12 new centers staffed by physical scientists, mathematicians and engineers in an effort to understand cancer from unique, conceptual insights. A transdisciplinary team will work with cancer cells as physical objects and establish new lines of inquiry, both theoretical and experimental. Each center will bring a non-traditional approach to cancer research with the goal of developing new methods of arresting tumor growth and metastasis. The Fred Hutchison Cancer Research Center will provide cell lines and Mayo Clinic will provide tissue samples for the research.

**Elinor Ostrom**, founding director of ASU's Center for the Study of Institutional Diversity, won the 2009 **Nobel Prize in Economic Sciences**. Ostrom, the first woman to win the Nobel in Economic Sciences, is considered one of the leading scholars in the study of common pool resources. In particular, Ostrom's work emphasizes how humans interact with ecosystems to maintain long-term sustainable resource yields. Ostrom is one of three ASU faculty members to receive Nobel Prizes: **Edward C. Prescott** won the 2004 **Nobel Prize in Economic Sciences** and **Leland "Lee" Hartwell** won the 2001 **Nobel Prize for Physiology or Medicine**.

According to the American Heart Association, about one in three American kids and teens are overweight or obese. Obesity contributes to health problems like diabetes and psychological problems like depression. ASU researchers in the **College of Nursing and Health Innovation** are studying the

prevention and treatment of these two major public health disorders afflicting U.S. adolescents - obesity and mental health. Through a grant from the The National Institute of Nursing Research (NINR), as part of the U.S. National Institutes of Health (NIH), researchers began randomized controlled trials in the early spring with 800 culturally diverse adolescents enrolled in Phoenix high schools. The trials test both short- and long-term effectiveness of teaching teens cognitive-behavioral skills to improve healthy lifestyle behaviors and reduce depressive symptoms.

**Lightworks**, a new initiative to position ASU as a leader in solar-based energy and other light-inspired research was launched this year. LightWorks capitalizes on ASU's unique strengths in renewable energy fields including artificial photosynthesis, biofuels and next-generation photovoltaics. LightWorks brings together ASU's transdisciplinary intellectual expertise centered on the idea of harnessing all that the sun has to offer as the ultimate power source of nature. Gary Dirks directs the initiative.

The City of Phoenix was awarded a grant from the Department of Energy and the American Recovery and Reinvestment Act (ARRA). In partnership with Arizona State University and Arizona Public Service, they will launch **Energize Phoenix**, a project that will save energy, create jobs and transform neighborhoods.

Nobel Prize winner Leland "Lee" H. Hartwell has joined ASU to establish and co-direct the Center for Sustainable Health at the Biodesign Institute and the second Virginia G. Piper Chair of Personalized Medicine. Hartwell's center will identify biosignatures—early indicators of disease—to enable personalized, pre-symptomatic diagnoses and develop tools for better patient outcomes. He will be assisted in redefining health outcome metrics by Michael Birt, a health policy expert who will co-direct the new center.

Arizona teachers trained in **ASU's Professional Development School (PDS)** in the College of Teacher Education and Leadership (CTEL) receive three times the amount of hands-on, practical classroom experience as traditional teacher education programs. Now, a Department of Education grant ensures the PDS NEXT program will continue for another five years and expand to include 15 urban and rural partner school districts in Arizona. Those districts include Mesa Public Schools; Glendale, Roosevelt and Phoenix Elementary School Districts; Sunnyside Unified School District in Tucson; the Window Rock, Ganado, and Kayenta districts in the Navajo Nation; University Public Schools; and the Phoenix Union High School District. The new facets of PDS include a two-year induction program for new teachers and enables local residents to earn a university degree and teacher certification without having to relocate to an urban area of the state. The award is the largest among 28 Teacher Quality Partnership grants across the country.

The **Diane Halle Center for Family Justice** has been established at the Sandra Day O'Connor College of Law at ASU. The center is a partnership with the O'Connor House and the Avon Foundation Program for Women and Justice. The center is funded by the Bruce T. Halle Family Foundation and the NextCare Urgent Care Family Violence Legal Clinic.

Early literacy can be an antidote to academic failure, a critical problem among Native Americans, where the dropout rate is three times that of other students and the highest of any ethnic group in the United States. A grant from the Department of Education will support ASU in driving a three-year **Early Reading First** initiative and community collaborative designed to boost literacy among preschool children in nine schools in northwest New Mexico on the Navajo Nation. The project's goals are to increase early literacy skills of Navajo children by using strategies and materials that reflect the traditions, experiences and



cultures of the children served. The project will also focus on family literacy, engaging parents and siblings in reading, writing stories, playing games and taking new books home to read.

High-school journalism teachers from around the country will continue to attend the **Reynolds High School Journalism Institute** in the ASU's Walter Cronkite School of Journalism and Mass Communications, which has been funded for an additional five years by a grant from the Donald W. Reynolds Foundation. Thirty-four high school teachers participated in the 2010 Institute where they learned to help students make sound news and ethical judgments; produce stronger reporting, writing, visuals and multimedia elements; and practice with a greater understanding of the First Amendment and the essential role of a free press in democracy. Five Reynolds Institutes are held nationally and recruit from schools in urban and rural areas where journalism programs are under the most stress.

**The Phoenix Transect** is a research project undertaken by graduate students and faculty in the Herberger Institute's School of Art. The project is interdisciplinary and participants are visual artists who work alongside natural and social scientists. The group explores growth and changes to the larger Phoenix Metropolitan area, its urban and outlying spaces, its people, natural environments and resources. The project's work is the product of a field class in photography taught by photographer and Regents' Professor, Mark Klett. The goal is to explore the nature of photographic processes with the intent of probing the traditional boundaries of documentary and expressive practices, to examine new media for visualization, and to promote interdisciplinary collaborations.

**The Oxford Dictionary of the Middle Ages**, a two-thousand page reference resource for all key aspects of European history, society, religion, and culture from circa 500 CE to circa 1500 CE was published by Oxford University Press. Robert E. Bjork, Foundation Professor of English and Director of the Arizona Center for Medieval and Renaissance Studies (ACMRS) at ASU, edited the four-volume set. More than eight-hundred scholars, guided by a five-member international advisory board and an international editorial board of 26, wrote more than 5,000 entries.

ASU is the only institution to lead more than one **Department of Energy Advanced Research Projects Agency-Energy (ARPA-E)** grant. Wim Vermaas, professor in the School of Life Sciences, received a grant to research cyanobacteria fatty secretions for biofuel feedstocks using just sunlight, water and carbon dioxide as inputs. Cody Friesen, professor in the Fulton Schools of Engineering, was awarded a grant to support advances in high-energy battery technology and energy storage. DOE's ARPA-E program has the goal of developing nimble, creative and inventive approaches to transform the global energy landscape while advancing America's technology leadership.

ASU's **Biodesign Institute** leads a multi-institutional research initiative to develop systems that would rapidly measure an individual's level of exposure to radiation in the event of a radiological or nuclear incident. In the event of a large-scale disaster, such a system would ensure that first responders have the information necessary to provide appropriate medical treatment. The five-year contract with the U.S. Department of Health and Human Services' Biomedical Advanced Research and Development Authority (BARDA) emphasizes the development of prototypes that would enable more rapid triage of patients than is currently possible.

### **2008-2009**

**Gro Amdam**, a professor in the School of Life Sciences, studies honeybee caste systems and social relationships. She heads social insect studies in laboratories at ASU and the Norwegian University of Life Sciences. Her research is providing new insight into what might control aging, and has high priority in

biomedical research into both Alzheimer's and Parkinson's disease. A three-year award from the Research Council of Norway funds exploration of the honeybee's DNA methylation system, the only invertebrate system that is similar to that of the human.

International travel is spurring the rapid spread of infectious disease on a global scale. ASU's **Biodesign Institute** is developing rapid vaccines in response, using fragments of DNA from the pathogen of interest. This unconstrained approach to vaccine development will make vaccine creation more predictable and standardized. Reducing the timeline of microbe discovery to vaccine delivery will change the way we face communicable disease worldwide.

ASU is home to one of 46 **Energy Frontier Research Centers** awarded by the U. S. Department of Energy to universities, national laboratories, nonprofit organizations and private firms across the country. The center will pursue advanced scientific research on solar energy conversion based on the principles of photosynthesis. For more than 15 years, ASU has built a first-class team of scientists who are designing and building solar energy harvesting components based on photosynthesis. Devens Gust, professor of chemistry and biochemistry in the College of Liberal Arts and Sciences, directs the center.

ASU scientists Milton Sommerfeld and Qiang Hu are developing and commercializing a process for turning algae into jet fuel, biodiesel, animal feed and fertilizer. As a result, their discovery made it onto **Time magazine's list of the Top 50 Inventions of 2008**. Their innovative system runs wastewater through bioreactors that contain algae. The algae consume nitrogen and phosphorus - two common fertilizer nutrients - removing the pollutants and leaving the wastewater clean and safe for human use. Unlike corn plants, algae bioreactors can be placed on land that is not suitable for farming because the algae require only water and sunlight to prosper. Arizona has plenty of sunlight and numerous farms producing nutrient-rich wastewater to help make this technology a promising solution to our country's need for energy independence and clean energy solutions.

