

Education Plan
for
Central Arizona College

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May 18, 2004

Revised August 12, 2004 by Central Arizona College Academic and Student Services Staff



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EXECUTIVE SUMMARY OF THE EDUCATION PLAN

This plan was developed from these sources: interviews of key administrators and faculty; analyses of data internal and external to the institution including labor market projections, economic trends, and program enrollment trends; perceptions and information gathered from community focus groups; a study of programs and services available at competitor community colleges, universities, and proprietary institutions; CAC Academic Quality Improvement Program (AQIP) Systems Portfolio; and from professional judgment and experiences gained in community college administration.

Central Arizona College has many strengths, including strong leadership, a dedicated and competent faculty and staff, a commitment to learning, established partnerships, and community support. CAC also has a tradition of strong transfer programs and viable career and technical programs. The College has formulated strategic goals and voluntary participation in alternative accreditation in the North Central Association Higher Learning Commission's Academic Quality Improvement Project (AQIP). Central Arizona College (CAC) faces many challenges in providing higher education opportunities for the citizens of Pinal County including the impact of intense population growth, a widening economic gap between new arrivals and longer-term residents, the recent lack of job growth in the County, relatively low secondary school completion rates, increased competition for students, and shifting preferences for accessing learning opportunities.

To meet new challenges the College needs the continued active participation of faculty and staff in planning processes, increased sharing of community resources, and more involvement by all employees in the local community.

CAC must continue developing a single, integrated planning, assessment, and budgeting system which can be continuously and systematically used to monitor and improve programs and services. We must understand present and projected enrollment capacities by program. Institutional research will need to work more closely with deans and chairs to provide data to make informed decisions about program growth and continuation.

CAC must strengthen its instructional program review process to guide future program development as well as the continuation of the renewal of existing programs. In addition to planning for appropriate program mix in each of the College's present and future locations, this process provides a structure for forecasting faculty and instructional resources.

To meet accelerated growth and accommodate the need to streamline decision-making processes and accountability, the current division structure will be examined. The increased demand for afternoon, evening, weekend, and compressed classes requires corresponding actions by CAC. To provide flexibility in year-round planning, course management and delivery, and to cover course and program delivery in new locations, the College will

consider consolidating instructional divisions, placing full-time administrators in charge of reconfigured divisions, and employing an appropriate number of faculty and academic support staff on 12-month contracts.

Central Arizona College must prepare learners to compete in a global economy through provision of a strong transfer program, career and technical programs that meet business/industry needs, and a nimble continuing/community education program. Programs must be distributed appropriately throughout the County and delivered through a combination of on-site and distance technologies.

Lifelong learning is a prerequisite for success in an information-based economy. Not all students seek a degree or certificate, so the College must provide them with opportunities to meet their intermediate, short-term goals. Many students, especially adult students, will seek compressed, evening, afternoon, and weekend courses.

Central Arizona College must solidify itself as the hub of workforce development for Pinal County. This will require thorough review of all programs, creation and marketing of additional short-term credit and noncredit options for employees and employers, and short turnaround time for these products and processes.

CAC will streamline internal processes for responding to business and industry needs. Nimble responses to documented needs will spell success in future endeavors. Employers who desire short-term training, technical assistance and focused workshops will not wait long for the College to respond before seeking other alternatives.

CAC will involve business/industry employers and economic development agencies more closely in educational programs. For example, we might consider forming a consortium of manufacturing and non-manufacturing employers to assess work force needs and college responses in preparing an educated workforce to meet these needs. Expect more and get more from program advisory committees.

These workforce development functions are critical: provision of short-term training opportunities, implementing standard assessments to identify potential employee skills and employer needs, creation of internships and cooperative education placements, and development of a systematic marketing plan to keep the menu of training opportunities the College can provide in front of new and existing employers.

CAC will explore establishing short-term “skills certificates” across several employment-related programs including information technology and business services. These certificates would provide College certification that holders have met the minimum expectations for entry into emerging jobs while satisfying employer demands for employees with communications and human relations skills, computing literacy, critical thinking, and civic responsibility in addition to minimum background in industry fundamentals.

The College cannot compete in all markets and provide all programs to all students. Instead, CAC will continue to develop partnerships with other colleges and universities and with other training providers. Central Arizona College has competitor, public community colleges located in immediate proximity to its service area borders in addition to strong competition for students from 4-year colleges and universities. The potential for program sharing and for developing 2 plus 2 programs in selected areas is great, especially in high cost program areas.

Based on predicted labor market demand and demographic shifts occurring in Pinal County, these programs should be strengthened: Construction Trades, Computer Programming, Education, Engineering Technology, ESL, Foreign Languages, GED, Medical Assisting, Multimedia, Nursing, Real Estate, (Display 22 page 64) and System Networking.

The Bureau of Labor Statistics has identified. fast growing and large growth occupations through the year 2012. Most of these jobs will require an Associate degree, a career and technical certificate, or less, and are potential growth programs for community colleges. These occupations include: medical records and health information technicians, physical therapist assistants, veterinary technologists and technicians, dental hygienists, occupational therapist assistants, environmental science and protection technicians, respiratory therapists, social and human service assistants, hazardous materials removal workers, dental assistants, fitness trainers and aerobics instructors, home health aides, physical therapist aides, occupational therapist aides, personal and home care aides, and self-enrichment education teachers.

The need for health programs will grow rapidly. CAC has unique programs in dietetics and home health aide. Other current CAC health programs have significant competition from other providers who offer programs in compressed formats. Most new programs in this area are expensive to start and may only become possibilities with partnerships with hospitals and other new health providers that will locate in Pinal County. These providers may not be located to Pinal County for several more years. Nonetheless, CAC should begin now to position itself to enter into partnerships for new programs in a nimble fashion.

CAC enjoys no competitive advantage in information technology programs or in high tech manufacturing. High tech manufacturing may not be a growth area for the College because of significant competition from more established programs at the Maricopa and Pima Community College Districts. Information technology programs, in contrast, may be somewhat less expensive to offer. Current information technology courses at the College are few and under-enrolled.

Potential new programs the College will consider are discussed later in the Educational Plan and are indicated in Display 22. Additionally, Display 21 lists programs to strengthen. Likewise, suggestions for programs to alter or downsize are discussed later.

The College needs to increase the number of afternoon, evening, weekend, and compressed (5 to 8 week) courses across all locations. Mapping out the length of time it would take a working student to complete an Associate degree when they cannot attend traditional classes during the day should be a benchmark for class scheduling decisions.

Encourage Pinal County middle and high school students to attend CAC. Expand the “Promise for the Future” program that pledges future CAC scholarships to junior high schools students. Support the “First Step” program that grants summer tuition to tenth, eleventh and twelfth graders and introduces those high school students to college life. Strengthen Tech Prep and Dual Enrollment partnerships providing qualified high school students articulated and transcribed CAC credits. In the long term consider implementing an early/middle college model with secondary schools in Pinal County. Students entering high school could emerge five years later with both a secondary degree and an Associate degree. These programs provide incentives and pathways for low-income students who heretofore might not have considered higher education.

About five percent of all CAC courses were offered via technology in fall 2003. This number should be doubled to be on par with competitor community colleges, but not with the expectation that distance education will replace face-to-face instruction. Development of ITV will be limited to Pinal County while continued growth will occur in Internet delivery. CAC will seek permission from the North Central Association to offer degree programs that can be completed solely by distance technologies. Several current programs, including dietetics, represent niche opportunities in on-line learning.

CAC will soon complete the development of an electronic “One-Stop Portal” for students and prospective students to access registration, advising, bill payment, and interaction with other administrative functions. In addition, other alterations in student services may be required including expanded access to support services, financial aid, and registration for evening and weekend students.

The organizing principle for student services is student success. Linkages between academic and student affairs in important functions such as student advisement, career placement, and academic support services are the basis for continuous quality improvement.

In the future as CAC grows, we will explore the consolidation of all developmental education efforts (initial assessment, study skills, tutoring, GED, ESL, and developmental English, math, and reading) in one unit. This would provide standardization of all courses throughout delivery sites, greater visibility for the entire developmental program, and synergies in new course development.

CONTEXT FOR PLANNING

The Pinal County Community College District, commonly referred to as Central Arizona College (CAC), is a multi-campus college district consisting of three campuses and two educational centers. Central Arizona College has a service area that covers the entire area of Pinal County. The three campuses include the Signal Peak Campus at Coolidge (which includes the District Offices), the Superstition Mountain Campus at Apache Junction, and the Aravaipa Campus at Winkleman. Additionally, CAC currently operates centers in Casa Grande, Florence, and operates programs at the Arizona State Prison. The Signal Peak Campus has residence halls. The College is considering establishing centers in other areas of recent growth in Pinal County. Fall 2003 FTSE totals of 2,533 were distributed as follows: Signal Peak, 1,718; Superstition Mountain, 468; Aravaipa, 192; Arizona State Prison, 155. In addition the District annually produces approximately 930 annual FTSE short term, open entry-open exit, and summer term programs.

The County covers 5,400 square-miles and is situated between Phoenix and Tucson. Most of Pinal County is made up of small communities. However, by the year 2025 it is predicted that the County will contain nearly 1 million residents, a five-fold increase in population over the year 2000. Most of this growth is predicted for the western half of Pinal County. Interstate Highway 10 connecting Phoenix and Tucson and Interstate 8 starting in Pinal County and running to Los Angeles are major corridors for transportation and will also influence future population growth.

Pinal County is marked by varied geographical and economic characteristics. The eastern portion of the County has less population and lacks convenient highway access from east to west. There also is little public transportation in this and other parts of the County. The topography of eastern Pinal County is mountainous. Mining, once the mainstay of the local economy in the communities of Superior, Kearny, Winkleman, Dudleyville, Mammoth, San Manuel, and Oracle, is no longer the economic driver it was in past decades.

The central and western portions of the County have been traditionally an agricultural area. That is changing, however, as new housing developments push into the area. Population increases in Queen Creek, Maricopa, Stanfield, and Johnson Ranch will provide significant opportunities for Central Arizona College both from the perspective of having more potential students residing in its service area and because the needs of those students are likely to cause the College to approach its services differently in the future. The Western part of the County is also home to three Indian Reservations. From north to south they are: the Gila River, the Maricopa Ak-Chin, and the Tohono O'Odham. The remainder of the County is divided between state and federal land, as well as private ownership.

Massive population growth coupled with commitment to service throughout Pinal County, spells opportunity for Central Arizona College. The College has long been a rural institution, nestled between two major population centers. As the space between Tucson and Phoenix becomes occupied with new residents, this distinction, at least for the western

part of the County will disappear. At the same time, little growth, in relative terms, is predicted for the eastern portion of the County. Opportunity also arises from the changing nature of community college students everywhere. Adaptation to new demographics, the sheer numbers of prospective students predicted to live in Pinal County over the next 20 years, and the ability to provide a blend of the services throughout the County will require continuous planning and innovation by the College and its partners. Decisions made in the short-term are critical and will determine the shape of the College over the next several decades.

Fortunately, the basic elements needed to address future growth are in place at the College. CAC is engaged in essential thinking about its future and its contributions to Pinal County, the State of Arizona, the nation, and an increasingly global world. The College has made public commitment to the Learning College philosophy in which all the evaluation of all services is tied to maximizing student learning. A recent transition in leadership has expanded the use of planning, the need for information to guide that planning, and strategies to address the future. CAC has identified six strategic goals:

1. Optimize development and allocation of resources.
2. Serve Stakeholder needs in targeted areas
3. Advance the Learning College culture.
4. Create environments that promote learner centeredness.
5. Strengthen community relations.
6. Expand partnerships and linkages.

Further evidence of Central Arizona College's commitment to managing its future is its early membership in the Academic Quality Improvement Project (AQIP), an alternative accreditation mechanism. This process is driven by continuous quality improvement under the aegis of the Higher Learning Commission of the North Central Association. As an AQIP institution, CAC has examined the effectiveness of its systems as they relate to the nine AQIP criteria:

1. Helping Students Learn
2. Other Distinctive Objectives
3. Understanding Students' and Other Stakeholders' Needs
4. Valuing People
5. Leading and Communicating
6. Supporting Institutional Operations
7. Measuring Effectiveness
8. Planning Continuous Improvement
9. Building Collaborative Relationships

In addition, AQIP institutions identify Action Projects, key goals identified by the institution. CAC's current Action Projects are:

1. Construct and implement a dynamic institutional planning process.
2. Strengthen and enhance student assessment and advisement to promote learner success.
3. Improve data collection, data processing, and information dissemination methods for learning support.

CAC uses continuous quality improvement techniques to monitor and drive the progress of the Action Projects.

