

WORKforce

BRIEF

Arizona

Higher Education & the Workforce

In 2006 a good education is no longer just a way for an individual to get ahead. It is also, and increasingly, the best way a state can get ahead – and therefore a real economic priority. A college degree confers specific, calculable benefits on a state’s citizens: the average lifetime income of an individual with a bachelor’s degree is \$2.1 million, compared to \$1.2 million for those with just a high school diploma. But the benefits realized by the state are just as impressive as those that an individual sees. Not only does a state with a well-educated populace see increased tax revenues from its (better-paid) citizens, it is also able to use the education level of its citizens as a powerful lure for business and industry – a way to build its economy overall.

For that to happen, however, a state must make sure that all of its citizens have access to a college education. Businesses are no longer simply looking for a small, well-educated elite but instead need to be able to draw upon a labor pool that’s both broadly educated and diverse. In fact, a report from the Business-Higher Education Forum, a coalition that includes some of the country’s top corporate CEOs, states that an educated and diverse population is an essential competitive asset in today’s global economy.

In Arizona, one of the country’s fastest growing states, the demand for well-educated employees will only increase over the next several years. In the decade leading up to 2013, healthcare occupations will see growth of 50 percent. Almost 1,800 dentists will need to be hired to fill new posts and to cover retirement, for example. Teachers will be in high demand: nearly 70,000 educators (including librarians) will need to be hired. Managers will see their ranks swell by 21 percent. The growth of these sectors is good news for Arizona’s citizens, since wages for jobs in these areas are significantly higher than the average for Arizona in general. But entry into these jobs comes with a price tag: most positions in these fields will require a bachelor’s degree or higher. The question for Arizona and other states is how, in a time of tight budgets, to meet the increasing demands on higher education and thereby meet the needs of an increasingly sophisticated economy.

The Western Interstate Commission for Higher Education (WICHE) has had workforce issues at the top of its agenda since its creation in the 1950s. In fact, WICHE was launched specifically to address the shortage of workforce-training opportunities in medicine, dentistry, and other professional fields. Today, WICHE offers a slew of undergraduate, graduate, and professional options that help the West’s states educate and train their citizens, building their economies in the process.

Arizona’s Occupational Outlook

Employment in Arizona (including hourly and salaried jobs and self-employment) is projected to grow by 24 percent from 2003 to 2013, adding over 600,000 new jobs to the state’s economy and growing the workforce from 2,511,762 to 3,112,481. The rate of growth for the nation as a whole will be 13 percent (2004-14).

Growth will occur in virtually all sectors of Arizona’s economy, with the largest number of new jobs being generated in lower-paying fields such as sales, office support, food preparation, and construction. However, many of Arizona’s “top jobs” – those with the fastest growth rate and highest earnings – are professional positions (see Table 1).

Table 1. Arizona’s Top Jobs*

Physician Assistants	Occ. Therapists
Dental Hygienists	Physical Therapists
Radiation Therapists	Nuc. Med. Techs.
Medical Scientists	Diag. Med. Sonogs.
Registered Nurses	Pharmacists

* Jobs with the strongest employment outlook (2003-13) and with earnings in the top quartile.

Source: Arizona Department of Economic Security.

All of the top jobs listed on Table 1 require considerable education and training. Half of them (physician assistant, occupational therapist, physical therapist, medical scientist, and pharmacist) demand a B.A. or higher; the other half (dental hygienist, radiation therapist, nuclear medicine technologist, diagnostic medical sonographer, and registered nurse) require an associate's degree.

Strikingly, every one of Arizona's top jobs is in a field related to health. In the decade leading up to 2013, the need for health care professionals will rise steeply in the state. More than 2,000 M.D.s, dentists, veterinarians, and other health professionals will need to be hired just to fill new jobs. The demand for registered nurses will see a 58 percent increase – nearly 20,000 new R.N.s will be needed in the state; when retirements and other separations are factored in, that number grows to a whopping 26,000-plus. Physician assistants will see a 78 percent increase in their ranks, with some 220 being hired each year for new positions and to replace those who leave the field. Physical therapists will experience a 55 percent increase, while pharmacists will log growth of 52 percent. And about 450 veterinarians will need to be hired, as well. Arizona will also experience a strong demand for new occupational therapists, diagnostic sonographers and nuclear medicine techs. One reason for the increase: the aging of the state's population. Arizona is seeing rapid growth in its older population: in 2005, 17 percent, or more than 978,000, of its citizens were 60 or older.

Two other essential professionals, managers and teachers, will also see a large number of hires in the decade leading up to 2013, due to new job creation and the need for replacement workers. Over 3,200 new managers of all types – from CEOs and operations managers to supervisors – will be required to help run the state's various enterprises. Large numbers of teachers at every level from kindergarten through college will be needed. At the primary and secondary levels, close to 17,000 new jobs will be created, with the biggest chunk (over 6,300) slated for elementary school teachers. Over 10,000 new slots in postsecondary education are projected to open up during the decade. In all, some 5,000 hires will have to be made each year to cover all of education's new job openings and retirements.