NASA launched the **Lunar Reconnaissance Orbiter (LRO)** with the Lunar Reconnaissance Orbiter Camera (LROC) on June 18, 2009. The LROC imaging system, under the watchful eyes of ASU Professor and Principal Investigator Mark Robinson, consists of two narrow cameras to provide images in seven color bands over a 60-kilometer (37.28-mile) swath, and a sequence and compressor system supporting data acquisition for both cameras. LROC has taken and received its first images of the Moon, kicking off the year-long mapping mission of Earth's nearest celestial neighbor.

**NASA's two Mars Rovers, Spirit and Opportunity**, celebrated their fifth anniversary on Mars this year. The Rovers have uncovered a silica deposit that appears to have formed in the presence of water, photographed the first meteor on a planet other than Earth and traveled through Martian craters. Planetary scientists are working with this data collected by the Rover's mineral-scouting instrument, the Miniature Thermal Emission Spectrometer (Mini-TES), designed by ASU's Phil Christensen, a Regents' Professor of Geological Sciences and director of the Mars Space Flight Facility at ASU. The Rovers were launched into orbit in July 2003.

ASU's **Flexible Display Center (FDC)** is a unique collaboration among government, industry and academia and this year received an additional five years of U.S. Army-funded support. Named one of the Top 10 Technologies of 2008 by *Wired* magazine, FDC represents a critical resource in the Army's ongoing effort to provide our military with the highest level of technology assets. Through its collaboration programs, the center has achieved development and demonstration milestones that incorporate a broad range of advanced materials and processes necessary to accelerate the commercialization of flexible display technologies throughout the world.

In less time than it takes to blink, the latest upgrade to the ASU **High Performance Computing Initiative (HPCI)** now makes it possible to compute faster than ever before - an astounding 700 billion computations in less than 1/60th of a second. The Saguaro 2 - a set of seven-foot-tall black monolith computers - was upgraded in part by a nearly \$2 million grant from the National Institutes of Health. The new system doubled the capabilities of ASU's HPCI and will be used by the university and the Translational Genomics (TGen) Research Group on projects designed to develop and examine molecular profiles of human diseases, and continue the sequencing of the human genome.

The university-wide **Origins** initiative, established to explore questions about the origin of the universe, consciousness and culture, launched this past spring with the Origins Symposium. Attracting national and international media coverage, the event brought together 70 of the world's leading scientists and scholars, including Steven Pinker, Richard Dawkins, Donald Johanson, Brian Greene, Craig Venter, and Lawrence Krauss, a theoretical physicist and cosmologist in ASU's College of Liberal Arts and Sciences. Stephen Hawking participated via video. Public lectures and panels allowed ASU to moderate numerous community-driven discussions about the future of origins research and to share knowledge with the broader community, both in the region and around the world.

Mark Henderson, director of **GlobalResolve**, works with a range of international partners and researchers to develop sustainable technologies. The social entrepreneurship program is designed to enhance the educational experience for ASU students by involving them in semester-long projects that directly improve the lives of underprivileged people in nations throughout the world. Last fall, students and faculty installed an ethanol production system in Domeabra, Ghana. The equipment was designed and manufactured at ASU with support from the National Collegiate Inventors and Innovators Association (NCIIA). By incorporating all the necessary equipment to produce ethanol from corn, sugar cane or rice and to gel the ethanol, the system creates an effective cooking fuel for portable stoves.

Steven Corman, director of ASU's **Consortium for Strategic Communication (CSC)**, with an interdisciplinary team, has developed a text-analysis tool used to decode messages containing potential security threats to the U.S. The technology provides tools, methods and training programs to assess threats posed by terrorist narratives among contested populations. They have also established a database of archetypes populated with extremist narratives and counter narratives to create a model measuring diffusion and influence of extremist narratives. The work has received support from the Office of Naval Research.

Researchers at ASU have taken cues from young students' digital diversions and incorporated the distractions into tools that are transforming both teaching and learning. The School of Arts, Media and Engineering's **SMALLab** is a multimodal, interactive environment for learning. The system architecture includes tools familiar to all millennials – gamepads, Wii remotes and embedded sensors. During the past few years, SMALLab has been tested by more than 25,000 young learners in regional schools and museums, in subjects ranging from physics and geology to astronomy and language arts. In summer 2008, SMALLab was awarded a prestigious MacArthur Foundation grant in partnership with the Institute of Play in New York. The project, Gaming SMALLab, combines the ASU lab's research on mixed-reality learning with the Institute of Play's work in games and learning, extending SMALLab's reach across the country.

ASU's **Institute for Humanities Research** has taken the lead in promoting excellence and innovation in humanities scholarship by contributing to scholarly research and engaging the community. This academic year, ASU received four grants from the National Endowment for the Humanities, three of which were directly related to the Institute. Researchers Daniel Shilling and Joan McGregor studied the

role of literature, philosophy and history in developing the core principles and values that will directly influence today's sustainability efforts. Another grant aided in the development of a research, teaching and outreach program on the cultural and environmental history of the Sky Islands borderlands region of Arizona, New Mexico, and Sonora and Chihuahua, Mexico. The fourth project, *Becoming Arizona*, is the development of an online e-cyclopedia of Arizona history, culture, politics, economics and other topics being developed as a tribute to Arizona's centennial in 2012.

ASU was ranked among the top 20 leading universities without a medical school in research expenditures according to the National Science Foundation (NSF), ranked with Cal Tech, MIT, Princeton and Rockefeller University.

Research laboratory space increased by 43 percent.

Arizona State University secured the second-largest amount of federal funding for chemical engineering, according to the National Science Foundation (NSF). Only MIT earned more federal funding for chemical engineering than ASU in FY2006, the most recent year for which data are available.

### **2007-2008**

George Poste helped spearhead the launch of the Arizona-based **Partnership for Personalized Medicine**, a global effort to improve patient outcomes and reduce health care costs. A portion of this major award will be used to appoint two endowed chairs at ASU. Recently, the Partnership secured its first major international collaboration with the government of Luxembourg to explore the development of novel diagnostics for lung cancer.

The **Center for Applied Behavioral Health Policy (CABHP)**, directed by Michael Shafer in ASU's College of Human Services, was awarded a research grant from the National Institutes of Health's National Institute on Drug Abuse (NIDA). The Arizona Network for the Study of Implementation Effectiveness joins an existing array of research centers from across the country that comprise the Criminal Justice and Substance Abuse Treatment Studies (DATS) collaborative.

Stephen Albert Johnston is the director of the **Center for Innovations in Medicine**. He will focus his research on breast cancer. Johnston is one of two researchers in the nation to receive a five-year grant from the Department of Defense's Innovator Award, funded through the Breast Cancer Research Program.

Associate Professor of Geology Ariel Anbar and his group discovered evidence of a surprisingly early "whiff" of oxygen in 2.5 billion year old sediments. This finding supports the idea of **early evolution of oxygen-evolving photosynthesis**. His work was supported by NASA and NSF and published in two papers in *Science*.

Ananias Escalante was awarded a grant from the NIH for **malarial genetics research**. His work focuses on molecular evolutionary biology of human and primate malaria parasites.

Professor Kip Hodges (School of Earth and Space Exploration) and Assistant Professor Winslow Burleson (Arts, Media, and Engineering) received NASA funding to collaborate with Jet Propulsion Laboratory and MIT researchers. The group will work on the design of **collaborative human-robotic exploration protocols for geologic research on planetary surfaces**.

ASU's **biohydrogen project** aims to harness the energy in sunlight using microbial photosynthesis to produce hydrogen. A second part of the project will convert waste materials from the initial process to

produce even more hydrogen. The project is one of the first to be funded by the ASU President's Intellectual Fusion fund. The fund will be used to make seed investments in research areas that push the boundaries of traditional academic disciplines.

Faculty members Ann Kinzig, Sheila O'Connor and Thomas McShane are leading an interdisciplinary research team studying the **trade-offs between development and conservation in three developing countries**. The goal is to learn how conservation practices are affected by culture, practice, and social attitudes and how they can be improved. The five-year project, called Advancing Conservation in a Social Context, is supported by a grant to the Global Institute of Sustainability from the John D. and Catherine T. MacArthur Foundation.

Arizona State University was awarded **three grants for solar energy development** by the U.S. Department of Energy's Solar America Initiative (SAI). ASU is a leading university in this solar energy development program with six SAI grants. One of the grants went to a team headed by John Kouvetakis, a professor in chemistry and biochemistry, and Jose Menendez, a professor in physics. The project will explore the photovoltaic potential of new materials that were originally developed for laser applications.

The second SAI grant went to a team headed by Mark van Schilfgaarde, a professor in the School of Materials. That project is focusing on developing "tandem cell" solar cells where two-material combinations are brought together to most efficiently utilize solar energy.

The **Photovoltaic Testing Laboratory (PTL)** at ASU Polytechnic was awarded the third grant. ASU researchers will conduct reliability tests of concentrator photovoltaic (PV) modules developed by commercial companies at the PTL. The PTL is one of just a few such facilities worldwide capable of performing these types of tests and is the only accredited PV qualification testing laboratory in the nation.