In February 2004, the College contracted with the Voorhees Group, LLC, to create an Education Plan to address the college's capacity to respond to estimated growth in Pinal County. Specific questions that were to be addressed during this process include:

1. What will be the projected needs for community college programs and services for Pinal County the next ten years? And, beyond?
2. How can CAC meet needs for education through programs, support services, organizational development, technology, staffing, and marketing?
3. What programs and services will CAC need to develop to meet the varied needs of locations within Pinal County?
4. Conduct a series of staff and community focus groups throughout the County to assess unique needs and preferences for current and new programs.
5. Collect and analyze information external to the College including the County's K-12 education sector, economic development organizations, competitor higher education institutions, and state government employment projections.
6. Provide CAC with an analysis of future demand for programs and services as well as an assessment of institutional capacity to meet that demand.
7. How responsive are current career and technical programs to business/industry needs?
8. What new programs need to be developed to meet emerging workforce needs?
9. What programs must be downsized or altered to meet workforce needs?
10. To what extent do support services meet current student needs as well as future needs
11. Is the organizational structure of CAC developed to carry out program expansion?
12. Construct projections for enrollment, programs, support services, and educational delivery systems in new locations.
13. What policies and marketing strategies will CAC need to develop to meet customer needs for education through 2025?
14. What planning and assessment processes are necessary for the College to meet its obligations to citizens of Pinal County? How can CAC most effectively integrate its planning and budget setting processes?
15. Develop a final report combining analyses and projections into a comprehensive Education Master Plan for Central Arizona College.

ENVIRONMENTAL SCAN

No organization can plan effectively without understanding its external and internal environments. The most pressing change facing Central Arizona College is population growth resulting from in-migration. This will cause the College to respond with a larger volume of services. At the same time, it is more than likely that the needs and aspirations of new students who will come to the College during the next 21 years will differ from previous generations. An effective plan should identify these likely differences through environmental scanning and seek to understand where similarities among future students and programs may lie.

Demographics

- Pinal County will grow to nearly 1 million people by the year 2025, up dramatically from the 2003 estimate of 201,565. This represents an increase of more than 31,000 new people each year through 2025.^{1,2}
- In 2002, in-migration rates (15.0%) exceeded out-migration (10.2%), netting Pinal County a gain of 4.8 percent.³ This trend will accelerate dramatically.
- Households relocating to Pinal County are wealthier than those who leave.³
- Maricopa County is the largest source of in-migrants to Pinal County, accounting for 55 percent of all new county residents in 2002. Pima County was second with 4.5 percent. In-migrants from other states account for less than 6 percent of total in-migration.³
- Destinations for out-migration are nearly the inverse of in-migration. Maricopa County accounts for 43 percent of out-migration from Pinal County, followed by Pima County at 8 percent.³
- The profile of in-migrants to the County suggests that most new households will consist of two working adults, a market segment that is likely to attend part-time and experience competing demands for their time including families and their jobs.
- In-migration notwithstanding, the County's current population is mobile. Less than half of the County's population lived in the same house in 2000 that they did in 1995.⁴
- One in four households in Pinal County speaks a primary language other than English in their homes. Spanish is the most prevalent non-English language.⁵
- Nine percent of the county's population was born outside the United States.⁵

- Hispanics (30%) and Native Americans (8%) constitute higher proportions of the County than their proportions statewide.⁵
- Hispanics will be the most rapidly growing segment of Pinal County's population through 2025 when they will increase over their 2000 proportion nearly seven-fold.³
- The proportion of households receiving public assistance dollars in Pinal County (4.1%) is higher than the Arizona statewide proportion (2.9%).⁴
- Wealth varies widely with campus location. In 2000, the per capita income for residents living nearest the Superstition Mountain campus was \$20,808. For Signal Peak, the statistic was \$14,519 while for Aravaipa's figure was \$12,957.⁶
- Pinal County's proportion of adults with bachelor's degrees or higher is lower (11.9%) than the Arizona statewide average (23.5%). This statistic varies from the eastern part of Pinal County to the western part.³
- Levels of education attainment vary widely by proximity to existing campuses. The proportion of adults living near the Superstition Mountain campus that has earned bachelor's degrees or higher is 17.9 percent. The statistic for the Signal Peak campus is 13.1 percent and 5.2 percent for the Aravaipa Campus.⁶
- The proportion of Pinal County adults who have not finished high school (27.3%) is significantly higher than the Arizona statewide average (19.0%). Nearly a quarter of the adults in Pinal County have stopped their education after graduating from high school.⁴
- Pinal County is significantly older than the statewide average. Twenty-five percent of the households in Pinal County received retirement income versus the Arizona statewide figure of 18.5 percent. Thirty-eight percent of Pinal County's residents are aged 60 and older. The statewide proportion is 30 percent.³

Economy

- Despite recent difficulties in the national economy, the total assessed valuation for Pinal County has increased for the most recent seven years; for the past four years the rate of increase has been in the double digits.⁷
- Continued development of high tech parks in the southern Maricopa County, including the Williams Gateway Regional Job Center and expansion of the Intel complexes will result in more jobs located near the Pinal County Border. The Williams complex is projected to provide 100,000 new jobs by 2035.²

- Growth in local taxes (i.e., property taxes and state aid) is limited by the State constitution and State law and is heavily tied to enrollment and inflationary increases.
- Mining, a traditional County employment mainstay, is dependent on the price of copper. Although copper's price declined over the past decade, in 2003 prices increased substantially.
- The largest employee types are office and administrative occupations, education-related, food preparation and food service, transportation and material moving, and sales.⁷
- Public entities including school districts and correctional facilities represent seven of the largest 10 employers in Pinal County,⁸
- Higher proportions of blue collar workers live near the Aravaipa campus than either the Signal Peak or Superstition Mountain campuses.⁶
- Nationally and globally, employers are focusing on skills versus degrees and certificates.
- Growth in non-Agricultural employment in Pinal County has been flat from 1997 through 2002. The statewide gain was 14.1 percent. Maricopa County's growth was 15.1; Pima County's growth was 9.8.⁷
- The service industry was Pinal County's largest employment segment with 27 percent of County's workers in 2000. Government is second (23%) and retail trade is third (19%). Other employment includes manufacturing (9%), agriculture (7%), construction (4%), mining (4%), wholesale (3%), transportation and public utilities (2%), and finance, insurance and real estate (2%).⁷
- Agriculture is vital to Arizona's economic health. Arizona is the third largest state in the production of vegetables. Arizona is second only to California in the production of lettuce, broccoli and cauliflower. Agriculture, now experiencing the effects of increased use of technology, will continue to play a role in Pinal County's economic picture.⁷ In Pinal County, dairying/milk production and support crops of alfalfa and corn silage, join vegetable, cotton, and grain production as future key crops.
- The average commute time is lowest for workers living near the Signal Peak Campus (19.1 minutes) than for those living near the Aravaipa (33.4 minutes) or Superstition Mountain (31.1 minutes) campuses.⁵ The Aravaipa commute time reflects lack of job availability within the campus' vicinity while the Superstition Mountain commute time is attributable to population density.⁶

Secondary Schools

- In Arizona, Hispanic high school students have the lowest graduation rate (60.3%) of all non-White minorities compared to 81 percent of the White students.⁹
- Countywide, Grade 9 to Grade 12 enrollment has grown by 59.1 percent from 1999-2000 to 2002-2003. Nearly all of this increase was experienced in the western portion of Pinal County. The largest enrollment gains were Casa Grande Union and Coolidge High Schools. The largest enrollment decreases were Superior, San Manuel, and Ray High Schools.¹¹
- K-12 enrollment for Apache Junction's total enrollment will increase by more than 5,700 students by 2020, the result of a 4.2 percent annual growth rate.¹¹
- K-12 enrollment for the Maricopa Unified District will increase by more than 26,800 students by 2020, the result of a 20 percent annual growth rate.¹¹
- The proportion of secondary students who are minorities in Pinal County increased by 5 percent from 1999-2000 to 2001-2003.¹⁰
- County-wide, secondary school dropout rates range from 4.7 percent to 39.7 percent.¹⁰

Public Policy

- There is mounting pressure to increase success but at the same time the basic community college mission mandates open access for all students.
- The direction of state and federal funding for postsecondary education will continue downward relative to other sectors of education and many other state agencies (e.g., corrections).
- The College's external stakeholders will continue to rank education as one of its top concerns.
- The Arizona Legislature will consider permitting community colleges to offer 4-year degrees in education, law enforcement, nursing, and fire science.

Social Trends

- There is an increasing use of computers in homes. However, this access to technology is not evenly distributed across all income groups. The divide between technology "haves" and "have-nots" within Pinal County will continue.
- There is an increasing gap between those who are economically disadvantaged and those who are not. In-migration of affluent households will increase this gap.
- The need for job training programs, skills certificates, and other programs with fewer general education requirements will increase. Those who have obtained these skills may seek opportunities for career development, general education, and lifelong learning that can lead to higher levels of degree attainment.
- There is currently little convenient highway transportation from east to west in Pinal County, limiting access to the College's present total education program by all county residents. Transportation remedies are now under study and, if construction is put in place, will result in enhanced east-west access in the northern part of the County.²
- The Interstate-8 and -10 Corridors in the western County will continue to promote growth and the need for expanded education services.
- Public transportation continues to be a key issue challenging the local community and its service providers. For the College, transportation and access are key factors in determining where and when to locate new facilities.
- There will be a trend toward community incorporation in Pinal County. Most recently the San Tan area has requested incorporation. This trend will promote "sense of place" and concern with quality of life issues, including access to higher education opportunities.¹¹

Education Trends

- According to the US Department of Labor, Employment and Training, nearly 80 percent of new jobs nationwide will not require bachelor's degrees but will require post-secondary coursework, certificates, or associate degrees.
- Large instructional areas are getting larger. Over the past five years, math, physical education, and English have also increased their share of the overall FTSE at the College. Other areas that have increased enrollments in the past five years include healthcare, nursing, art, biology, fire science, and accounting.
- The rate of student transfers from Central Arizona College to Arizona Universities has increased by 267 percent over the past decade.¹² Arizona State University receives the largest number of transfers while the University of Arizona has the largest growth rate.

- In 2002-2003, about 8 percent of total FTSE was generated by distance delivery methodologies, chiefly in synchronous modes.¹³ As affluent households migrate to the County and as technology becomes increasingly commonplace in household, FTSE s growth could reach 15 to 20 percent of total FTSE over the next five years. Most of this opportunity will be realized through asynchronous modes.
- Nationally, one of every two community college students takes remedial courses.¹⁴ This trend will continue.
- Courses and programs offered by Central Arizona College match nearly three-fourths of the top 200 growth jobs in Arizona through 2010.¹⁵
- Employers in Pinal County, in common with employers everywhere, will seek employees with computer skills, communication and customer relation skills, basic skills, and good work ethics.
- Fifty-five percent of the full-time faculty at CAC is aged 50 and over. Owing to retirements, it is likely that the college will need to replace a significant proportion of its full-time instructional workforce in a competitive job market.
- Short-term (occupational/certificate/licensure) students and part-time students will place proportionately the same demand on student services as other students.
- There are other education providers offering programs and services similar to those provided by Central Arizona College that are available to CAC's potential student population.

PLANNING ASSUMPTIONS

Planning assumptions use the information from the environmental scan to establish a foundation for the Education Plan. The assumptions developed below help guide the College's efforts to respond to changes in its internal and external environments.

- There will be explosive growth in Pinal County through the year 2025 and beyond. This growth will bring many challenges to the County's infrastructure and to Central Arizona College.
- The College will serve as the primary vehicle for access to higher education opportunities in Pinal County.
- Central Arizona College will face increased competition for students from both public sector institutions as well as private and for-profit institutions.
- Families will be attracted to Pinal County for the relatively lower cost of housing. Breadwinners in many of these families will commute to jobs in Maricopa and Pima Counties. These households will be relatively affluent.
- As population density and traffic congestion in the County increases, especially along the I-10 and I-8 corridors, there will be great interest among new residents in these areas in creating employment opportunities nearer to where they live and, in many cases, creating and/or enhancing opportunities to work from their homes.
- The population growth in the foreseeable future will translate into high demand for local service industries. These industries are likely to experience the biggest growth: nursing, general healthcare, sales, hospitality, HVAC, construction, landscaping, plumbing, and transportation
- Central Arizona College will play dramatically expanded role in assisting Pinal County to attract new businesses and to train their employees. Creation of new partnerships with private sector businesses and industries is necessary to provide focused training demanded by businesses and industry.
- Central Arizona College enrollment growth should rise in tandem with predicted County population growth. The college can, however, utilize enrollment management techniques to increase its overall enrollment and to specifically target new programs and students.