As Arizona's economy changes, so do the kinds of jobs available to Arizonans. The projections indicate that plenty of jobs will be available for those without formal training beyond high school. However, wages in the sectors hiring those workers – sales, office support, food preparation, and construction/extraction will be their top employers – fall significantly below the statewide mean (\$16.56, or \$34,445 a year); ranging from an average of \$8.04 for food prep to \$15.14 for construction, they simply don't provide a living wage. Over the next several years, workers who have the most education and training will have the best opportunity for high-paying jobs in growing sectors. In addition, a number of professions requiring education beyond the bachelor's degree are expected to see moderate to strong growth (see Table 2).

Table 2
Arizona Professional Employment Projections, 2003-2013

Profession	Number		% Change	Total Openings*
	2003	2013		
All professions	2,511,762	3,112,481	24%	1,200,050
Architects	5,063	6,557	30%	2,480
Dentists	4,502	5,527	23%	1,780
Librarians	2,722	3,109	14%	1,040
Occupational Therapists	1,003	1,550	55%	680
Optometrists	479	577	20%	230
Pharmacists	3,210	4,882	52%	2,290
Physical Therapists	2,341	3,636	55%	1,530
Physician Assistants	2,341	4,178	78%	2,200
Physicians and Surgeons	7,898	10,686	38%	3,860
Podiatrists	311	396	27%	160
Registered Nurses	34,123	53,901	58%	26,920
Veterinarians	1,223	1,382	13%	450

*Includes new jobs and replacements, rounded.

Source: Arizona Department of Economic Security.

ARIZONA & WICHE's Student Exchange

In 2002, over 40 percent of Arizona's new high school grads enrolled in college – and 11 percent of them went to school out of state, according to WICHE's Policy Indicators for Higher Education (www.wiche.edu/Policy/FactBook). One of the most economical ways for them to do that: our Western Undergraduate Exchange (WUE), which allows students to enroll in out-of-state institutions at a reduced tuition level (150 percent of resident tuition). Over 700 Arizona students enrolled in WUE in 2005, saving almost \$4 million and working toward degrees in fields that are essential to Arizona's economy. Some of the most popular fields of study for Arizona students: hospital management, construction management, business administration, biology, and communications.

WICHE's Professional Student Exchange Program (PSEP) offers students opportunities to train outside of their home state in 14 highly competitive fields: architecture, dentistry, graduate library studies, medicine, nursing, occupational therapy, optometry, osteopathic medicine, pharmacy, physical therapy, physician assistant, podiatry, public health, and veterinary medicine. In Arizona, employment projections in all these fields are on the rise (see Table 2). Through PSEP, Arizona students are studying to be dentists, veterinarians, occupational therapists, optometrists, osteopathic physicians, and physician assistants. In general, at least 60 percent of PSEP students return to their home state to practice.

Arizona students also participate in the Western Regional Graduate Program (WRGP), which offers them the chance to engage in graduate studies and includes 175 distinctive programs in 14 states, such as education, construction management, nursing, and business. On the horizon is a distance learning option, NEON (the Northwest Educational Outreach Network), which will provide electronically delivered degree programs in high-demand disciplines, such as a Ph.D. in nursing and a graduate certificate in supply chain management.

Six Fast-Track Fields

The Outlook for Arizona & the Nation

The economy in Arizona and the nation will continue generating jobs for workers at all levels of education and training for the foreseeable future. But there will be an increasing demand for employees with at least some postsecondary education, preferably a bachelor's degree. Nationwide, during a decade (2004-14) that will witness large numbers of baby boomers moving into retirement, 18.9 million new jobs will be created, an increase of 13 percent. However, in some fields, the increase will be far more than that. Across the country, competition will be especially stiff for physician assistants, who will see their ranks grow by 50 percent, as well as for physical and occupational therapists (whose fields will experience growth of 37 and 34 percent, respectively) and pharmacists (25 percent). More than 703,000 new nurses will be needed (an increase of 29 percent) and some 11,000 new veterinarians. Below is a debriefing that focuses on trends in some of Arizona's – and the nation's – fast growing professions.

Registered Nurses. Nursing is the ninth fastest growing field in Arizona among occupations requiring some postsecondary education, but it will require more new hires in the decade leading up to 2013 than any other job in that category. Working in the largest healthcare profession, registered nurses held about 34,123 jobs in 2003 in Arizona; that number will grow to 53,901 by 2013, a 58 percent increase. Demand for RNs is expected to be high for a number of reasons, including the need to replace experienced nurses who leave the field, especially as the median age of the RN population continues to rise; a growing elderly population; and an imbalance between the supply of and demand for qualified RNs. Nationally, employment of registered nurses is expected to grow by 29 percent in the decade leading up to 2014. Median annual earnings of registered nurses were \$55,250 in 2004; the top 10 percent earned \$72,240 and up (nationally, that number was \$77,170).