In January 2007, **Science Foundation Arizona** awarded 37 Graduate Fellowships to ASU students. The Fellowships program is geared toward challenging Arizona research institutions to set quality standards for key graduate programs and to recruit and retain bright and creative minds to assist Arizona in creating a knowledge driven economy. The Graduate Research Fellowship grants were the first from the foundation, with the goal of building world-class science, engineering and medical infrastructure in Arizona by fostering innovative research programs.

Arizona State University is into nanotechnology in a big way. According to **Small Times magazine**, ASU ranked sixth overall and scored in the top 10 of three categories in a survey-based scorecard of micro- and nanotech research and commercialization. ASU led the pack in commercialization, due in part to its number of microtechnology and microelectromechanical systems (MEMS) patent filings, and to the commercialization of those technologies by Arizona Technology Enterprises (AzTE). ASU also made the top three in the facilities category and is ninth in education. ASU's research specialties include nanofabrication, nanocharacterization, nanoelectronics, molecular electronics, thin film transistors and organic nanostructures.

The Global Institute of Sustainability partnered with the Ira A. Fulton School of Engineering to establish the ASU Solar Power Laboratory. This new lab is expected to boost economic development in Arizona and become the pre-eminent academic solar energy research, development and training program in the United States. Three widely recognized experts in solar energy research and technology commercialization—Christiana Honsberg, Stuart Bowden, and George Maracas—were recruited to lead the venture. Under the institute's leadership, the lab will unify solar energy-related research efforts



throughout the university, bringing together researchers across many disciplines, and develop industry collaborations.

Cheryl Nickerson performed the first study of its kind to investigate the effect of **space flight on the virulence of specific bacteria**, demonstrating that bacteria become more infectious in space, posing a greater risk to flight crews.

Roy Curtiss' team has developed a **new vaccine that can sneak into the body and self-destruct**. The vaccine turns a "foe into a friend" by using salmonella as a versatile vaccine delivery system against a variety of pathogens.

Hao Yan developed the **world's first gene detection platform that is made up entirely from self-assembled DNA nanostructures**. It is able to detect genes in a single cell.

Life sciences faculty member Quentin Wheeler, vice president and dean of the ASU College of Liberal Arts and Sciences also launched a new institute, **the International Institute of Species Exploration**. Support for the institute will come from life sciences faculty and staff, including Andrew Hamilton, Tony Gill and Malte Ebach. IISE is pioneering cybertaxonomy and attention to biodiversity and has generated significant national press attention and public interest through high profile publications as diverse as *National Geographic*, *NY Times*, and *Rolling Stone* magazine.

ASU researchers are part of a team led by UOP, a Honeywell company, that is looking at **alternative sources of oil that could be used to produce Jet Propellant 8 (JP-8) or military jet fuel**. The goal of the project is to develop and commercialize a process to produce JP-8, which is used by U.S. and NATO militaries. The ASU team in the School of Applied Arts and Sciences will lead an effort to demonstrate the technical and economic feasibility of using algae as an alternative feedstock resource.

ASU's researchers Qiang Hu and Milton Sommerfeld will screen for oil-rich algal strains, evaluate their potential as oil producers, and develop an **algal feedstock production system** that will yield competitively priced oil that can be converted into jet fuel. The benefits of oil produced from algae are endless, according to the ASU researchers.

Phil Christensen from the School of Earth and Space Exploration and Jennie Si from the Ira A. Fulton Schools of Engineering and the Mars Education Program hosted the **China Youth Space Academy**. They brought 15 Chinese high school students to ASU for a space exploration education experience with seven high school students from Nogales, Arizona.

Phil Christensen, Joshua Bandfield and Alice Baldrige used the Mars-orbiting-camera with JMARS software, designed and operated at ASU's Mars Space Flight Facility, to find **the first evidence for deposits of chloride minerals— salts—in numerous places on Mars**. These deposits, say the scientists, show where water once was. Their report shows up in the March 31, 2008, issue of the journal *Science*. Christensen gave a demonstration of the JMARS software to an audience of 10,000 software developers at the Java One conference. JMARS is open-source software developed at MSFF to analyze and coordinate data sets of Mars.

**The Department of Biomedical Informatics** is among ASU's newest—and most ambitious— academic and research endeavors. The department enrolled its first class of students during the 2007 fall semester. "Biomedical informatics" describes the integration of computer and information sciences with basic biological and medical research, clinical practice, medical imaging and public health disciplines. Part of ASU's School of Computing and Informatics in the Ira A. Fulton School of Engineering, the

department is educating students and pursuing research in specialties considered critical to fulfilling the promise of “personalized” or “customized” medicine in which medical care is tailored to specific health profiles of individual patients.

Geochemist Lynda Williams and microbiologist Shelley Haydel from Biodesign report that minerals from clay could provide **inexpensive, highly-effective antimicrobials to fight MRSA infections**. In their latest study, funded by the National Institutes of Health, they collected clay samples from around the world to investigate their antibacterial activities and identified at least two clays from the United States that kill or significantly reduce the growth of these bacteria. The antibacterial effect of the French clay was documented this year in the *Journal of Antimicrobial Chemotherapy*.

ASU Research Magazine, in its 23<sup>rd</sup> year of publication, won the **gold medal as the best university research magazine in the United States**. The award was presented as part of the 2008 Circle of Excellence program sponsored by the Council for Advancement and Support of Education (CASE) based in Washington, D.C. The staff members at Research Publications have won 28 awards for their work in 2007 – 2008 alone. The honors come from six different regional, national and international professional communication organizations. The magazine features articles on the research and creative activity of faculty and students at ASU.

#### **Institute of Human Origins (2007)**

ASU’s Institute of Human Origins advances scientific understanding of our origins and its contemporary relevance through research, education, and the sponsorship of scholarly interaction. The goal of paleoanthropology is to understand the natural process by which we became human with regards to diversity and adaptations, technology and culture.

In December of 2000, a team of researchers led by Zeresenay Alemseged of ASU, discovered a girl’s cheekbone poking out of the sand in the remote Dikika desert of northeastern Ethiopia. The girl turned out to be the oldest, most complete fossil of a pre-human child—trapped by the sediments of an ancient river in stone for 3.3 million years. Named *Selam*, which means *peace* in Amharic, Ethiopia’s official language, the skeletal remains included the skull and jaws with teeth, parts of the shoulders, spinal column, ribs, right arm, fingers, legs and left foot.

#### **Global Institute of Sustainability (2007)**

The Global Institute of Sustainability evolved from over 30 years of environmental research conducted by the Center for Environmental Studies at ASU. In 2004, Julie A. Wrigley contributed \$15 million to ASU to establish the Global Institute of Sustainability and from the Institute grew the School of Sustainability which opened in 2007, with another \$10 million donation from Ms. Wrigley.

The Institute conducts research, education, and problem solving related to sustainability, with a special focus on urban environments. More than half of the world’s population lives in cities: global sustainability cannot be achieved without making cities sustainable.

#### **Robotic Upper Extremity Repetitive Therapy or RUPERT, (2006)**

ASU researchers and Tempe-based Kinetic Muscles, Inc. developed a robotic arm to help stroke survivors regain the ability to perform basic tasks, such as reaching for objects or feeding themselves. RUPERT, Robotic Upper Extremity Repetitive Therapy is able to mimic a fluid, natural extension of the arm using pneumatic muscles and can be programmed for repetitive exercises specific to the user.

Recent research suggests that stroke survivors can recover significant use of their arms by performing repetitive motor function exercises over a period of time. The availability of a device like RUPERT, that

could be used at home with greater frequency and for a long period of time, may prove to be a more cost-effective approach with significant success.

### **Spinal Cord Rehabilitation (2006)**

A collaboration between ASU's Biodesign Institute and the Clinical Neurobiology & Bioengineering Research Center at Good Samaritan Medical Center was established to assist people with spinal cord injuries to exercise, stand, and possibly prevent chronic disease due to inactivity.

Four separate studies are underway, each with a different focus for people living with spinal cord injury (SCI). The team hopes to demonstrate that this system can be used as an effective form of therapy in the clinic.

### **Decision Theater: *Visualizing Possibilities – Realizing Solutions* (2005)**

Policy makers, business leaders, and others are often overwhelmed with complex information and enormous demands on their time. Little opportunity exists to read through voluminous reports searching for nuggets of information to help inform decisions related to an issue at hand. Thus, many decision makers aren't able to take advantage of the available science and expertise that could be part of their decision making process if it were presented in a more accessible, user-friendly way.

Arizona State University created a new type of visualization center—one focused on connecting the science and expertise of ASU with the needs of the community. Decision Theater has been designed to assist policy makers and others in making decisions about complex issues ranging from urban growth and public health to education and the environment.

### **Hubble Ultra-Deep Field (2004)**

"The Hubble Ultra-Deep Field (HUDF) was an experiment designed by a large team of people and came from the then-director of the Space Telescope Science Institute, Steven Beckwith," says ASU professor Rogier Windhorst. The research was to find, image, and study the objects that completed the second ionization of the universe, about a billion years following the Big Bang. The objects are extremely faint because they are so distant, so a large telescope outside the atmosphere is needed to detect them. Between September 2003 and January 2004, the Hubble Space Telescope took 800 exposures of the same star field in the constellation of Fornax, south of Orion. The 800 exposures added up to 11.3 days of continuous viewing time, or about 1 million seconds

### **Flexible Display Center (2004)**

The Flexible Display Center at Arizona State University is an ASU-led venture in which academia, industry, and government actively collaborate on rapid technology innovation, development, and integration to create a new generation of revolutionary information displays that are flexible, intrinsically rugged, lightweight, ultra-thin, and low powered.