- New students will want course choice and convenience. When alternative providers are clearly available, they will make their choices about institutions based on these factors.
- Central Arizona College will provide high quality, low cost education for Pinal County residents who choose to start or continue higher education in locations convenient to their homes. Further, CAC will continue to serve as the point of entry to postsecondary education for high school graduates who cannot afford, be accommodated by the Arizona University System, or who are not ready for the University.
- Central Arizona College will need to serve the career needs of a wide spectrum of its citizens including K-12 students, recent secondary graduates, current workers, and prospective workers of all ages.
- The anticipated increase in older adults in the County, most of whom will be affluent baby boomers, will provide the College additional challenges in expanding its credit but particularly noncredit activities to match their interests and lifestyles.
- Learning is life-long. There will be a constant need to retrain and refresh workers and others as technology evolves.
- Younger, incoming students will be “digital natives.” They will be computer literate and expect more from technology at Central Arizona College.
- Students without access to technology will rely upon the College to provide it. Technological “have-nots” throughout the County may come to expect that Central Arizona College can serve as a gateway to technology.
- Even given the likely higher income profile of in-migrants, Central Arizona College will still continue to serve a diverse student population in age, goals, background, and economic status.
- Many students will continue coming to the College with low skills in English, math and general sciences. There will be an increased demand for English as a Second Language instruction. Higher proportions of students will have childcare needs that translate into demand for resources.
- To keep pace with societal trends and the income profile of in-migrants to the County, course offerings should include a variety of learning modalities including, but not limited to, distance learning alternatives. These alternatives should include synchronous as well as asynchronous modalities.

- Although the trend and demand for online learning and learning paradigm shifts is strong and positive, the basic course delivery mechanism at CAC will remain traditional, requiring renovated and additional space.
- CAC is nationally recognized as a leader in the development of student learning outcomes based curriculum and establishment of proficiency standards for all curriculum. To insure that this level of quality is maintained, the institution has implemented a mandatory three year review and evaluation cycle for all curriculum as well as a four-year purge process for outdated curriculum. A complete re-structure of the Academic Program Review process has been developed and will be piloted during the Fall semester 2004. This new Academic Program Review process will link budget process, curriculum development five-year planning cycle and AQIP together. Improvement in the area of curriculum development and Academic Program Review will continue to improve over time.
- New facilities will need to be constructed and existing facilities renovated to accommodate anticipated growth. Facilities will need to be expandable to meet increased population in their vicinity, well equipped to parallel technological advances, and scalable to match a variety of learning activities and modes.

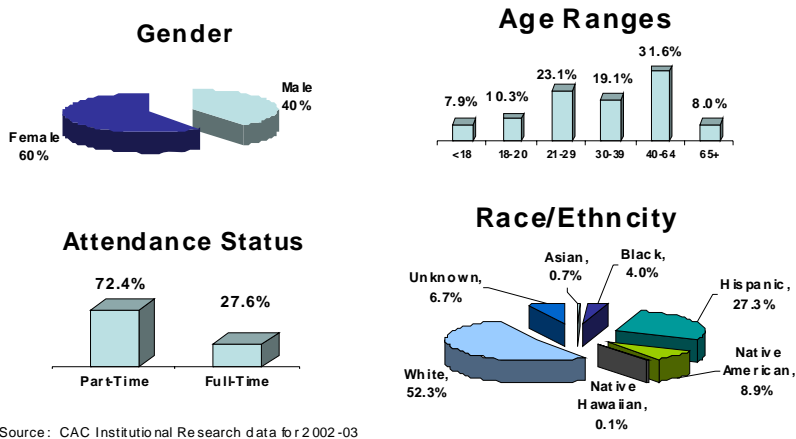
CURRENT STATUS

Demographics

With several important exceptions, Central Arizona College's student demographic characteristics are not substantially different than other, medium size community colleges. The proportion of females is consistent with colleges throughout the nation. CAC is a Hispanic-Serving Institution; more than 27 percent of its students are Hispanic. Hispanics will be the fastest growing ethnic population in Pinal County and throughout Arizona for the foreseeable future. According to the U.S. Census Bureau, Hispanics will also be the youngest segment of the population and will have the lowest rate of secondary school

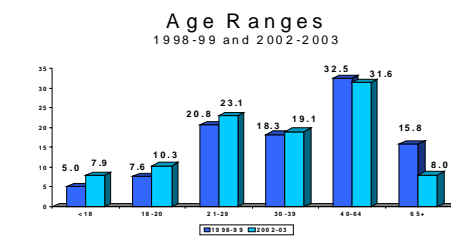
Display 1

College Demographics



Source: CAC Institutional Research data for 2002-03

Display 2



completion. The proportion of Native American students (8.9%) also sets CAC apart from other medium-sized community colleges (see Display 1).

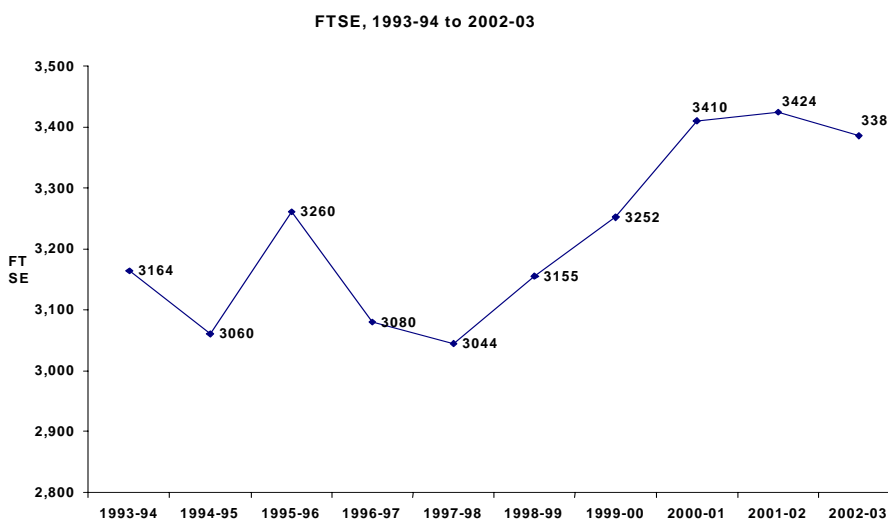
Nationally, about 37 percent of all community college students attend their institutions on a full-time basis versus 27 percent for Central Arizona College.¹⁶ The proportion of full-time students has risen each year since 1992, consistent with the number of younger students entering the college. Younger students can be expected to attempt more credit hours than older students who typically are working adults (see Display 2).

Younger students have increased proportionately at CAC, while senior citizens have declined. This may be attributable to changes in programming as the institution has moved away from Elderhostel programs and as the district tuition rate for senior citizens has increased. The effect of shifts in ages has been a relatively stable pattern of Full-Time Equivalent Student (FTSE) production each year since 1992 and a decrease in headcount enrollment through 2002-2003 (see Display 3).

It is notable that FTSE production at CAC continued grow from 1999-2000 even while the Arizona and national economy experienced difficulty, bearing out the fact that community college enrollments increase in economic downturns while the opposite is true when the economy prospers. Central Arizona College's overall enrollment will be a major benchmark of the institution's performance. Subsequent sections of this report will examine the structure of current programs and make recommendations for programs that will be required to meet future needs of the College and its stakeholders.

Enrollment growth has been in an upward direction at the Signal Peak and Superstition Mountain campuses while the Aravaipa campus has experienced cyclical enrollment patterns culminating in no absolute enrollment growth since fall 1995 (see Display 4).

Display 3



One benchmark of performance is the service area participation rate: the unduplicated headcount in an academic year divided by the number of county residents aged 18 and older. Using this measure, Central Arizona College compares favorably to its neighboring community college districts, especially the corresponding statistic for Maricopa County.

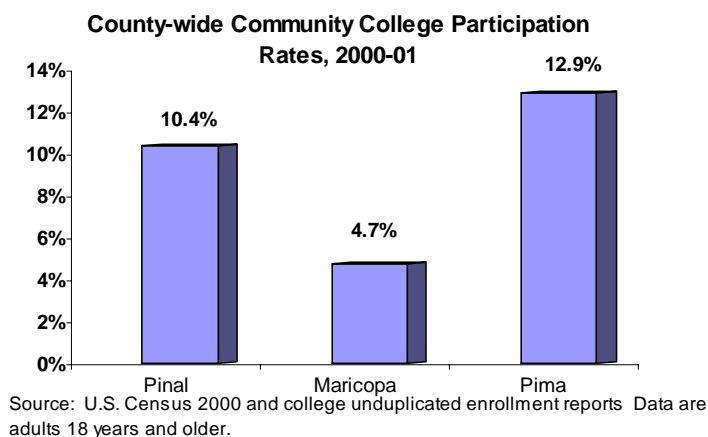
Display 4

Fall Term Headcount	1995	1996	1997	1998	1999	2000	2001	2002	2003
Aravaipa	624	770	732	679	945	588	619	590	606
Signal Peak	2,700	2,608	2,326	2,328	2,601	2,827	2,950	3,095	3,210
Superstition Mountain	725	647	723	687	841	997	1,198	1,198	1,176
Total	4,049	4,025	3,781	3,694	4,387	4,412	4,767	4,883	4,992

Source: CAC Institutional Research

The Maricopa Community College District's relatively lower participation rate is attributable to increasing competition for that County's students among higher education providers (see Display 5).

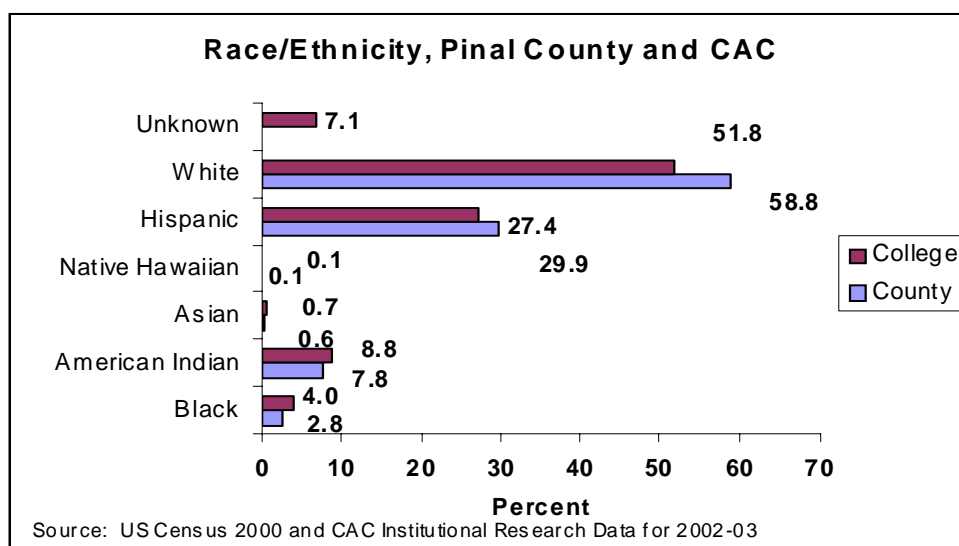
Display 5



College participation rates would be higher if the numbers of adults in Pinal County that have had no prior college experience took advantage of the College's education program. The Pinal County proportion of adults 25 and older with no prior experience with college is higher than both state and national averages (Display 6). The following communities exceed the countywide average (57.7%) for adults 25 and older with no prior college experience and therefore are target areas for expanded ESL and GED instruction as gateway programs for community college education: Ak-Chin (85.9%), Apache Junction (58.2%), Blackwater (85.7%), Chuichu (80.3%), Coolidge (64.4%), Dudleyville (66.7%), Eloy (76.5%), Florence (64.1%), Mammoth (67.3%), Maricopa (86.0%), Sacaton (75.7%), San Tan (75.7%), Stanfield (86.1%), and Superior (64.6%). As individuals with higher levels of

education migrate to Pinal County overall proportions of college readiness may change in certain of these communities. However, it is likely that the County's least educated adults will remain in or near their current communities.

(Display 6)



Yet another demographic benchmark is the proportion of Pinal County recent high school graduates that enter the College immediately after graduation. CAC's Fall 2003 capture rate is 23.6 percent (see Display 7). Arizona's participation rate in higher education by 18 to 24 year-olds is 29.2 percent, a statistic that is significantly below the performance of best performing states (Rhode Island's rate is 47.7 percent).¹⁷ Arizona's rate is depressed by high dropout rates. One source estimates that the chance that a low-income high school freshman in Arizona will enter college is 15.6 percent.¹⁸ Left alone, these statistics paint a grim picture of Arizona's future. Central Arizona College, however, can play a fundamental role in reaching out to both high school dropouts as well as recent high school graduates. Subsequently, this plan makes several specific recommendations that can solidify relationships with secondary schools in Pinal County while improving participation rates in higher education.

The College participates in the statewide ASSIST (Arizona State System for Information on Student Transfer) database containing enrollment and degree information on students attending Arizona's three public universities and ten public community college districts (see Display 8). The most recently available data indicate that the cumulative number of students attending Arizona public universities has risen each year even at a time period when the College has experienced relatively flat unduplicated headcount. This is an indicator of demand for transfer programs. These data may not

represent total transfer activity from CAC since they do not include private college transfers or transfers to out of state institutions.