Physician Assistants. This is the fastest growing profession in Arizona among all occupations requiring a bachelor's degree or higher. Physician assistants held 2,341 jobs in 2003; that number is projected to grow to 4,178 in 2013, a 78 percent increase. Demand will be strong for P.A.s, particularly in places that have difficulty attracting physicians, such as rural areas and inner city clinics. In addition, physicians and institutions are expected to employ more P.A.s to provide primary care and assist with medical and surgical procedures. Nationally, the number of physician assistants is expected to grow by 50 percent (2004-14): over 3,000 new physician assistants will be needed each year. Median annual earnings of physician assistants in Arizona were \$65,770 in 2004; the top 10 percent earned \$92,810 and up (nationally, that figure was \$94,840).

Physical Therapists. This is the third fastest growing profession among all occupations requiring a bachelor's degree or higher in Arizona. Physical therapists held 2,341 jobs in 2003, a number that will climb 55 percent to 3,636 in 2013. Thanks to a rapidly growing elderly population that's particularly vulnerable to chronic conditions requiring therapeutic services — as well as to the use of physical therapists at the workplace, to evaluate worksites, develop exercise programs, and teach safe work habits to employees — the demand for P.T.s will be strong throughout the 2003-13 decade. Nationally, the number of physical therapists is expected to grow by 37 percent (2004-14). In Arizona, median annual earnings of physical therapists were \$61,730 in 2004; the top 10 percent earned \$92,140 and up (nationally, that number was \$89,830).

Dentists. To keep up with its growing population, Arizona will need to hire almost 180 dentists each year between now and 2013 to fill new jobs as well as the posts of those who've left the profession. Dentists held 4,502 jobs in 2003 in Arizona; that number is projected to grow to 5,527 by 2013, a 23 percent increase. Nationally, the number of dentists expected to grow by 4 percent. Median annual earnings of dentists in Arizona were \$138,500 in 2004.

Pharmacists. In Arizona, this is the eighth fastest growing profession among all occupations requiring a bachelor's degree or higher. Pharmacists held 3,210 jobs in 2003, a number slated to jump to 4,882 in 2013, a 52 percent increase. Competition for pharmacists is expected to be steep over the 2003-13 period due to the increased pharmaceutical needs of a larger and older population. In addition, the number of degrees granted in pharmacy is expected to be lower than the number of job openings created by employment growth and replacement needs. Nationally, the number of pharmacists is expected to grow by 25 percent (2004-14). Median annual earnings of Arizona's pharmacists in 2004 were \$85,160; the top 10 percent earned \$106,480 and up (nationally, that figure was \$112,530).

Teachers. When it comes to the number of new hires, teaching is one of the top professions among occupations requiring a bachelor's. Primary, secondary, and special ed teachers held 68,381 jobs in 2003 in Arizona; that number will grow to 85,161 by 2013, a 25 percent increase. In the decade leading up to 2013, Arizona will also have to find 10,068 new postsecondary teachers for its colleges and universities. In addition, it will have to hire almost 23,000 educators at all levels to cover retirements and separations. Every year, in other words, about 5,000 new and replacement teachers will need to be hired in Arizona. Nationally, the demand for teachers

will vary, ranging from 38 percent for postsecondary teachers down to 9 percent for middle school teachers. Median annual earnings ranged from \$35,230 for Arizona's primary teachers to \$37,110 for secondary in 2004; the top 10 percent earned \$54,060 and \$57,200 and up, respectively (nationally, those figures were \$68,930 and \$72,110).

The Regional Outlook

Seven of the top 10 states in terms of projected job growth are in the West: Nevada, Utah, Idaho, Arizona, Colorado, New Mexico, and California. In the 15 WICHE states, an additional 5.9 million jobs will be added in the decade leading up to 2013. While California has the greatest numerical growth in the region, with some 270,000 new jobs being created each year, the states seeing the fastest job growth are Nevada (41 percent), Utah (31 percent), Idaho (24 percent), and Arizona and Colorado (23 percent). Most of the region's fastest growing professions are in the health and computer sectors.

Sources: Workforce Report Data

All information used in the text and tables of this report is available from the Arizona Department of Labor and Workforce Development (www.workforce.az.gov) and the U.S. Department of Labor's Bureau of Labor Statistics (www.bls.gov/emp).

WICHE

WICHE and its 15 member states — Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming — work collaboratively to expand educational access and excellence for all citizens of the West. By promoting innovation, cooperation, resource sharing, and sound public policy among states and institutions, WICHE strengthens higher education's contributions to the region's social, economic, and civic life.

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