The FDC was awarded a \$43.7 million grant from the military to develop an array of devices that will revolutionize both commercial and battlefield communications. "The center will bring flexible display technology to the brink of commercialization," Greg Raupp, FDC Director explains. "It will become of the shelf technology available to the Army that also can be used in a variety of commercial flexible displays for consumers."

Two patent applications have been filed by FDC, a fourth is under review by AzTE.

## Investment

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In FY2002, ASU relied primarily on state funding. The low-tuition model in effect at the time provided few resources for financial aid, which meant that help was unavailable to those who needed it most. Private investors were relatively few.

Since then, we have worked to demonstrate the value of investing in ASU to local and state governments, students and their families, and private investors. We have earned their confidence as demonstrated by the following:

- ASU's endowment has grown by 100 percent from \$221 million in 2003 to \$441 million in 2010. For the same period, the total assets of the ASU Foundation have grown from \$313 million to \$696 million – a 122 percent increase – and the number of individual donors has grown by 18 percent.
- The ASU Foundation has raised \$108.9 million for ASU scholarships from July 1, 2002 through June 30, 2010.<sup>1</sup>
- Since July 1, 2002, the ASU Foundation has raised \$58.6 million in support of endowed faculty positions.<sup>1</sup>
- Dollars raised for capital projects by the ASU Foundation between July 1, 2002 and June 30, 2010 total \$93 million.<sup>1</sup>
- Investment in ASU by the State of Arizona through state appropriations grew from \$311.8 million in FY2003 to \$468.4 million in FY2009 (before rescission), a 50 percent increase.
- ASU's total net assets have grown almost 19%, from \$869 million in FY2002 to \$1.03 billion in FY2010. ASU's total revenue over the same time has grown from \$833 million to \$1.6 billion, a 92% increase. (Note: FY2010 information is based on draft, unaudited financial statements.)
- Local governments made unprecedented investments in a state university, with the City of Phoenix allocating more than \$220 million in voter-approved bond money to build the Downtown Phoenix campus, and the City of Scottsdale donating a \$41.5 million parcel of land with \$45 million in infrastructure improvements to build SkySong.

## Organizational Transformation

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Traditional academic departments have advanced understanding in defined areas of intellectual endeavor. Over time, however, they have developed into silos, reinforcing their own existence and isolating faculty members from routine intellectual interaction with those in other departments. Traditional university organizations also are slow to react and respond, operating at a pace that is out of touch with the rate of change in the rest of the world. Addressing the problems of the 21st century requires a more fluid, responsive organizational structure, where faculty with radically different skills and experiences can work together to advance understanding and solve problems in ways that have not been possible before.

Since FY2002, ASU has made remarkable progress in transforming itself from an organization based strictly on traditional academic departments into a truly interdisciplinary institution. Since FY2002, 31 new schools have been started:

- New schools in the W.P. Carey School of Business include:

- School of Accountancy
- Morrison School of Management and Agribusiness
- School of Health Management and Policy
- New schools in the Herberger Institute for Design and The Arts include:
  - School of Architecture and Landscape Architecture
  - School of Arts, Media and Engineering
  - School of Dance
  - School of Design Innovation
  - School of Theatre and Film
- New schools in the Ira A. Fulton Schools of Engineering include:
  - School of Biological and Health Systems Engineering
  - School of Sustainable Engineering and the Built Environment
  - School of Computing, Informatics, and Decision Systems Engineering
  - School of Electrical, Computer, and Energy Engineering
  - School of Multiscale Science and Engineering: Mechanical, Aerospace, Chemical, and Materials Engineering
- Walter Cronkite School of Journalism and Mass Communication
- The School of Letters and Sciences
- New schools in the College of Liberal Arts and Sciences include:
  - School of Earth and Space Exploration
  - School of Geographical Sciences and Urban Planning
  - School of Government, Politics and Global Studies
  - School of Historical, Philosophical and Religious Studies
  - School of Human Communication
  - School of Human Evolution and Social Change
  - School of International Letters and Cultures
  - School of Life Sciences
  - School of Materials
  - School of Mathematical and Statistical Sciences
  - School of Social and Family Dynamics
  - School of Social Transformation
- New schools in the College of Public Programs include:
  - School of Community Resources and Development
  - School of Criminology and Criminal Justice
- School of Sustainability

The university also has expanded its academic portfolio to meet needs for a highly skilled, innovative workforce by adding 36 new bachelor's degrees, 32 master's degrees and 30 doctoral degrees.

ASU's research enterprise has been redefined and expanded with the following new centers and institutes since FY2002:



- American Indian Policy Center
- Biodesign Institute
- Mathematical, Computational and Modeling Sciences Center
- Center for Biology and Society
- Center for Jewish Studies
- Center for Nanotechnology in Society
- Virginia G. Piper Center for Creative Writing
- Institute for Humanities Research
- Institute for Social Science Research
- Global Institute of Sustainability
- Family and Human Dynamics Research Center
- Beyond: The Center for Fundamental Concepts in Science
- International Center for Species Exploration
- Center for Population Dynamics
- The Edward C. Prescott Center for Advanced Study of Economic Efficiency
- The Center for Environmental Economics and Sustainability Policy
- Center for Film, Media and Popular Culture
- Center for the Study of Religion and Conflict
- Center for Urban Innovation
- ASU-Sichuan University Joint Confucius Institute
- Center for the Study of Institutional Diversity
- Center for Applied Behavioral Health Policy
- Center for Violence Prevention and Community Safety
- Center for Civic Education and Leadership
- Center for Improving Health Outcomes in Children, Teens & Families
- Center for Healthy Outcomes in Aging
- Hartford Center of Geriatric Nursing Excellence
- Center for Healthcare Innovation & Clinical Trials
- Megapolitan Tourism Research Center
- Center for Community Development and Civil Rights
- Advanced Technology Innovation Center
- Donald W. Reynolds National Center for Business Journalism
- Knight Center for Digital Media Entrepreneurship
- Cronkite High School Journalism Institute
- Melikian Center for Russian, Eurasian and East European Studies
- North American Center for Transborder Studies
- Institute for Computing and Information Science and Engineering
- ASU Stardust Center for Affordable Homes and the Family
- Wireless Integrated Nano Technology
- Arizona Initiative for Renewable Energy
- Arizona Institute for Nanoelectronics
- Center for the Advancement of Evidence-Based Practice
- Center for Policy Informatics
- Southwest Interdisciplinary Research
- Practice, Research and Innovation in Mathematics Education Center
- Center for Advancing Business through Information Technology
- Center for Executive and Professional Development
- Center for Real Estate Theory and Practice

- Adaptive Intelligent Materials and Systems Center
- Center for Adaptive Neutral Systems
- Center for Earth Systems, Engineering and Management
- Center for Environmental Fluid Dynamics
- Center for Health Information and Research
- Information Assurance Center
- Sensor Signal and Information Processing Center
- Center for Law Leadership and Management
- Consortium for Science, Policy and Outcomes
- Center for Biological Physics Center for Metabolic Biology
- Center for Social Dynamics and Complexity
- Center for Bioarchaeological Research
- GeoDa Center for Geospatial Analysis and Computation

### Major Partnerships and Collaborations

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As a New American University, ASU has worked to become a force, not just a place; and to be globally engaged, in service to the state, the nation and the world.

Partnerships and collaboration with other groups and institutions are key to achieving our mission. Since FY2002, we have developed the following domestic partnerships:

- **ASU-Mayo Clinic partnership:** In 2005, ASU and Mayo Clinic formed several collaborations, including joint educational and research programs. Joint degree programs exist in law/medicine, business/medicine and nursing. Collaborative research areas include biomedical informatics and cancer, with shared lab and office space on both ASU and Mayo Clinic Arizona campuses. Joint seed funding is \$1.3 million to date for research projects in cancer, Alzheimer's disease, cellular and molecular biomedicine, vaccine development, genetics, and sensory motor coordination. We have one joint faculty hire with more expected this year.
- **ASU-Barrow Neurological Institute partnership:** The ASU-Barrow Neurological Institute partnership includes research collaborations in magnetic resonance imaging (MRI); neuroscience, cardiovascular, biomedical informatics; infectious diseases; and tissue bank collaboration. A joint interdisciplinary neuroscience graduate program, ABOR approved, has been created to utilize the strengths of both institutions, with joint appointments for ASU faculty members and BNI clinicians. A joint small animal 7T imaging center, to be housed at BNI has been created in connection with the Keller Imaging Lab at BNI . The imaging center, which opened in spring 2009, is funded in part by an NIH grant as well as funds from Barrow Neurological Institute.
- **ASU-Banner Health partnership:** Banner Health and ASU collaborate on cancer, diabetes, spinal cord injury and rehabilitation, Alzheimer's disease and haptics research.
- **ASU-Carl T. Hayden VA Medical Center partnership:** ASU and Veterans' Affairs are working together in developed research projects in diabetes, and mental health studies in post-traumatic stress disorder. This involves joint research projects and joint faculty appointments. Other key areas of collaborative research include: cardiovascular disease, metabolic disorders, mental health/sleep disorders and musculo-skeletal disorders.