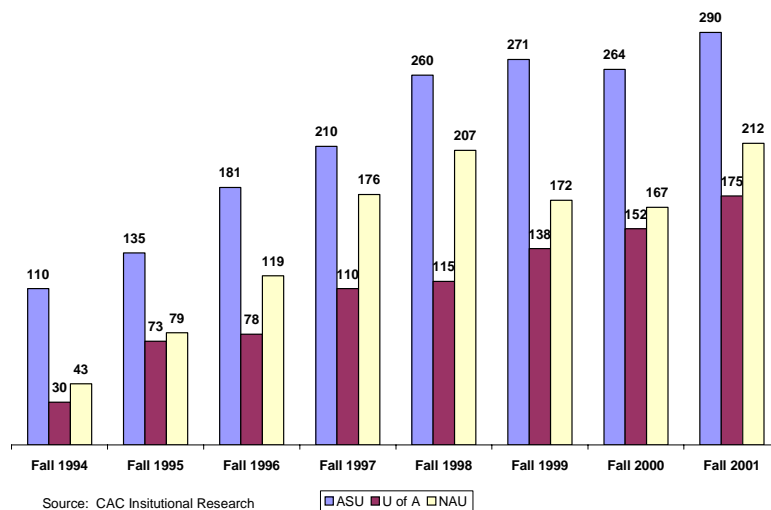
Display 7

Participation Rate, Pinal County High Schools, Fall 2003

	Graduates, May 2003	% Applied	% Registered	# Attended	% Attended
APACHE JUNCTION HIGH SCHOOL	280	23.2%	15.4%	42	15.0%
APACHE TRAIL	36	41.7%	22.2%	8	22.2%
CASA GRANDE UNION H.S.	388	64.7%	32.5%	117	30.2%
COOLIDGE HIGH SCHOOL	98	78.6%	46.9%	43	43.9%
EXCALIBUR CHARTER SCHOOL				1	
FLORENCE HIGH SCHOOL	72	58.3%	38.9%	28	38.9%
MARICOPA HIGH SCHOOL	55	45.5%	12.7%	7	12.7%
PINNACLE HIGH SCHOOL	35	17.1%	5.7%	2	5.7%
PPEP TEC				0	
RAY DISTRICT HIGH SCHOOL	48	54.2%	20.8%	9	18.8%
SAN MANUEL HIGH SCHOOL	73	27.4%	12.3%	9	12.3%
SANTA CRUZ VALLEY UNION H.S.	81	65.4%	24.7%	15	18.5%
COOLIDGE HS SUCCESS CENTER	21	19.0%	0.0%	0	0.0%
SUPERIOR HIGH SCHOOL	44	47.7%	22.7%	8	18.2%
VILLA OASIS INTERSCHOLASTIC	13	38.5%	30.8%	4	30.8%
CAPTURE RATE	1244	49.4%	25.2%	293	23.6%
CAC Institutional Research					

Display 8

Transfer Status, CAC Students

**Degrees and Certificates**

Central Arizona's degrees include the Associate of Arts (AA), Associate of Business (AB) and Associate of Science (AS), each of which are designed for direct transfer without loss of credit to one of Arizona's public universities (Arizona State University, Northern Arizona University, and the University of Arizona). Central Arizona College participates in a statewide articulation agreement for general education known as the Arizona General Education Curriculum (AGEC). The AGEC consists of 35 semester credits of study covering the general education areas of Written and Oral Communication, Arts and Humanities, Social and Behavioral Sciences, Physical and Biological Sciences and Mathematics. Responding to the need for preparing future educators within Pinal County, CAC has developed a specialized transfer degree, Associate of Arts in Elementary Education (AAEE). Like the standard AA degree, the AAEE transfers without loss of credit to an Arizona public university.

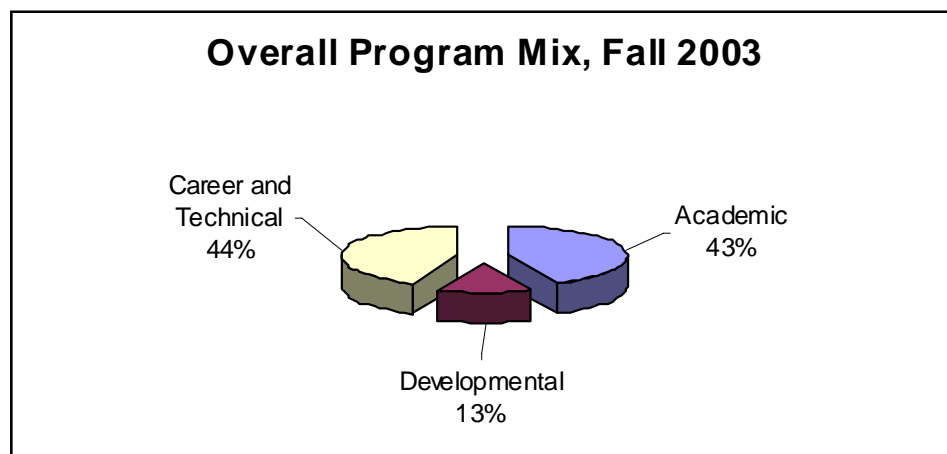
The Associate of Applied Science (AAS), Associate of General Studies (AGS) and certificate programs are designed to provide learners with the flexibility and opportunity to move into advanced training or degree programs. Regardless of their program of study, learners are encouraged to complete the AGEC as part of their program to accommodate possible transfer to a university in the future. Central Arizona College also offers a number of certificates in the career and technical education area. In fact, more than 2 and one-half as many certificates are awarded as associate degrees.

CAC also offers learning opportunities for those not pursuing a degree or certificate program. A variety of special interest courses, including both credit and non-credit are offered through the Workforce Development and Community Education department. In addition, CAC provides a General Education Equivalency Diploma (GED) program.

Current Program Mix

Past offerings inform future offerings, but do not dictate future offerings. Community colleges have considerable flexibility to manage programs for the benefit of learners. Central Arizona College's overall mix of programs is almost evenly split between career and technical (vocational) and academic programs. Developmental, or remedial programs, account for a much smaller proportion of overall enrollment (13%) (Display 9). If trends continue in the general population and in the performance of secondary schools, the share of CAC's instructional activity that is given to developmental education will grow.

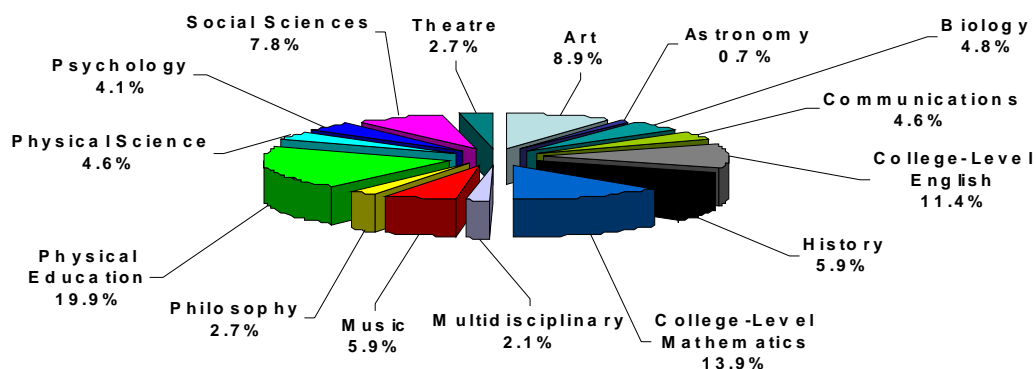
Display 9



The performance of CAC's programs and their contributions to the institution's overall health can be assessed in four ways: 1) recent enrollment trends, 2) numbers of courses offered in traditional formats, 3) locations at which they are offered, and 4) labor market connections.

Display 10

Academic Program Mix, Fall 2003



Source: CAC Institutional Research course files. Traditional length classes depicted; excludes open-entry/open-exit classes

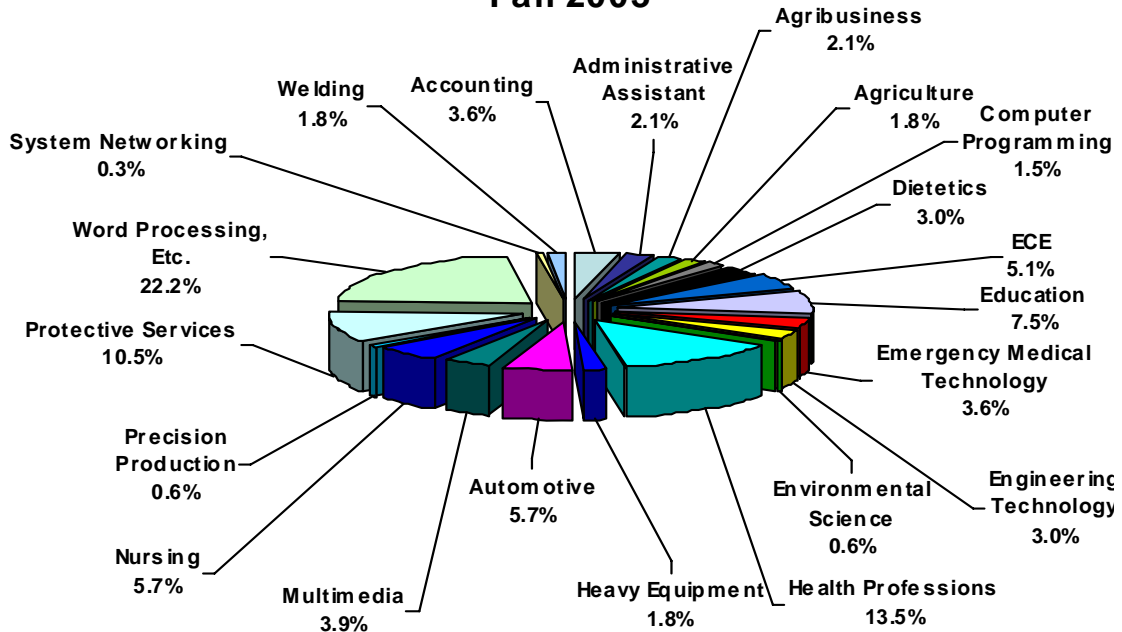
There is considerable breadth in the academic program at Central Arizona College. The largest single academic program area is physical education; the smallest is astronomy. Since fall of 1999 the growth programs in the academic area are art, biology, physical education and physical science. Those programs with substantially less enrollment since the fall of 1999 include psychology and theatre. (Display 10)

Courses in remedial English, math and reading have increased in number since fall of 1999 while English as a Second Language and General Education Development (GED) courses offered in traditional formats have declined. Given the proportion of current and predicted Hispanic residents, the College should offer more ESL courses.

The College also offers a wide range of career and technical programs (Display 11). Programs that have grown in this area since the fall of 1999 include agribusiness, business management, dietetics, early childhood, health professions, and protective services (the CARLOTA program). Programs that have declined over this period include administrative assistant, automotive technology, construction trades, education, engineering technology, multimedia, and welding. System networking was offered sporadically from fall 1999 to fall 2003 and experienced only marginal enrollment.

Display 11

Career and Technical Program Mix, Fall 2003

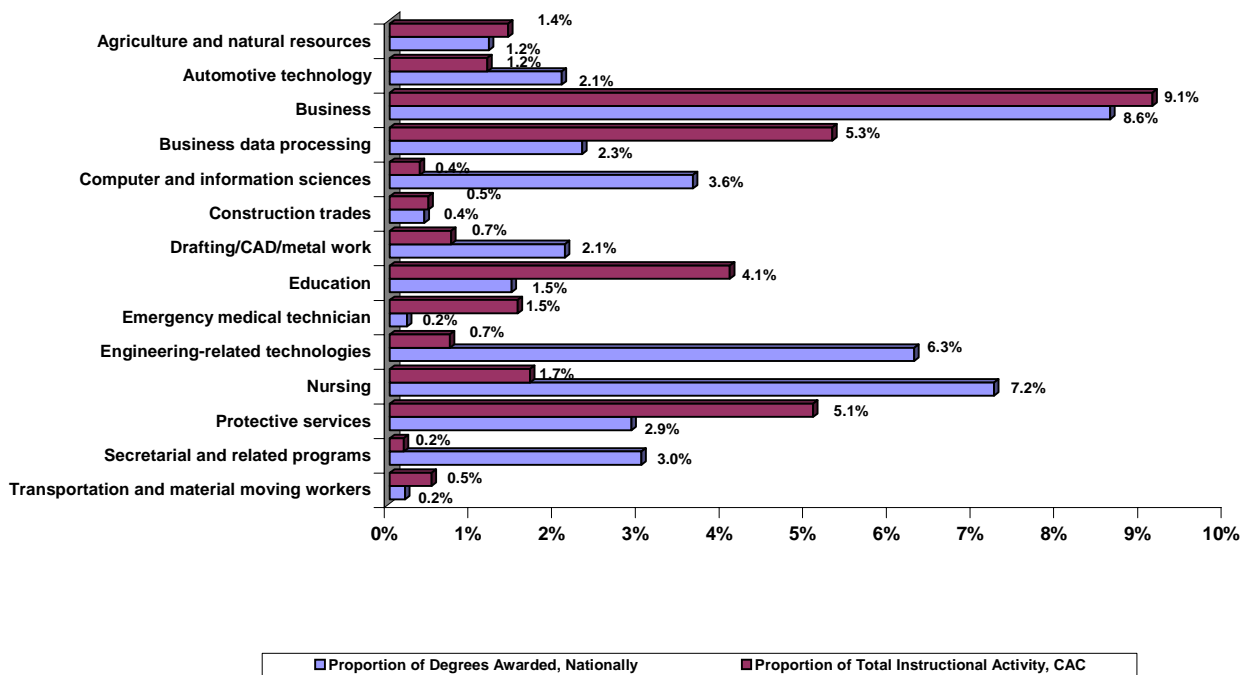


A useful way to examine career and technical program mix at Central Arizona College is compare it to what is known about the distribution of these programs nationally. Data about program enrollments are not available on a national basis. However, data about the types of degrees offered by community colleges are available from the national Center for Education Statistics and can provide a rough comparison. This exercise shows that Central Arizona College is below the national profile in these program areas: computer information science, drafting/computer assisted drafting, engineering technology, nursing, and secretarial related programs. On the other hand, CAC appears to offer more of these programs compared to the national profile: business data processing (word processing and spreadsheet applications), education, emergency medical technology, and protective services.

Every college is different and the programs that they offer are different as well. However, at this stage of Central Arizona College's evolution it is critical to use a variety of benchmarks to assess what programs citizens of Pinal County need and how those programs are made available. National benchmarking, program enrollments, and program scheduling options will continue to be the yardsticks that should be applied to all programs. (Display 12)

Display 12

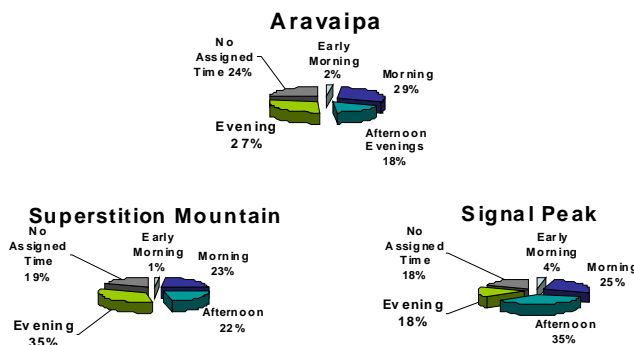
National Program Comparison



Oftentimes, the reason that programs grow or fail to grow can be traced to the times that they are scheduled. This impacts program mix. For example, there are significant differences among the district's three campuses in the proportion of classes that are offered in evening hours (see Display 13).

Display 13

Classes by Time, Fall 2003

**Unique Programs**

Astronomy. Central Arizona College owns a series of 6 telescopes ranging from a 24 Inch Goerz Cassegrain Reflector to a 6 Inch Newtonian Reflector at the Signal Peak Campus. The Goerz Cassegrain is as large as the telescope at the nationally known Lowell Observatory at Northern Arizona University and is accompanied by a computer tracking for precise viewing of stars and planets. Its use by the wider community has accelerated in the current year and it holds even more promise for increased credit and noncredit usage.

Dietetics. Central Arizona College operates a statewide program in Dietetics that awards both degrees and certificates. This program offers degree and certificate programs in the fields of nutrition, dietetics, and culinary arts, all of which enhance job skills and expand job possibilities. Internships which combine theory and practice are required for three of the program options: the Dietetic Technician AAS degree, the Dietetic Technician Advanced degree, and the Dietary Manager's Certificate. Certifications in Diabetes Prevention Assistant, Certified Breastfeeding Counselor, Cook Level I, and Food Service Management are also offered. Hospitals, restaurants, wellness centers, retirement homes, school food services, and community nutrition agencies are sites where students provide service while applying dietetic skills. The Dietetic Technician program is accredited by the Commission for Dietetic Education of the American Dietetic Association. A chief market for this program is working with food service workers in the K-12 arena in cooperation with the Arizona Department of Education. CAC's dietetics program serves between 800 and 1,200 students annually. A certificate option in the dietetics program, diabetes prevention, exhibits strong demand.

Heavy Equipment Operation. The College operates a degree and certificate program in heavy equipment operation. This program accents the operation as well as maintenance of heavy equipment. This area is making a transition to increased technology as dealers have

recognized that they do not have qualified applicants for positions coming directly from area secondary schools. The relationship with CAC involves donated equipment. Students may earn a set of tools if they graduate from the program and complete one year's work in an affiliated dealership. Mesa Community College is the nearest competitor in this general area.

Science, Engineering, Mathematics, and Aerospace Academy (SEMAA). This program, funded by the National Aeronautics and Space Administration, seeks to expose historically underrepresented youth in K through 12 grades to science, math, and technology as fields of study and to increase their numbers enrolling in college. SEMAA involves 13 districts and 10 elementary, 6 middle, and 3 high schools in Pinal County. It seeks to provide hands-on instruction while linking college faculty with their counterparts. This program has been very successful and can serve as a model for future collaborations with area schools. This program has almost doubled the number of students it has served in the last two years, from 657 students to 1,244. The SEMAA program also hosts a Science Day on the CAC campus. In April 2004, more than 500 people attended this event.

Faculty and Staff Resources

About 75 percent of Central Arizona College's headcount faculty is part-time, a statistic that is comparable to community colleges nationwide. Part-time faculty drawn from business and/or other education providers can provide fresh insight into the curriculum. Qualified part-time faculty also lend flexibility as the College expands to meet growing needs in Pinal County it will need to employ an appropriate number of part-timers. Accreditation-wise, the North Central Association will require that a "sufficient" number of the College's faculty are full-time employees of the institution and that faculty has a significant role in developing and evaluating all of the institution's educational programs. Central Arizona College currently meets these standards and will need to adhere to them as it plans its future. One of the issues that the College will want to address is increased recruitment of people of color, especially Hispanic and American Indian staff and faculty see Display 14. Their current proportions appear low relative to the number of Hispanic and Native Americans in the student body. Under-representation of persons of color in faculty and staff positions is a widespread problem across higher education especially as many institutions attempt to draw from a limited pool of qualified minority applicants for professional positions. Increasing the number of Hispanic faculty—in particular—would provide a significant proportion of the student body with role models. However, given the five-fold growth in minority populations in the County, the College will want to try multiple avenues to match race and ethnicity characteristics of its students.

Display 14

Human Resources, Central Arizona College			
	FY 2001-02	FY 2002-03	FY 2003-04
Full-Time Teaching	95	93	95
Part-Time Teaching	263	230	265
Full-Time Non Teaching			
Classified	124	123	119
Support	88	89	93
Administration	14	14	17
Total Non-Teaching	226	226	229
Source: CAC Office of Human Resource, March 2004			

Characteristic	Administrative	Support	Faculty	Classified	Total
Male	11	34	50	36	131
Female	6	59	43	83	193
White, Non Hispanic	14	75	81	70	240
Hispanic	1	10	4	36	51
African American	1	3	5	3	12
American Indian	1	2	2	4	9
Asian	0	1	1	2	4
Multiracial	0	2	2	4	8

Existing Partnerships

Pre K through 16 Partnerships

Central Arizona College has dual enrollment agreements with Casa Grande Union, Santa Cruz Valley Union High school, Coolidge, Florence, Apache Junction, Maricopa, and San Manuel High Schools and the Central Arizona Valley Institute of Technology in which high school juniors and seniors can earn both CAC and secondary credit for selected classes. Secondary students must attain a satisfactory score on the ASSET placement assessment (usually in reading) and be otherwise admissible to the College.

Housed at CAC, the Central Arizona Valley Institute of Technology is a career and technology education public school district working in partnership with five area high schools. The Tech Prep program prepares students for employment in high-skilled technical occupations. Tech Prep, which is funded by the U.S. Department of Education, provides a seamless transition for students from high school vocational programs to college vocational programs. Program areas include agriculture technology, criminal justice, drafting, electronics/technology, business information technology systems, administrative information services, sales/marketing, visual/media communications, early childhood

education, allied health/nursing, welding, and hospitality and culinary arts. CAC articulates 40 courses with the Pinal County Tech Prep Consortium.

In 2003-2004 workshops were conducted to enhance the knowledge and skill of Secondary Guidance Counselors in Pinal County. The purpose was to increase their effectiveness in assisting students in Academic and Career planning. The training provided opened avenues for partnership and also exposed Counselors to many available, but previously unused, resources. It was discovered that a number of related educational entities, inside the college, as well as external; shared a common interest. Some of the partnerships that have begun to be strengthened in conjunction with Guidance Counselor Training are the following; Pinal County Tech Prep Consortium, CAC's Student Services Division, The Central Arizona Vocational Institute of Technology (CAVIT), Title V, The AZ Career Services Network at ADE, CAC's Promise for the Future, The Arizona Counselor's Academy Cadre and Career Technology Education Departments at area high schools. Current efforts are aimed at continuing and enhancing workshops and training, leading to adoption and implementation of the state model called "Comprehensive Competency Based Guidance (CCBG)". This collaborative effort has great potential to provide vision, resources and support for high school students and could lead to increased student achievement, higher attendance, fewer drop-outs, higher graduation and college attendance rates.

The College, the College Foundation, and Pinal County middle and high schools have created an innovative program designed to increase the number of low-income students who view higher education as a possibility. Titled, "Promise for the Future," this effort involves a contract signed by 8th grade students and their parents in which they agree to complete high school with a 2.75 or better grade point average. During their senior year, they then apply for a Promise for the Future scholarship that provides four semesters of free tuition for study at any of the CAC campuses. The first senior class eligible to receive this scholarship will be the 2005 class. More than 1,900 secondary students throughout the County are currently enrolled in the program and while it is perhaps premature to predict success, the volume of interest in this program indicates that secondary school entrance rates to CAC ought to increase substantially.

Higher Education Partners

Articulation agreements among institutions of higher education give evidence of current collaborations. The umbrella state articulation agreement, Arizona General Education Curriculum (AGEC) states, "Completion of the AGEC also means that you will have met the lower-division general studies requirements at any of the universities for the majors that articulate with that AGEC", this allows students to complete lower division courses at CAC and transfer with to any of the three Arizona Public Universities. CAC cooperates with the other Arizona Community Colleges in maintaining and updating these

state articulation agreements. State articulation agreements also have been established with Arizona Tribal Colleges and Universities. Expanded articulation agreements exist through the Course Applicability System (CAS) for all colleges and universities in the states of Washington, Oregon, Kentucky, Illinois, Minnesota, Ohio, Arizona, New York, and Wisconsin. Central Arizona College also participates in the Western Undergraduate Exchange program, a cooperative effort that allows students from 13 participating states to enroll in designated programs at 150 percent of the institution's regular residential tuition.

Partnerships also exist with other Arizona community colleges and 4-year institutions. Northern Arizona University and CAC have entered into an articulation transfer partnership in Hospitality Management. Arizona State University recently agreed with CAC to articulate the Tourism and Recreation Management program. NAU and CAC have signed articulation agreements in nursing (RN to BSN) and dietetic education (AAS to BAS in Health and BS in Health Promotion). CAC and NAU have entered into an articulate agreement in special education. The University of Arizona and CAC have established a partnership in the agriculture program. CAC has articulation agreements with private universities as well. Included here are the University of Phoenix in the BS in Management and BS in Business Administration programs. CAC also has an agreement with Prescott College in teacher education and with Grand Canyon University for CAC's AA program.

The Arizona System Ready/Child Ready (AzSR/CR) Professional Development Grant is funded through the U.S. Department of Education and administered by Arizona State University. Central Arizona College is one of four community college districts in the state to collaborate on this project. The purpose of AzSR/CR is to provide coursework, training, and mentoring opportunities for early childhood educators to improve the knowledge, skills, school-readiness, and success rates of young children living in poverty.

Construction on a new University Building at Signal Peak Campus is slated for late 2004 with projected completion in summer 2005. This facility will allow students the opportunity to attend Arizona state universities locally through face-to-face interaction and through Interactive Television. The partnerships slated for this facility will boost CAC's efforts to bring baccalaureate degrees to Pinal County.

Business and Industry Partnerships

CAC is in partnership with businesses, manufacturers, Chambers of Commerce, and national employers. Some of these collaborations arise through the Workforce Development arm of the institution while several are more decentralized in origin. For example, the CAC Agricultural Department has established various collaborative relationships. The Annual Dean Merrell FFA Field Day enables CAC to collaborate with 14 Arizona high school agricultural programs and brings more than 250 students to the CAC campus for various agricultural competitions. In addition, The Natural Resource Education

Center (NREC) at the Signal Peak Campus gives visitors a hands-on agricultural experience. The center is a non-profit organization supported by West Pinal, Florence-Coolidge, and Eloy Natural Resource conservation districts. CAC donates a classroom, four acres of land, and the water for irrigation.