- **ASU-Maricopa Integrated Health System partnership:** ASU researchers and MIHS clinicians work together in the fields of orthopedics, burns, depression, trauma, obstetrics and gynecology and diabetes. Partnerships between MIHS and ASU's Southwest Interdisciplinary Research Center have led to the Familias Sanas (Healthy Families) project to assist special populations.
- **ASU-TGEN partnership:** The ASU-TGEN partnership in genetic and molecular research has resulted in more than two-thirds of TGen's faculty members submitting joint extramural grant proposals with ASU faculty and staff. Other partnering initiatives include the maintenance of a joint cluster supercomputer facility, shared educational programs, TGen's assistance in recruiting ASU senior faculty hires and internships for ASU students.
- **ABC News on Campus:** ABC News chose the Walter Cronkite School of Journalism and Mass Communication to be one of its partners in ABC News on Campus, an initiative that provides an opportunity for students to report on stories in their region and produce a wide array of content for ABC News' broadcast platforms.
- **Tubes in the Desert:** Tubes in the Desert is a two-year initiative that will leverage key investments of government and industry partners including ASU's Bidesign Institute and Arizona Public Service to grow and harvest photosynthetic bacteria to create a renewable energy source.
- **TUV Rheinland PTL:** As a partnership between the Photovoltaic Testing Laboratory at ASU, TUV Rheinland and Arizona Public Service, TUV Rheinland PTL is the most comprehensive, sophisticated, state-of-the-art facility for testing and certification of solar energy equipment in the world.
- **Arizona Indicators Project:** ASU partnered with the Arizona Community Foundation, Valley of the Sun United Way, Arizona Republic and Arizona Department of Commerce to create a Web tool that popularizes data describing Arizona's development. The easy-to-understand visuals contained on the Web site include data on economics, education, innovation, sustainability, quality of life, health, human services, criminal justice and children and families.
- **Ashoka: Innovators for the Public:** As part of Ashoka's Changemaker Campus initiative, in 2010 ASU joined a consortium of 9 other colleges and universities to set a new standard of excellence for social entrepreneurship education. Since its founding in 1980, Ashoka has provided long-term support to more than 2,500 social entrepreneurs in over 70 countries. ASU is working in partnership with Ashoka and its network of Ashoka Fellows to foster and accelerate teaching, research and action in social entrepreneurship.
- **Teacher Preparation and Evaluation Project (T-Prep):** T-Prep is a collaborative effort of ASU, University of Arizona and Northern Arizona University to assess teacher preparation programs and ensure that all three universities are producing effective teachers. ASU is taking the lead in the statewide effort following new graduates since the spring of 2008 and examining them using the National Board for Professional Teacher Standards.
- **ASU-Teach for America partnership:** ASU partners with Teach For America (TFA) in four areas: TFA recruitment, Alumni Leadership, the Phoenix Institute and Teacher Support and Development by offering a tailored master's program for TFA corps members through the Mary Lou Fulton Teachers College. Since 2007, 299 TFA corps members have graduated from ASU with master's degrees in education. In 2009, six of 19 Fulbright fellows were ASU-TFA graduates. Twenty-five thousand students in the Phoenix metro area were impacted by nearly 400 TFA corps members in the 2007-2008 school year. During 2009 and 2010, an average of 600 TFA

Phoenix Summer Institute corps members made an impact on 6,000 students in the Phoenix metro area. In the 2009-2010 school year, 510 TFA corps members impacted 20,000 students per day in the state of Arizona.

- **iTeachAZ program** : Since 1998, ASU's Mary Lou Fulton Teachers College has partnered with school districts statewide to prepare teachers in the districts using on-site faculty, satellite video conferencing, mentoring and internships providing more than three-times the amount of hands-on classroom experience as traditional teacher education programs.
- **Rodel Community Scholars**: In partnership with the Rodel Charitable Foundation of Arizona, the scholars program allows 25-30 undergraduate students to identify and address key issues in education. In 2008, the scholars identified early dropout behaviors and discovered that the dropout process can begin as early as kindergarten. Their research was published in the Journal of Education Research.
- **BEST (Building Educator Support Teams)**: The BEST program offers mentoring and support for 1st and 2nd year teachers statewide, to enhance the effectiveness and help retain these new teachers. In 2009, BEST supported 125 school partnerships, with 294 professional development sessions and 3,000 coaching visits providing an impact to 78,000 K-12 students.
- **Maricopa-ASU Alliance**: The Maricopa to ASU Pathways Program (MAPP) and the Maricopa-ASU RN-BSN Pathway Program provides transfer options for students pursuing their degrees within the Maricopa County Community College District.

ASU has developed global partnerships with the following institutions since FY2002:

- **Instituto Tecnológico De Monterrey (Mexico)**: including an on-campus network, online network, Binational Lab and Entrepreneurial Network.
- **Sichuan University (PRC)**: includes the Confucius Institute, Creative Writing/English and University Design Consortium.
- **Dublin City University (Ireland)**: includes technology transfer, a Binational Lab (biosensors) and Conflict Management and Innovation.
- **Nanyang Technological University (PRC)**: includes the Trinational Lab, Journalism and Entrepreneurship.
- **TechBA Arizona**: A business accelerator that is the result of a partnership between the State of Arizona, the United States-Mexico Foundation, the Ministry of the Economy of Mexico and ASU's SkySong will bring brought representatives of knowledge-based Mexican businesses to Arizona. With the assistance of ASU SkySong, TechBA's success caused them to outgrow their accelerator space in the project, and they have moved into larger space in Phoenix while maintaining a collaborative relationship with SkySong., providing companies with office space and support.
- **Japan Technology Group**: Arizona Technology Enterprises (AzTE) established a formal partnership in 2010 with eight top Japanese research universities represented by JTG to cross-market technologies.

## Infrastructure Investment

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In FY2002, ASU's infrastructure was inadequate for the university's existing student population, let alone able to serve the growing numbers of qualified high school graduates who would need near-term access to higher education. Classrooms, research laboratories and offices were cramped and poorly equipped. Major institutional software systems were in need of replacement. There were few residence halls available, so the vast majority of students lived off campus even as freshmen, exacerbating problems with retention and graduation.

The university had one main campus in Tempe with two satellite campuses that were viewed as providing duplicate, but lesser quality, programs than those offered on the Tempe campus. Town/gown relations with the City of Tempe were strained by concerns over traffic congestion and the negative impact on property values of large numbers of students living in off-campus rental housing.

The buildings on the West campus were relatively new and in good condition, but those in Tempe were in a significant state of disrepair. The Polytechnic campus was composed of World-War-II-era Air Force base buildings that had been retrofitted for use as classrooms, offices, research labs and residences. None of the buildings on any ASU campus had been designed and built with consideration for minimizing utility costs and negative impact on the environment.

We initiated a comprehensive development planning process in 2003 that brought together all of the university's stakeholders with local governments, utilities and other suppliers to assess the current state of the university's infrastructure and establish a long-term build-out plan that would meet the needs of all. The resulting Comprehensive Development Plan was published in 2005 and has been used since as the framework for new construction and renovation of existing facilities.

We established that it would be necessary for ASU to grow to accommodate 100,000 students by 2020 in order to meet our commitment to the citizens of Arizona that no qualified Arizona student would be denied access to a college education. We further instituted a strategic redesign called One University in Many Places that established distinct but equal missions for all ASU campuses and set the expectation that academic quality would be equally rigorous for all programs, allowing the university to accommodate the majority of the growth detailed in the Comprehensive Development Plan on campuses other than Tempe.

We overhauled the university's information technology organization and infrastructure, replacing high-cost internally developed applications such as e-mail with free, state-of-the-art programs provided by Google and other companies. We deployed wireless network service on all campuses, greatly expanding network and computing capacity. We replaced fragile legacy software with new platforms that greatly enhanced the student experience and allowed the university to meet its student enrollment growth objectives. We also set the stage for a significant expansion of online course delivery.

As a result of these and other actions, we increased classroom, classroom laboratory, library, office, residence hall and other space by 76 percent, adding a new campus, a global innovation park and expanding capacity in existing locations. The details by location are as follows:

### Tempe campus

- In FY2010, we completed phase 1 of the Campus Solarization Project, which, at build out, will enable the university to generate 20 percent of its own power. The project was entirely funded by a third party.