The College also has collaborative agreements with Intel and John Deere to produce qualified workers for entry in those industries. As noted later in this report, however, the high tech manufacturing industry in Arizona is cycling through change and has not added production jobs over recent years. Even so, the College currently is in the process of developing a training center based on a working lab model that will allow CAC and college partners to educate faculty from secondary and postsecondary schools in high tech manufacturing. In collaboration with John Deere CAC serves as the Regional Training Center for repair technicians. Students attend this center from John Deere businesses in New Mexico, Nevada, Arizona, California, and Alaska. Collaboration with the Arizona Equipment Distributors Association, with the Arizona General Contractors and with the Arizona Operating Engineers help provide heavy equipment operations and service training to both full and part time students. In addition, on the job experience or hands on lab experiences are provided.

The College is in the process of developing a collaborative relationship with The Western Association of Food Chains (WAFC) that includes the stores of Albertson's, Fry's, Bashas', and Safeway. The WAFC has agreed on a set of courses needed by an employee to move up the management ladder in retail foods. CAC is in the process of modifying curriculum with all these courses to be offered on-line. These stores will pay tuition for their employees who pursue this certificate. CAC also has an agreement with the Tucson Plumbers and Pipefitters Joint Apprenticeship and Training System to provide training.

State of Arizona

The College has an agreement with the Arizona State Department of Corrections (DOC) to provide eligible inmates in the Florence Prison Center with educational opportunities. Of its 15,000 inmates, 4,000 are eligible to participate in the 14 vocational programs CAC offers on site. CAC also has developed a relationship with the Central Arizona Regional Law Officers Training Academy (CARLOTA). One of eight state-certified police academies, CARLOTA provides the only daytime college-based academy in the state. Each 13-week program offers practical law enforcement training to newly hired agency peace officers. The Arizona Peace Officers Standards and Training Board requires this training and subsequent certification. CAC recently has signed an agreement to provide highway construction training with the Arizona Department of Transportation.

Central Arizona College works collaboratively with the Arizona Association of School Business Officials (ASBO), a professional association providing support and professional development opportunities for individuals whose primary responsibility is the business

management of a school district. CAC offers many of those professional development opportunities through continuing educational credits, certificate programs and degrees.

The Arizona Department of Economic Security (DES) has awarded a contract to the CAC Early Care and Education Program to provide educational opportunities to center based and family child care providers. The college serves as the lead in coordinating the statewide efforts of the DES Professional Career Pathways Project with fifteen other community colleges.

Federal Government

CAC administers a \$2 million Title V Hispanic Serving Institution Development Grant from the U.S. Department of Education. The program provides low-income CAC students with orientation programs, peer mentoring, in-person and on-line tutoring, CD-ROM tutorials, academic and ESL counseling, designed to encourage student participation in higher education. This program also offers K-12 workshops. Another grant from the U.S. Department of Education, the Para Educators of Pinal County Project (PEP-C), helps Pinal County paraprofessionals obtain Associate of Arts degrees with emphases in special education. The money provides tuition and books for students from participating Pinal County school districts. This program fulfills a need for special education para-educators and encourages people to obtain a teaching degree and stay in Pinal County. For each year of support received from CAC, students are required to stay and teach in Pinal County for two years. A third U.S. Department of Education grant is operated in collaboration with Gila River Community Child Services/Head Start Program, Child Care Access Means Parents in School (CCAMPIS) that supports the development of a child care center at the CAC-Superstition Mountain Campus. The College is presently in the process of applying for Title IV Trio grant from the U.S. Department of Education to expand its services to low-income students.

Tribal Government

The Supporting Teachers in Education Profession (STEP) grant assists Sacaton and other Gila River Indian Community schools to generate their own K-8 teachers with an emphasis on multilingual/multicultural skills. Participants attend classes at on-site locations and at CAC.

National Partnerships

The **League for Innovation in the Community College**, with support from the **Alfred P. Sloan Foundation**, has launched **Project SAIL (Specialty Asynchronous Industry Learning)**. Through a network of colleges and industry partners, Project SAIL aims to *create a national marketplace promoting access, exchange, and dissemination of*

specialized industry-driven programs anywhere and anytime for community college students.

Central Arizona College has entered an agreement to participate in Project SAIL. Currently, Business of Family Child Care and Early Childhood Management courses are included as well as the Diabetes Prevention Certificate.

International Partnership

Central Arizona College and Northeastern University, Shenyang, Liaoning Province, People's Republic of China recognize the value of and need for international cooperation between educational institutions. Such cooperative ventures serve to further not only the needs and interests of students and faculty, but also the community in general. Believing that education cannot be contained within political or geographic boundaries, officials at both institutions are interested in establishing links through pursuance of a cooperative institution agreement, which would include the following initial interactive arrangements of creation of linking web pages and encouragement of email correspondence between students and faculty; exploring an invitation to a Visiting Professor from Northeastern University to teach and students to attend CAC. This cooperative agreement is seen as a beginning step in the college's resolve to provide students and faculty true global awareness.

Specialized and Regional Accrediting Agencies

In addition to its accreditation through AQIP, the College is accredited by the American Dietetic Association, Dietary Manager's Association, American Culinary Federation, Arizona Quality Alliance, National Junior College Athletic Association, and National League for Nursing Accrediting Commission. These accrediting agencies set standards that students must meet to obtain certificates and degrees.

PROJECTED NEEDS FOR COMMUNITY COLLEGE PROGRAMS

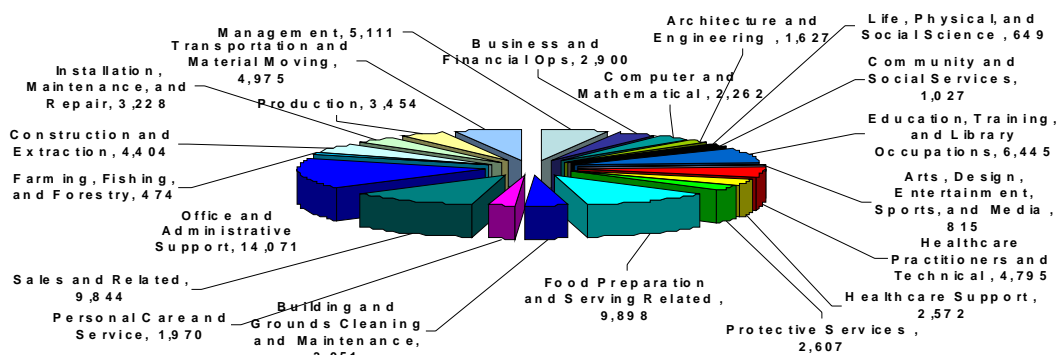
Central Arizona College is in a unique place among the nation's community colleges; its future challenges are the result of unprecedented growth, changing demographics and preferences for education, and increased competition for education and training opportunities. Few community colleges in the United States will be able to match the strength of these challenges. Competition will be keen; there are more than 230 providers of employment training opportunities that have been approved to operate in Arizona, offering programs from short-term training of several weeks in duration to full Associate degree programs.¹⁹

Statewide, Local, and National Labor Markets

Central Arizona College is located in Pinal County. However, it also serves wider labor force needs in Arizona because of its proximity to major metropolitan areas. The College also must seek to prepare graduates to successfully compete in labor markets in the West, the nation, and globally. As the second fastest growing state, employment trends that are experienced nationally also influence the Arizona job market. The outsourcing of jobs to overseas destinations also influences local job markets and resulting programs offered by the College.

Display 15

Annual Job Openings in Arizona through 2010



Source: Arizona Department of Economic Security

Statewide Trends

Arizona is one of the few states growing rapidly. As is the case with Pinal County, population growth and migration are creating new jobs to serve those needs. Most of the recent gains have been in construction and healthcare. Because of rapid population growth and recent low interest rates for homebuyers, the construction industry in Arizona has been among the strongest in the nation. Given predicted continued growth construction and healthcare will continue to produce jobs. Both are fields in which community colleges can prepare qualified employees. (Display 15)

In contrast, manufacturing serves demand that is largely external to Arizona. Manufacturing industry has been slow to recover since 2000. Both mining and manufacturing firms have lost jobs since 2000 while the construction industry is forecast to add more than 11,000 jobs.²⁰ This is offset by the predicted loss of 10,000 jobs in manufacturing and loss of roughly 700 in mining through 2005. It should be noted that the

decline in manufacturing jobs since 2000 is not as severe as experienced in other states but nonetheless has implications for community college efforts to prepare qualified manufacturing technicians. Service-providing industries are forecasted to add more than 81,000 jobs during 2003-04. Health and education sectors are projected to show growth of more than 26,000 jobs. Forecasted annual growth rates are expected to average roughly 5.7 percent during 2004-05. (Display 16)

Display 16			
Arizona Industry Employment			
Annual Average Growth Rate			
	2003	2004	2005
Manufacturing	5.2%	1.4%	1.1%
Natural Resources/Mining	-	-	-
Construction	8.0%	5.4%	4.4%
Construction	-	-	-
Trade, Transportation, Warehouse & Utilities	2.6%	2.9%	2.2%
Information	0.9%	2.2%	3.0%
Financial Activities	4.4%	1.6%	1.5%
Professional & Business Services	2.7%	1.8%	2.1%
Education & Health Services	1.9%	3.6%	4.2%
Leisure & Hospitality	5.9%	5.5%	5.7%
Other Services	0.9%	2.0%	2.5%
Government	-	0.5%	2.9%
	0.5%	2.9%	3.7%
Government	0.8%	2.5%	2.8%

Source: Arizona Department of Economic Security, Arizona Workforce, April 1, 2004

Pinal County Employment Trends

Employment growth in Pinal County has been flat for more than a decade. From 1989 through 2000, these sectors lost employees: government (-21.4%), manufacturing (-16.6%), mining (-64.2%), and agriculture (-9.4%). These sectors gained employees: services (109.9%), real estate (7.0%), retail/finance/insurance (28.0%), and construction (53.5%).²¹ Mining, once the largest contributor to Pinal County's assessed valuation, has declined dramatically although a 70 percent surge in worldwide copper prices in 2003 may spell a turnaround. At the same time, reduced labor costs in other countries may mean that this industry will experience a slower recovery in the United States (Display 17). The service sector now is the largest employment category in Pinal County and can be expected to grow alongside predicted population and associated demand for services. The greater majority of these jobs, however, will not be high-wage jobs. Government employment will also grow but will lag somewhat behind population growth. The trend toward small businesses (with

fewer than 50 employees) will continue and will provide the College with opportunities to provide customized training to this critical sector.

Display 17

2003 Occupational Employment, Pinal County

Occupational Group	Number	Average Hourly Wage
Architecture & Engineering Occupations	300	\$21.24
Arts, Design, Entertainment, Sports, & Media Occupations	280	\$12.42
Building & Grounds Cleaning & Maintenance Occupations	1,400	\$9.73
Business & Financial Operations Occupations	1,330	\$17.30
Community & Social Services Occupations	870	\$16.34
Computer & Mathematical Occupations	240	\$18.64
Construction & Extraction Occupations	2,390	\$16.72
Education, Training, & Library Occupations	6,270	\$14.63
Farming, Fishing, & Forestry Occupations	710	\$9.28
Food Preparation & Serving-Related Occupations	3,680	\$7.79
Healthcare Practitioners & Technical Occupations	1,430	\$21.96
Healthcare Support Occupations	970	\$9.66
Installation, Maintenance, & Repair Occupations	1,800	\$13.36
Life, Physical, & Social Science Occupations	220	\$20.99
Management Occupations	1,810	\$29.09
Office & Administrative Support Occupations	5,790	\$12.37
Personal Care & Service Occupations	730	\$8.60
Production Occupations	1,860	\$13.04
Sales & Related Occupations	2,580	\$10.24
Transportation & Material Moving Occupations	3,580	\$10.29

Source: Arizona Workforce Informer. Retrieved on May 2, 2004 from http://www.workforce.az.gov/admin/uploadedPublications/1199_Pinal03.xls

National Trends

The U.S. Bureau of Labor Statistics tracks information on individual occupations and on entire industries. The most recent statistics are for the decade 2002 to 2012 (see Display 17) and predict that the fastest growing occupations will largely be in health-related areas. Much of this demand occurs as the general population ages and as current professionals retire. These data are encouraging since the types of programs typically offered by community colleges match entry to most of these occupations.

The Bureau of Labor Statistics also predicts which jobs will grow the most through 2012. This compilation also predicts heavy demand for health professionals but also includes teachers and other professionals whose academic careers can begin at the

community college. As was the case with the fastest growing occupations, most of the training for these occupations can be offered by community colleges. (Display 18).