- ASU acquired an office-retail complex called the Brickyard at the main intersection in Tempe, which contains more than 390,000 square feet of mixed-use space. The complex now houses the Decision Theater, the dean's office of the Ira A. Fulton Schools of Engineering and the computer science department in just under 86,000 square feet of the facility.
- Completed in January 2004, Lattie F. Coor Hall houses classrooms and the departments of Political Science, Philosophy, History, Sociology, Transborder Chicana/o and Latina/o Studies, and Speech and Hearing Science. It is also home to the Institute for Social Science Research, the Centers for Latin American Studies, Russian and East European Studies, Medieval and Renaissance Studies, and Asian Studies.
- The Fulton Center was completed in 2005 and houses the College of Liberal Arts and Sciences, the ASU administration and ASU Foundation.
- Hassayampa Academic Village is a living-learning facility focused on the goals of creating an integrated, self-contained academic and residential community with classrooms, computer labs, tutorial spaces, residential dining, and retail venues. The complex creates a residential and academic village for up to 2,000 freshmen.
- Vista del Sol, completed in fall 2008, consists of housing for upperclassmen and graduate students and is located on the southernmost boundary of the Tempe campus. The units are apartment-style and the student programming is directed to a more mature, independent, residential population. Vista del Sol comprises approximately 1,850 beds in apartment style buildings.
- We renovated the former nursing building to house the Global Institute of Sustainability. It is one of the most eco-friendly buildings on campus.
- The Biodesign Institute Building A, at 177,661 square feet, was completed in August 2004 at a cost of \$72.8 million.
- With the Biodesign Institute Building B, and Interdisciplinary Science and Technology Buildings 1 and 2, ASU was able to add another 420,000 square feet of research space.
- A new facility was constructed to house the ASU Police Department, doubling the size of the previous building and significantly improving access for faculty, staff and students.
- The Weatherup Indoor Basketball Facility provided 51,037 sq. ft. of needed practice space. It was completed in May 2009 at a cost of \$22 million.
- Barrett Honors College is the nation's first complete honors college campus, with 510,000 square feet of space for ASU's honors students. It was completed in August 2009 at a cost of \$110 million, financed entirely by a third party.

**Downtown Phoenix campus:** We opened an entirely new campus in Downtown Phoenix in fall 2006, as a result of an unprecedented public referendum.

- On Aug. 15, 2006, ASU opened its doors to the Downtown Phoenix campus, enrolling more than 3,000 full-time students and more than 6,000 students taking at least one class there and supported by 600 faculty and staff. The first phase of the campus included the colleges of Nursing and Healthcare Innovation, Public Programs, and University College.
- The University Center building boasts modern classrooms, offices, labs, seminar rooms and study areas. It houses student services, Information Commons (Student Computing/ASU

Library), the ASU Bookstore and a small café/coffee house. The College of Public Programs, School of Letters and Sciences, University College administration offices and student services also operate within this building.

- The Post Office building serves as a gathering place for students via meeting rooms while providing additional student services such as student advocacy, rights and responsibilities, career services, campus services hotline, student engagement and more.
- The Walter Cronkite School of Journalism and Mass Communication building opened in the summer of 2008, bringing the school closer to more major metropolitan news operations than any journalism school in the country. In fall 2009 Arizona PBS affiliate Eight/KAET-TV moved into a new, state-of-the-art studio in the shared facility.
- Previously called Park Place, the Nursing & Healthcare Innovation building is occupied by the College of Nursing & Healthcare Innovation student services, nursing research centers, faculty, staff and administrative offices.
- Taylor Place is Arizona State University's premier Downtown Phoenix residential community. The two towers, each 12 stories above the common, first floor, houses 1,250 students as well as a dining facility and retail store. It is financed by a third party.
- The Nursing and Healthcare Building, Phase 2, brought 83,641 additional square feet. It was completed in July 2009 with third party financing.

### **Polytechnic campus**

- Completed in summer 2008, the Polytechnic Academic Complex provides general university classrooms, classroom laboratories and other specialized instructional spaces, as well as faculty and departmental offices to serve a campus enrollment of approximately 10,000 students.
- Interdisciplinary Science and Technology Building 3 is a 34,600-square-foot facility, opened in 2006, devoted to laboratories that support applied research in biological sciences, psychology, healthy lifestyles and plant-made pharmaceuticals.

### **West campus**

- The Devils Den, a major remodeling project, opened in fall 2009 to provide more space for students in the University Service Building. The area includes food service, a student lounge and patio, student meeting rooms, student offices and an office of the State Press (the university's student newspaper). In addition the ASU Bookstore and cafeteria were expanded and enhanced. The ASU Student Health Services clinic was expanded and relocated.

### **ASU Research Park**

- ASU acquired a unique \$100-million flat panel display building that Motorola was closing for \$29 million and acquired a Motorola research group that was being disbanded. Both were instrumental in ASU's winning a \$43.7 million Army research award for flexible display computers, which was subsequently renewed for another \$50 million, against 99 other universities.

### **Skysong, the ASU Scottsdale innovation Center**

- The Scottsdale City Council voted to give ASU a \$41.5-million, 42-acre parcel of land in Scottsdale and added \$45 million in infrastructure improvements for the university to build a

research/innovation park. It opened in 2008 with 20 global start-up and mid-sized companies from eight foreign countries.

- In 2010, ASU SkySong's two buildings reached a combined occupancy of more than 80 percent, including 45 companies representing eight foreign countries. In addition, 18 'virtual' companies, representing an additional three foreign countries, utilize the services and support of ASU SkySong without a physical presence at the project.
- Since its opening, ASU SkySong has hosted more than 1,600 community meetings and events attracting more than 50,000 attendees.

## Community Engagement

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Our New American University design aspirations also include connecting with our communities and serving their needs through mutually beneficial partnerships. Our accomplishments in this area since the end of FY2002 include:

- In 2008 and 2009, ASU was named to the Presidents Higher Education Community Service Honor Roll—the highest federal recognition a university can receive for its commitment to volunteering, service learning and civic engagement. In 2009, more than 10,000 students engaged in 400,000 hours of community service.
- ASU's commitment to higher education as an agent for positive social transformation earned the university a coveted place in the Changemaker Campus Consortium, announced in Sept. 2010 by Ashoka – a global non-profit network of more than 2,500 social entrepreneurs. ASU joins an elite group including Babson College, The New School, Tulane University and Duke University.
- Arizona State University earned a spot on the annual list of "Peace Corps Top Colleges and Universities" ranking No. 24 nationally for large universities. Since Peace Corps' inception in 1961, 844 ASU alumni have served overseas with the corps. ASU currently has 43 alumni serving in 32 of the 76 countries where Peace Corps works.
- We were awarded the Carnegie Foundation for the Advancement of Teaching's two Social Engagement classifications: Curricular Engagement and Outreach & Partnerships
- The Lodestar Foundation donated \$5 million, the largest gift in its history, to the ASU Center for Nonprofit Leadership and Management, which was renamed the Lodestar Center for Philanthropy and Nonprofit Innovation.
- ASU has 473 community outreach programs in 548 locations, offered by 149 units, totaling 1,153 outreach opportunities (see <http://community.asu.edu/database/>).
- University Public Schools, Inc., an affiliate of ASU, opened its first school, the Polytechnic Elementary School, in August 2008, and opened University Public School Phoenix in August 2009. Together, the schools currently enroll more than 900 students.
- We established the Office of the Vice President for Education Partnerships to improve the academic performance of students in Arizona from early childhood through high school completion and promote the attainment of a college degree. In 2009-2010, the partnership worked with over 111,261 local students through 25 programs.
- American Dream Academy, a program helping parents in low-income, disadvantaged areas learn how to transform their children's educational experience, won the regional and national 2009 C.

Peter Magrath University Community Engagement Award. More than 7,000 parents have graduated from the American Dream Academy. Since 2006, the program has "graduated" parents of students attending 41 different schools, and indirectly impacted more than 24,000 low-income, minority youth throughout the greater Phoenix region..

- We launched the President's Medal for Social Embeddedness in 2003-2004 to recognize ASU teams that have demonstrated excellence in identifying a community need or issue and fostering mutually-supportive partnerships with Arizona communities to implement successful solutions.
- We established the Stardust Center for Affordable Homes and the Family in 2003 to engage in design/build efforts to create models of affordable, sustainable housing that are also designed to be culturally specific.
- We hosted a series of Communities Connect Dialogues with over 400 participants engaged on all four campuses. Attendees learned about collaborative efforts to make an impact in our local and global communities and ways to get involved (see [http://asunews.asu.edu/20100324\\_communitiesconnect](http://asunews.asu.edu/20100324_communitiesconnect)). Partners included the Arizona State Credit Union and Ignite Phoenix.
- In 2009 we were named to the President's Higher Education Community Service Honor Roll in recognition of the institution's exemplary civic engagement programs and our invaluable relationships with our community partners. In 2008-2009, nearly 10,500 ASU students provided almost 400,000 hours of community service at sites throughout the state.
- In 2010 we launched the Community Changemaker Competition as part of the ASU Innovation Challenge (see <http://innovationchallenge.asu.edu/>). 5 student teams were awarded \$2000 each to develop projects that address local needs in partnership with organizations including The Improviders Association, Stand Up for Kids and National Auto Body Council.
- In 2010, ASU launched the Sanford Education Project as part of a five-year, \$18.85-million investment from entrepreneur and philanthropist T. Denny Sanford. ASU, in partnership with Teach For America, will bring major substantive changes to the way ASU recruits, selects, and prepares future K-12 teachers.
- The ASU Foundation, through face-to-face appointments, has connected 19,328 new relationships to the university since July 1, 2002.

## Athletics

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Since 2002, ASU student-athletes have achieved remarkable results, both on the playing field and in the classroom. Those results include:

- In 2010 ASU ranked second only to Stanford in the Pac-10 conference on the NCAA's Academic Progress Ratings. ASU ranked No. 2 in the Pac-10 Conference and in the top 10 in Division I athletics programs for the highest numbers of Academic All-Americans since 2000.
- ASU was named the No. 1 college athletics program in the U.S. by *Sports Illustrated* in 2008. The Sun Devils earned fourth place in the U.S. Sports Academy Director's Cup the same year.
- **Baseball** has remained the strongest program in the Pac-10 and one of the strongest nationally, notching a 146-15 home mark in the past four seasons and 50-win seasons in back-to-back

seasons (2009 and 2010) for the first time since 1981-82 and reached the College World Series in back-to-back seasons for the first time since 1993-94. It has made four trips to Omaha since 2005 and has made 11 straight NCAA Tournaments. Zack MacPhee earned the 2010 Pac-10 Player of the Year as ASU became the first school in league history to win the honor in four straight seasons, and Seth Blair earned Pitcher of the Year in 2010 as ASU became first school to earn that hardware in three straight seasons. ASU head coach and alum Tim Esmay has now participated in CWS as player, assistant coach and head coach. ASU has finished the season ranked in the top-10 in six of the past eight seasons.

- **Men's Basketball** hired Herb Sendek after the 2004-05 season and, in addition to earning Pac-10 Coach of the Year in 2009-10 (just the second Sun Devil coach to earn the honor in 32 seasons and the first since 1979-80), he has led ASU to three straight 20-win seasons for the first time since 1961-63. James Harden was the third pick in the 2009 NBA Draft, the second-highest Sun Devil, while Jeff Pendergraph went 31st that same season as ASU had two players drafted for the first time since 1981. Harden also became the first consensus first-team All-American in Sun Devil history.
- **Women's Basketball:** ASU head coach Charli Turner Thorne has led the Sun Devils to the postseason 11 consecutive seasons, including a school record five consecutive NCAA Tournament bids between 2005 and 2009. In 2007 and again in 2009, Turner Thorne had the Sun Devils one win from the Final Four in leading the program to its only two Elite Eight appearances in school history. Briann January, the two-time Pac-10 Defensive Player of the Year and all-time assists leader at ASU, was selected sixth overall in the 2009 WNBA Draft. Since 2005, the ASU women's basketball team has led the Pac-10 in the number of First-Team All-Academic honorees (7) and the combined number of First- and Second-Team honorees (13).
- **Soccer:** Under the guidance of third-year head coach Kevin Boyd, the Sun Devil soccer team returned to the NCAA Tournament in 2009 following a six-year absence. ASU's nine First-Team Pac-10 All-Academic honorees from 2007-09 are the most of any team in the Pac-10 during that span.
- **Football:** Since 2002, the football team has participated in five bowl games, including the Holiday Bowl (2002 and 2007), the Sun Bowl (2004), the Insight Bowl (2005) and the Hawaii Bowl (2006). Head Coach Dennis Erickson was the 2007 Pacific-10 Conference Coach-of-the-Year and has put together three straight recruiting classes that are among the best in ASU history. Linebacker Vontaze Burfict was the 2009 Pac-10 Conference Freshman Defensive Player-of-the-Year while tight end Zach Miller was the conference Offensive Player-of-the-Year in 2004. Terrell Suggs and Dale Robinson earned Pac-10 Defensive Player-of-the-Year accolades in 2002 and 2005, respectively. Placekicker Thomas Weber won the Lou Groza Award in 2007, given annually to the nation's top collegiate placekicker. Since 2002, ASU has had 18 football student-athletes win some sort of All-American recognition, including consensus All-Americans Thomas Weber (2007), Zach Miller (2006), and Terrell Suggs (2002, unanimous). Suggs won three national awards in 2002 (ASU's first in history), including the Bronko Nagurski Award, The Rotary Lombardi Award and The Ted Hendricks Award. Since 2002, 87 Sun Devils have earned All-Pacific-10 Conference honors.
- **Men's Golf** under 1996 National Coach of the Year Randy Lein, has reached the NCAA Championships every spring starting with the 2003 event, as its eight-year streak is the third-best current mark in the nation. Alejandro Canizares won the NCAA title as a freshman in 2003, the sixth time a Sun Devil has won the event.

- **Women's Golf**, under 2009 National Coach of the Year Melissa Luellen, won the NCAA Championships in 2009, their seventh all-time title and first since 1998. ASU holds the NCAA record for the longest streak of consecutive NCAA Championship appearances at 19. The Sun Devils won the Pac-10 Championships in 2007 and 2009 and have won a total of 20 tournament titles since 2004. Since 2003, an ASU golfer has been a tournament medalist 14 times including the 2008 NCAA Champion Azahara Munoz and Pac-10 Champions Louise Stahle (2005) and Carlota Ciganda (2009 and 2010).
- Since 2002, the **Softball** program has taken to new heights, where in 2002 alone the Sun Devils made their third WCWS appearance with the leadership of Head Coach Linda Wells. Wells brought ASU to the NCAA twice more before retiring after 16 seasons in 2005 which sparked a change in the program starting with the hiring of former ASU baseball player, Clint Myers as only the third head coach of the storied program on June 29, 2005. Since that time, Myers has brought to ASU: ASU's first NCAA Championship in 2008, Four consecutive WCWS appearances from 2006-2009 (a school record), Five consecutive Super Regional appearances from 2006-2010 (a school record), 11 NFCA All-Americans, 2 USA Softball Team Members, 3 Finalists for USA Softball Player of the Year, 39 All Pac-10 team awards, 38 Pac-10 All-Academic awards (11 in 2010 alone, an ASU school record), 3 Pac-10 Player of the Year awards, 1 Pac-10 Defensive Player of the Year award, 2 Pac-10 Newcomer of the Year award, 13 ESPN the Magazine Academic Awards, 5 Honda Broderick Award Finalists and 1 Pac-10 Pitcher of the Year Award.
- Since 2002, the **ASU Volleyball** team has seen a tremendous amount of change as the 2002 season sparked coaching legend, Patti Snyder-Park's final season with ASU before retiring after 14 seasons. Most recently with the Sun Devil Volleyball program was the hiring of Head Coach Jason Watson on January 29, 2008 where in just his second season, Watson, in 2009, took the Sun Devils to their best start since 1992.
- **Men's Cross Country** has qualified for the NCAA Championships as a team six times in the history of the program with four of those coming under Louie Quintana since his hiring in 2004. The team had finished 14th and 20th in its previous NCAA appearances and, since then, placed a program-best eighth overall in 2004 and added Top 20 finishes in 2005 (17th) and 2009 (19th). The men have placed in the top five of the toughest distance conference in the nation seven times since 2002, including a runner-up finish in 2004 and third-place showings in 2002 and 2009.
- **Women's Cross Country** has advanced to the NCAA Championships for the past 12 years after never having participated in the event, including the past six in a row under Louie Quintana. That 12-year streak currently ranks as the third-longest active and the eighth-longest all-time in NCAA history. The women also have earned a pair of trophy finishes (Top 4) at the national level as they finished fourth overall in both 2005 and 2007. Since the 2002 season (2002-03 academic year), seven of the women's 11 all-time All-America honors have been earned, including three by Amy Hastings (2003-05), the most by one individual ASU athlete in cross country. Hastings also won the 2004 Pac-10 Cross Country title, making the first (and so far only) Sun Devil, both male and female, to have ever won the Pac-10 title in the sport.
- **Men's Track & Field** has continued to grow under 13th-year head coach Greg Kraft as the program has placed in the Top 10 in its past six NCAA Championships (indoor and outdoor included). In that time, the men won the 2008 NCAA Indoor Championships for its first national indoor title and just the second in the program's history (1977 outdoor) and added a fourth-place trophy at the 2010 NCAA Outdoor Championships. Since the 2003 NCAA indoor and



outdoor seasons, the men have won five individual indoor national titles – the first in the history of the program – and four outdoor crowns with Ryan Whiting earning six of those titles (three indoor shot put, two outdoor shot put and one outdoor discus).