Display 18

Fastest Growing U.S. Occupations, Growth to 2012

Titl	Employment Change Percent	Most significant source postsecondary education training(1)
Medical assistants	59	Moderate-term on-the-job training
Network systems and data communications analysts	57	Bachelor's degree
Physician assistants	49	Bachelor's degree
Social and human service assistants	49	Moderate-term on-the-job training
Home health aides	48	Short-term on-the-job training
Medical records and health information technicians	47	Associate degree
Computer software engineers, applications	46	Bachelor's degree
Physical therapist aides	46	Short-term on-the-job training
Physical therapist assistants	45	Associate degree
Computer software engineers, systems software	45	Bachelor's degree
Veterinary technologists and technicians	44	Associate degree
Database administrators	44	Bachelor's degree
Fitness trainers and aerobics instructors	44	Postsecondary vocational award
Dental hygienists	43	Associate degree
Hazardous materials removal workers	43	Moderate-term on-the-job training
Occupational therapist aides	43	Short-term on-the-job training
Dental assistants	42	Moderate-term on-the-job training
Personal and home care aides	40	Short-term on-the-job training
Self-enrichment education teachers	40	Work experience in a related occupation
Occupational therapist assistants	39	Associate degree
Computer systems analysts	39	Bachelor's degree
Environmental engineers	38	Bachelor's degree
Postsecondary teachers	38	Doctoral degree
Environmental science and protection technicians, including health	37	Associate degree
Network and computer systems administrators	37	Bachelor's degree
Computer and information systems managers	36	Bachelor's or higher degree, plus work experience
Preschool teachers, except special education	36	Postsecondary vocational award
Respiratory therapists	35	Associate degree
Occupational therapists	35	Bachelor's degree
Physical therapists	35	Master's

(1) An occupation is placed into one of 11 categories that best describes the education or training needed by most workers to become fully qualified. For more information about the categories, see Occupational Projections and Training Data, Bulletin 2572 (Bureau of Labor Statistics, forthcoming).

Source: U.S. Department of Labor, Bureau of Labor Statistics, Employment Projections.

Retrieved April 27, 2004 from <ftp://ftp.bls.gov/pub/special.requests/ed/ind-occ.matrix/mlrtab4.txt>

Hot Community College Programs

The American Association of Community Colleges recently surveyed community college administrators to determine which programs from which students were hired immediately after graduation. Those results are summarized below.²² It is important to note that there are many programs on this list that either are not currently offered at Central Arizona College or are offered as one or more courses, but not as a readily identifiable sequence of courses leading to a formal award.

Display 19

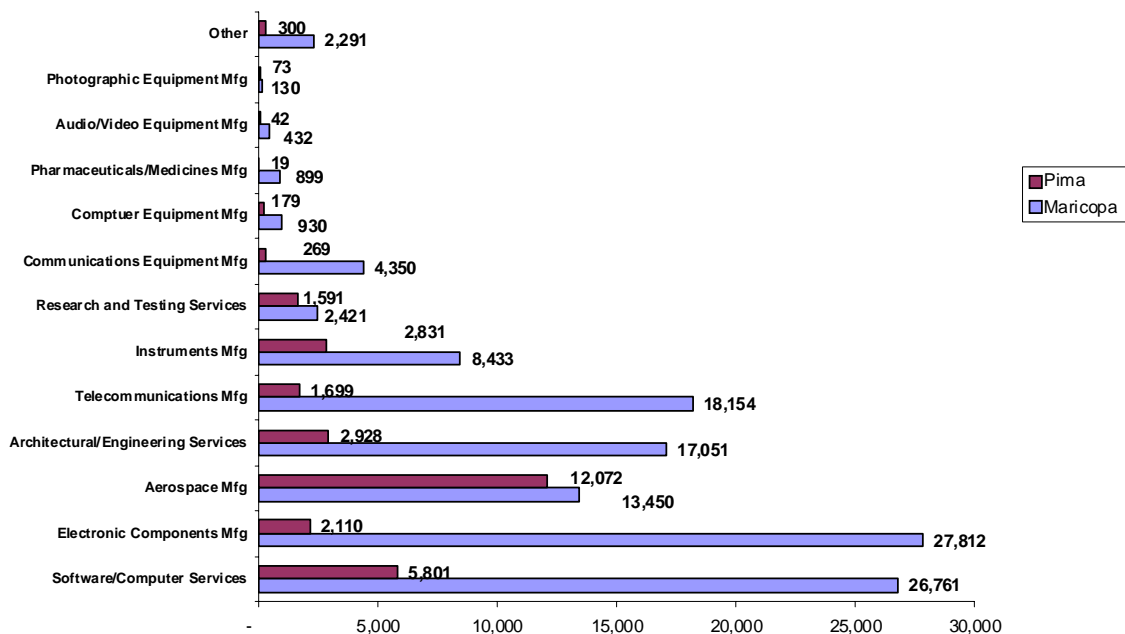
Programs	Reported Average Starting Salary	Degree/Certificate Program at Central Arizona College
Registered Nursing	\$32,757	Yes
General Computer Technologies	\$34,242	No, courses only
Computer Networking	\$38,767	No, courses only
Engineering-Electric/Electronics	\$29,464	Yes
Computer Technician/Networking	\$36,092	No, courses only
Manufacturing Technology	\$30,291	Yes
Radiology Technology	\$32,478	No
Digital Media	\$35,409	No, courses only
Computer Programming	\$30,838	No, courses only
General Skilled Trades	\$25,598	Yes
Law Enforcement	\$27,975	Yes
Dental Hygiene	\$41,907	No
Computer-Aided Design	\$27,968	No, courses only
Automotive	\$29,305	Yes
General Allied Health	\$24,781	Yes

High Tech Programs Potential

High tech employment in Pinal County is only marginal in the number of people it employs. A very recent report by the Arizona Department of Commerce estimates a high tech employment base of 425 individuals.²³ In contrast, Maricopa County and Pima County are the state leaders with more than 120,000 jobs (Display 20). The largest high tech employment categories within the County were in research and testing services with 221 workers followed by telecommunications manufacturing with 97. Although these numbers can be expected to increase in tandem with population increases, it is clear that the major employment base for high tech manufacturing lies to the north and south of the County. Meanwhile, the high tech sector is undergoing another cyclical change.

Display 20

High Tech Employment, Maricopa and Pima Counties



Source: High Technology Activities in Arizona, Arizona Department of Commerce, September 2003

Arizona's past performance in high tech manufacturing does not guarantee future jobs. The state has experienced a downturn in high tech manufacturing over the past five years owing to the nation's economic slowdown and the outsourcing of jobs to other countries. The Arizona Department of Commerce reports more than 4,000 jobs were lost in *primary* high tech manufacturing including computer and peripheral equipment, semiconductor and electronic components, communications equipment, and software and data processing between 1998 and 2002. These jobs were good quality and with annual salaries of more than \$60,000. In contrast, the outlook for *embedded* technology is increasing in the state.²⁴

The embedded technology represents the integration of technology with in products. This sector remained relatively strong during the economic downturn and probably represents the next wave of high technology employment for Arizona. Included within this sector are navigational instruments, aerospace, research and development (R&D) firms, and corporate administrative offices. Those primary manufacturing jobs lost to overseas factories will not return to the United States. Embedded high technology jobs, requiring an even more developed employee skill set represent the next wave of employment within the state.

The biotechnology sector also provides opportunities for the College to train laboratory technicians, engineering technicians, and management support occupations. A recent

survey estimated that more than 900 new laboratory technicians, production related workers, and management support will be required through 2005.²⁵ However, the biotechnology companies surveyed frequently indicated a preference for seeking candidates with a bachelor's or higher degree higher for these positions. There is an obvious statewide disconnect between biotechnology employers and education providers in sharing information about the competencies needed for success to perform specific high tech jobs.

What role should Central Arizona College in preparing a high tech workforce? First, analysis of enrollment data indicates that the College is considerably behind its competitors in providing high tech training opportunities. Both the Maricopa and Pima Community College Districts have long-established programs and both organizations are within close proximity of high tech manufacturers. Additionally, several other nationally known proprietary institutions operating in Arizona provide high tech training. Manufacturers themselves also invest considerable resources in training their employees in industry-specific techniques. Second, the College already has forged partnerships with two of the largest employers in Pinal County, Ross Abbot Labs and with Frito Lay, both of whom use automated manufacturing techniques. While these companies are large by Pinal County standards, unless expansion occurs in these or other industries using high tech processes, they cannot by themselves support sufficient long-term employment on which to build an enduring community college program can be built. Additional employers with high tech employment needs will be needed to support dynamic programs. Further, the College has built excellent relationships with Intel factories in the southern part of Maricopa County. However, their employment needs are shifting along with other primary manufacturers in the state of Arizona. As the Intel plants shift to automated manufacturing; the College will need to shift its training focus to ensure a pipeline of jobs for its graduates. Third, small communities simply do not have the resources to attract high-tech firms on a regular basis. This is particularly the case for the eastern portion of the County.

Even so, Central Arizona College should continue to pursue a niche for training high tech workers even give the constraints identified here. The relative lack of high tech employment may indeed change as the College comes to be viewed as the hub of workforce development for Pinal County. Employers moving to the County will want a trained workforce and the College should consider what types of skill competencies that high tech companies will require as a an entry point and build a certificate program around that core set of skills. The curriculum for that certificate would necessarily integrate computer skills, communication and customer relation skills, basic skills and work ethics alongside math, science, and critical thinking skills.

The College should also pursue the development of 2 +2 programs with the public university system in high tech areas. The continued development of these industries in Arizona will be dependent on the quality of university-based research. At the same time, companies will need qualified technicians to put that research into practice. Articulation agreements that recognize the specific hands-on curriculum available at community colleges and marry that knowledge with the research-based curriculum available at the university

level will be increasingly important to the state. It is important to draw those partnerships for the benefit of Central Arizona College alumni.

Central Arizona College also has a role to play in increasing the number of secondary students who might pursue technologically related careers. The SEMMA program is a bright example of how such collaborative efforts might work. In its work with the K-12 sector within the County the College should consider even closer collaborations, particularly if the grant that makes the SEMMA program possible goes away. Creating awareness of high technology programs through “hands on” application of technology will pay dividends. The College could also replicate this success through Tech Prep programs, dual enrollment programs, and through embedding these opportunities in its new Promise for the Future program. The desired goal is to improve the transition and college-going rates of Pinal County secondary students into college career and technical programs and subsequent careers.

Management Programs Potential

Central Arizona College must actively pursue more corporate management training. Five potential programs should be examined. Then decisions could be made with input from the Greater Casa Grande Valley Economic development foundation, the Cooper Corridor Economic Development Coalition, and input from area corporations’ human resources departments. These programs are:

Phillips model of Return on Investment (ROI). As colleges experience demand for accountability, businesses and their departments are also required to be more accountable. ROI is based on a step process of data collections, isolating process effects, converting “hard” data and subjective data into a monetary value, and adding costs.

International Organization for Standardization (ISO). Organizational processes are documented to ensure a high quality, uniform product or service.

WordKeys {Trademark registered by American College Testing program (ACT)}. Knowledge and skills are measured through a comprehensive system which can help determine gaps between job requirements in a company and potential or current employees’ actual skill levels. Assessment areas include applied mathematics, applied technology, locating information, reading for information, and business writing.

Developing a Curriculum (DACUM). Focus groups are formed consisting of current employees to help identify duties and form task lists. DACUM can provide valuable information about frequently performed tasks and be a basis for creating training programs.

American Management Association (AMA). The AMA offers a variety of courses which are self-contained modules. Management certificates can be earned by completing six modules. These courses can either be online or in a classroom setting taught by a professional trainer.

Health Programs Potential

The demand for health care workers is accelerating and Central Arizona College will need to expand its programming to match documented need. There are many medical facilities in the Phoenix metropolitan area. Pinal County, in contrast, currently has approximately 11 medical facilities and most of these are private doctor, dentist, or chiropractic offices. Several large health management firms are projecting building facilities in Apache Junction and the Casa Grande Regional Medical Center is adding beds to its current facility. Due to projected population growth especially in Maricopa, Queen Creek and the Johnson Ranch areas a number of regional medical centers will need to be constructed. CAC offers AAS degrees in Medical Transcription, Medical Assistant, Massage Therapy, Nursing, and Pharmacy Technician in addition to certificates in Medical Billing, Certified Nursing Assistant, Medical Assisting, Practical Nursing, Professional Coder, Pharmacy Technician, Home Health Aide and Behavioral Health Aide. Except for specialty classes, all Health Occupation programs (excluding nursing) are located at the Superstition Mountain Campus. CAC has certification and alliances that community colleges with more resources do not offer. In regards to short term certificates, CAC has an agreement with American Association of Professional Coders (AAPC), International Association of Medical Billers (IAMB), and the Arizona State Board of Nursing to offer a certified Nursing program. A reciprocal agreement with Maricopa Community College District (MCCCD) is in place so the HOC core classes can be transferred into the MCCD-HCIES (Health Care Integrated Educational System). Core classes at the Pinal County High Schools, through Tech Prep agreements, are also offered. Central Arizona College has alliances with businesses outside Pinal County that allows Pinal County residents to work from their homes i.e. Med-Quest and Med Pro. Except for those that receive a certificate or degree and decide not to pursue employment in a health career, all students have a choice of 2 to 3 positions upon completion of their respective program.