- **Women's Track & Field** has become one of the top programs in the nation under 13th-year head coach Greg Kraft as his women, since 2002-03, have won 14 individual national titles, 75 All-America honors and 31 Pac-10 titles while adding three NCAA Championships (2007 and 2008 NCAA Indoor and 2007 NCAA Outdoor) and three Pac-10 Championships (2006-08). Sarah Stevens, one of the NCAA Top VIII Award winners in 2009-10, closed her career with 15 individual All-America honors while Jacquelyn Johnson was one of the most accomplished collegiate athletes of all-time as she won the indoor pentathlon (five events) three times (she was second as a true freshman) and the outdoor heptathlon (seven events) all four times she competed. The coaching staff was equally honored as Kraft was named the national coach of the year three times, his assistant coaches David Dumble (throws) and Louie Quintana (distances) were named national assistant coaches of the year three and one time, respectively, and Kraft was a three-time Pac-10 Coach of the Year.
- **Water Polo** has continued to find a home among the Top 10 in the national rankings under fifth-year head coach Todd Clapper. Playing in the toughest conference in the nation, the Mountain Pacific Sports Federation (a conference that has won every NCAA title contested), the Sun Devils have continually been ranked in the Top 10 in the past three years and have climbed into the Top 6 on several occasions in a poll that predominately has a Top 8 filled totally with MPSF teams. Several of Clapper's student-athletes also have competed on the international level for national teams in Australia, Germany, Canada and New Zealand, which Clapper also has served as the national team head coach.
- **Wrestling** hired Shawn Charles as its head coach prior to the 2009-10 season and is already attracting some of the top individuals in the nation to the program, including transfers from national powers Oklahoma State and Penn State, while also adding talent from across the country. Since 2002-03, the Sun Devils have won the Pac-10 Championship three times (2003, 2005, 2006) and finished in the Top 25 five times.
- **Swimming & Diving**, hired Dorsey Tierney-Walker as their head coach in May 2009. Mark Bradshaw, the 2003 National Coach of the Year, has proven to be one of the premier diving coaches in the country. He led Joona Puhakka to four NCAA Individual Championships and has additionally led six athletes to 20 Pac-10 titles. Bradshaw himself is a seven-time Pac-10 Men's Diving Coach of the Year and also won Pac-10 Women's Diving Coach in 2004. Since 2003, 20 women swimmers and 10 men swimmers have earned All-American honors. ASU had 11 former and current members of the ASU Swimming and Diving team compete in the 2004 and 2008 Olympic Games.
- **Gymnastics**, under 31st year Head Coach John Spini, has qualified for 29 straight NCAA Regional Championships. The Sun Devils finished ninth at the NCAA Championships in 2003, 2004 and 2006. In 2004, Ashley Kelly won the balance beam at the NCAA Championships. The Sun Devils have had five athletes earn nine All-American honors since 2003.
- **Women's Tennis**, under 27th year Head Coach Sheila McInerney, has qualified for 23 consecutive NCAA Championship appearances. In 2003 and 2004, the ASU tennis teams reached the Round of 16. Three Sun Devils have earned All-American honors in the past eight years, Adria Engle (S, 2003), Kelcy McKenna (S, D, 2009) and Micaela Heina (D, 2009).

## Alumni Engagement

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The rate of alumni engagement is a broad and significant indicator of institutional quality. Alumni who have a positive experience while in college through their student engagement, a strong belief in the value of their degrees, and sustained positive feelings about their alma mater, are more likely to want to be involved with the institution over the course of a lifetime.

In FY2005, the Alumni Association undertook a major assessment of alumni demographics and interests. The staff learned that ASU alumni, like the rest of the university, are unique in their profile. We have continued our monitoring of demographic trends, and today's (FY2010) statistics indicate that ASU alums are much younger than expected, with 55 percent younger than 45 and 31 percent younger than 35. The majority of alums live in Arizona (185,012) and in particular Maricopa County (162,605); the 10 highest states where alums reside outside of Arizona are California, Colorado, Texas, Illinois, Washington, New York, Florida, Oregon, Nevada and Virginia.

In response to the assessment, the association launched a major rebuilding of the alumni volunteer chapter network, a broad series of new programs, events, benefits and services. The following highlights these new efforts and their results.

- The Alumni Association developed Arizona State Young Alumni (ASYA), a program aimed at engaging alumni under age 35 with social, career and community service programming and events. ASYA was launched in FY2010.
- In order to reach alumni living outside Arizona, the Alumni Association has put increased emphasis and staff resources into strengthening its chapter and club network.
  - We have grown the number of chapters, clubs and connections to 66, an increase of 41 percent since 2003, in targeted geographic locations throughout the United States, as well as 13 international connection groups.
  - In FY2009, we took ownership of the ASU Cares Across the Nation day of service project and transformed it from a primarily local event to a national day of service. In its first two years, 14 chapters participated in ASU Cares Across the Nation projects.
  - In FY2009, we inaugurated the tradition of participation by our geographic chapters in "shadow runs" held across the nation in conjunction with the 4.2 mile Pat's Run held in Tempe each April. In 2009, 2 chapters held shadow runs; in FY2010, 14 chapters participated in "shadow runs." Pat's Run is the signature event of the Tillman Foundation, a major national fundraising efforts for military veterans' scholarships.
  - The chapters have also increased the amount of fundraising they have done for scholarships for students in their geographic area or affiliated with their special interest area. The chapters' "Pennies for Points" program raised \$3,400 in FY2010.
- We increased the number of Sparky license plates on the road by 51 percent since FY2003 to 10,451. The continued support for the Medallion Scholarship Program has increased from \$89,107 to \$195,806 in the same time period, an increase of 119 percent.
- *ASU Magazine*
  - We increased circulation of the magazine by 35 percent from FY2003 to FY2010. It is delivered to 299,000 households including alumni, dues-paying Alumni Association members, faculty/staff and select donors. *ASU Magazine* has the third-highest magazine circulation in Arizona.

- Since FY2007, the magazine has been printed on paper that is FSC and SFI Chain of Custody certified and printed with vegetable-based soy ink.
  - Since FY2007, the magazine has received 20 writing, design and overall excellence awards.
- The Alumni Association instituted the Sun Devil Advocates program, which enlists supporters to advocate on behalf of the university and higher education, and now has 1,520 participating in the effort.
  - Sun Devil Generations, a new program, was developed in FY2007 to connect children from birth through eighth grade to the university. Since inception, the program has grown to 200 members.
  - In FY2008, we revitalized our Homecoming Week offerings by reinventing our annual pre-game luncheon as a “Legends Luncheon” honoring our football legends. Attendance at the 2008 event increased 147 percent over 2007; paid attendance at the 2009 event increased 77 percent over 2008.
  - In FY2009, we inaugurated a partnership with the ASU Foundation related to our premiere signature event, Founders’ Day. The event, which garnered 620 attendees, was dedicated to the public unveiling of the Challenges Before Us Initiative at ASU and honoring faculty and alumni exemplars of the work that the university is doing to resolve the most pressing issues of our time. In FY2010, we again partnered with the ASU Foundation to produce a highly successful Founders’ Day Awards Dinner. The first Founders’ Day Award to go to an international recipient was presented to His Excellency Sultan Saeed Nasser Al Mansoori '88 B.S.E., and Gregory and Emma Melikian received the new Philanthropist of the Year Award. Attendance at the event was 600.
  - We partnered with Undergraduate Student Initiatives (USI) to recruit 482 volunteer Alumni Admissions Ambassadors nationally, and in partnership with USI and Global Engagement, recruited and trained 16 international ambassadors.
  - In FY 2009, we created the Maroon & Gold Professionals Network to help Sun Devil alums expand their business connections.
  - In FY 2009, we developed Women in Business to provide programming and networking opportunities for Sun Devil alumni.
  - The ASU Foundation, through face-to-face appointments, has connected 19,328 new relationships to the university since July 1, 2002.
  - In FY2007, we reinstated our travel program, naming it Sun Devil Destinations. Trips have been offered appealing to a wide variety of demographics, including, graduating seniors, young alumni, families, active (“adventure”) travelers and alumni seeking cultural enrichment.

### **Membership**

- Membership has increased 75 percent since FY 2003 with 23,592 dues-paying members.
- Since the launch of a strategic partnership with the ASU Bookstore, we have increased membership among new graduates by 92 percent since FY 2008.

- 3 Newest Membership Categories
  - In FY 2006, we revitalized the Student Alumni Association into a dues-paying membership organization to support the program more fully. SAA experienced a 35% growth in membership in FY2010.
  - In FY 2006, we established U Devils with 284 members and have grown membership to 854 in FY 2010, a 300 percent increase in membership among faculty and staff.
  - In FY 2008, we established Gold Life Membership and have grown this category to 820 members.

### **Partnership Opportunities**

- In FY2010, we expanded our community partnerships by co-producing two events with az magazine, a publication of the Arizona Republic publishing company: A Conversation with Justice O'Connor (attendance: 620) and Live to Give (attendance: 250), which featured 3 successful businesswomen with ties to the university.

### **Student Engagement**

- We revitalized the Student Alumni Association into a dues-paying membership organization in FY 2006 to support the program more fully. SAA has experienced a phenomenal growth in members to 1,399 in FY2010.
- We implemented a Senior Year Experience program that included the development of a council and resulted in 1,200 seniors attending programs and events to assist with their transition to graduate studies or their first professional position.
- We reconstructed the Medallion Scholarship with Undergraduate Admissions from a one-year stipend to a four-year scholarship program, which now selects 27 recipients each year from throughout Arizona. During the same time period, the scholarship amount was increased from \$2,000 to \$2,750. Our first cohort of students who started as freshmen under this new system in 2006 graduated in FY2010.
- In FY2009, we piloted conducting a Send-Off at local Maricopa County high schools, and in FY2010 we conducted 3 Send-Offs at Valley high schools. Since FY2006, we have hosted 89 Send-Offs nationally with our geographic chapters.
- In FY2010, we launched the Legacy Scholarship program, which offers \$1,000 scholarships (\$500 per semester) to relatives of ASU Alumni Association members. Three inaugural scholarship recipients were selected for the 2010-11 school year.

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<sup>1</sup> Figures include all outright gifts, new pledges and face value of planned gifts, but exclude contributed services and payments on pledges.