Nursing

The Nursing Program, a multiple-exit program, allows students to earn a Practical Nursing certificate or an AAS degree. Students with an AAS degree may take the Registered Nurse Licensing exam and become a registered nurse. Students with a certificate may take the Practical Nurse Licensing exam to become a practical nurse. This program requires a minimum of 180 hours of clinical practicum work in local health care facilities.

Strong demand for registered nurses will continue for the foreseeable future, especially as the population ages and as qualified nurses move out of the profession. According to the American Association of Community Colleges, nursing school enrollments nationwide are stunted due to a lack of qualified faculty, clinical, classroom, and lab space, and preceptors.²⁷ Central Arizona College is not immune from these issues. Currently, required clinical classes are scheduled both in Pinal County and outside the County because of lack of hospital beds required for student rotations. The College recently has committed funding for instructional supplies and professional services to increase the number of students admitted to nursing by 30 percent.

Medical Assisting

Medical Assisting is predicted to be one of the fastest growing occupations in the United States. According to a recent consultant's report, the number of graduates produced in medical assistant (front office and back office) total fifteen (15) since 2001.²⁸ Given the impending demand, both enrollment and graduates of this program need to be increased.

Medical Transcription, Massage Therapy, Pharmacy Technician, Home Health Aide, and other Programs

The Medical Transcription program has produced 16 AAS and certificate graduates since 2001. The Massage Therapy program, a new program, has not yet produced a degree and Pharmacy Technician program has produced 12 certificate and AAS graduates. The Nursing Assistant Certificate program awarded 28 certificates since 2001 and the Home Health Aide program produced 3 certificate graduates. While the numbers of graduates appear modest, it can be anticipated that as population expands in the County, accompanied by additional medical facilities and demand for health care, that the number associated with individual programs will increase.

During the past decade several reviews of health occupations in Pinal County have been conducted. Results are unanimous: Central Arizona College needs to be consistently engaged in the education and training of current and future health care providers. Central Arizona College, the sole-provider of health occupations training in Pinal County, must be aggressive and comprehensive in its efforts to help relieve the drastic shortage of qualified workers in all health related fields. Courses must be offered utilizing the latest technology and taking advantage of all medium available.

Most of the surveys suggested there was a severe shortage of facilities at CAC, in particular, the Superstition Mountain Campus. There can be no contention that space is a problem and until facilities can be constructed, growth is severely restricted. In addition to classrooms, lab facilities for all programs are needed and additional practicum sites would greatly enhance the programs as well as produce increased completers.

The majority of Health Career Programs require a practicum site. Pinal County has two medical centers, Casa Grande and HoHo Kam Memorial Hospital on Indian Reservation land at Sacaton. As a result of these limitations most practicum (clinical) sites are located in private medical centers or offices. A number of large health management firms are projecting the building of facilities or renovation of current facilities in Apache Junction, and the Casa Grande Regional Medical Center is adding beds to its current 180 bed facility. Due to the projected population increases, especially in Maricopa and Queen Creek (Florence-Chandler corridor), a number of regional medical centers will need to be built.

While there are many health-related programs CAC might offer, funds, facilities and personnel are deterrents in doing so. Realistically, the College should investigate implementing the following programs in the foreseeable future: Dental Assisting, Dental

Hygienist, Respiratory Therapy, Occupational Therapy, Surgical Technologist, District Health and Wellness, Chiropractic Assistant, Radiology and Ultrasound Technician and Clinical Laboratory Technician. These programs are mentioned specifically because it is realized many health programs are moving towards a Bachelor's or Masters degree for licensure or certification.

Recommendations:

- Place HOC, Nursing and Dietetic/Nutrition programs under one Division and change the title to Division of Health Professions
- Establish a position of Dean of Health Professions to manage the Divisions. This position would administratively report to the Vice President/Provost of Academics and Student Affairs with Directors of HOC, Nursing, and Dietetic/Nutrition reporting to the Dean.
- Alter the course designations from HOC for all Health Occupations Careers to program specific. The current HOC courses 100 through 112 would continue with an HOC prefix because the courses are core for a number of programs. Medical Assisting, Pharmacy Technology, Massage Therapy, Nursing Assistant and Health Information Technology courses would receive new designations
- The Medical Assisting program should proceed with its accreditation plans through the American Association of Medical Assistants (AAMA).
- The Massage Therapy program should apply for certification through the National Certification Board for Therapeutic Massage and Body work (NCBTMB).
- Establish and maintain a minimum of two meetings per year with Advisory Committees for all AAS Health Professions Programs.
- Establish a title of Adjunct faculty for unpaid clinical faculty
- Identify a Health Career Campus
- Obtain accreditation in Pharmacy Tech and Health Information Technology programs
- Establish a new salary schedule entitled "Technical and Professional."
- Provide space at the Signal Peak and Aravaipa Campuses for core courses to have on-site instructions. In addition, establish a process for comprehensive services to students who choose the online modality
- Establish a mechanism to identify new Health Career programs based upon community requests and needs

- Establish a continuing Education Department for the Health Professional Division

These recommendations are reasonable and consistent with needs expressed through the Southwest United States. There is no doubt that many health occupations are experiencing grave shortages in trained personnel. It is abundantly clear that CAC should be the primary provider for this workforce.

Pre K through 16 Linkages

Closing the participation gap especially for low-income and Hispanic students is a Pinal County problem, a state of Arizona problem, and a national problem. Standardized test scores alone cannot describe the dimensions of this problem. Test scores are highly correlated with demographics and the percent of students defined as “poor” by the federal government. Even so, the connections between secondary school performance and CAC are many. Because students are particularly vulnerable to dropping out at transition points, especially during the first year of college, the needs of high school students must be addressed with seamless curricula and support services that help students transition into college and career. Certainly, any activities that cause or strengthen collaborative relationships between and among families, middle schools, high schools, postsecondary institutions and business/industry should be pursued with vigor. CAC recently granted partial release time to a faculty member to serve as the district coordinator for Tech Prep and Dual Enrollment. CAC does not have a centralized office for the recruitment or establishment of relationships with local high schools, but as efforts are accelerated to draw secondary schools closer, this will become very important.

As mentioned earlier, the College must encourage Pinal County middle and high school students to attend CAC. Expand the “Promise for the Future” program that pledges future CAC scholarships to junior high schools students. Support the “First Step” program that grants summer tuition to eleventh and twelfth graders and introduces those high school students to college life. Strengthen Tech Prep and Dual Enrollment partnerships providing qualified high school students articulated and transcribed CAC credits. These programs provide incentives and pathways for low-income students who heretofore might not have considered higher education.

English as a Second Language (ESL) and Developmental Education Programs

There will be continued need to provide ESL, GED, and developmental math, reading, and English courses in Pinal County. The demand for these programs will continue despite the projected influx of a demographic with a different educational background. Earlier, this report identified those locations within the County that are targets for all levels of developmental education.

There is considerable need to raise the level of adult participation in higher education opportunities in Pinal County. Hispanics (30%) and American Indians (8%) constitute higher proportions of the County than their proportions statewide; members of these groups may be less likely to speak English as a first language. Further, nine percent of the county's current population was born outside the United States, and 1 in 4 Pinal county households speak a primary language other than English. English language literacy is a key issue for economic development. Literacy and fluency in English are related to economic self-sufficiency. Those who are literate only in a language other than English are more likely to have non-continuous employment and to earn less than those literate in English.²⁶

Further, it is likely that an increasing number of younger CAC students that enroll from secondary schools either immediately after graduation or especially after one or more years gap in schooling will require remediation through developmental education courses.

Recommendation: Given the combination of low English proficiency and low graduation rates, there will continue to be a strong need for ESL as well as developmental courses. The needs of these two very different programs can only be met if the College recognizes developmental education and ESL as two separate entities.

ESL Programs

English as a Second Language (ESL) is comprised of at least three distinct programs: community outreach, workplace education, and academic instruction. Each meet different needs of specific populations and are best maintained in a separate yet progressive sequence. CAC currently offers community outreach and workplace education programs, but little is in place for the academic ESL component.

Community Outreach ESL

There is a large population of ELL (English Language Learner) adults who want to learn English or improve their low level English skills. These adults know that in order for them and their children to be successful and participate fully in American life they need to be able to communicate in English. These students typically want classes at times and locations convenient to them: the vast majority of our community ESL classes are conducted at off-campus locations during evening hours. These adult students' primary goal is to improve

the quality of their families' lives by learning to communicate better in all areas of their lives: at their children's schools, the marketplace, the community and their workplace. They want better opportunities for themselves and their families, and they know that these community classes, which integrate all four communication skills, e.g., listening, speaking, reading and writing, are crucial to reaching that goal. Many of these students are most interested in survival and conversational English – what they need to know and understand when they go about their daily lives. Some, however, are determined to improve their English skills beyond that level and then continue on to college certificates or degrees. Once they're at a high enough proficiency level, or if they come to our community classes already at a relatively high level of English proficiency, we refer them to the more academically-oriented campus classes where they can hone their skills and take advantage of all the campus resources. Outreach is the key to this program, and these classes should continue to operate under the Workforce Development/Workforce and Community Education Division.

Recommendation: In the future, we need to make a more concerted, institutionalized effort to transition our community ESL students to campus certificate and degree programs. An important first step is to design a collaborative relationship between the Workforce Development Division, the Communication Division and the campus Learning Assistance Centers to create this seamless transition.

Workplace [ESL] Literacy

We have offered ESL classes in the workplace at several locations and are able to customize instruction to meet the needs of workers and employers. (See Workplace Education.)

Academic ESL

We currently offer active Community Outreach and Workplace Literacy programs in the communities we serve, but at the College, developmental reading and writing are the de facto ESL courses. CAC's demographics support an academic ESL program within the college. CAC students would benefit if a bridge were provided from the community outreach and workplace education program to the academic ESL instruction designed for students earning certificates, Associate's degrees, and transfer options in which the ELL can simultaneously improve language skills while working on college level course content. The consistency and standardization for ESL must occur at the point where the community based classes leave off and the college level learning needs pick up.

Recommendation: Create an Intensive English Program that offers continuity of course work and Content Based Instruction at the college level.

Issues to Consider

CAC has no means to identify, test, or place ESL students. By opting for no differentiation among entering students, English Language Learners are placed out of necessity in developmental courses. This neglects the ELL students' language needs.

Entry-level testing and placement based on language skills can be seen as segregating students of color. The lack of testing results in a more pronounced segregation as the students never receive the support they need to compete in college level courses. This could be perceived as the College being unwilling to address language diversity.

ELL students do not accurately self identify. Many claim a bilingual status in their primary language and English if they received schooling in English. Some ESL speakers will claim English as their primary language even though they first learned another language (Chiang, 84).

As there is no ESL assessment, the College cannot currently design courses to meet ESL students' needs. Demographics show only their ethnic backgrounds. We do not know how many are ELL and how many are native English speakers in our developmental courses. There is an English proficiency statement in the College Catalog, but the College also wants to reach out to students who need to acquire English language proficiency. This should correspond to or go beyond workplace literacy.

The College must avoid labeling ESL as developmental education. This presumes that a lack of proficiency in English is the same as a lack of college level skills in reading, writing, and math. Writing, reading, GED, and math developmental courses share in common that they are working on pre-college levels similar to what should be covered in high school level work. ESL differentiates itself when it is viewed as speakers of a language learning a second language. An ELL may have these skills; however, the skills may not be apparent without ESL testing. Time in developmental classes is not well spent if the student with strong reading and writing skills is not receiving the language instruction necessary.

Recommendation: One solution is to combine language skills testing as a part of the existing entrance testing. In a 1995 survey of US universities, separate ESL courses or sequences existed at virtually every institution (Harklau, ⁷). This requires identifying ELL students in the admission process.

Recommendation: TESOL has long recommended that ESL courses be awarded the same status as foreign language classes for purposes of credit and distribution (Harklau 7). CAC should investigate a fast-track method to offer two courses of language training in one semester. Classes could meet four days/week, the preferred method for teaching and learning a language, and this course could be worth 6 language credits. Such a course would be competitive with the current course offerings at community colleges in neighboring counties.

Recommendation: Create a ladder to college opportunities for ESL students through an academic ESL track implemented through the Communication Division.

ABE/GED (Adult Basic Education/General Educational Development)

Central Arizona College has provided ABE (or Pre-GED) and/or GED classes throughout the county for two decades. Although the title, format, and delivery method may have varied throughout the District over the years, all of these courses have been geared towards helping adults upgrade their basic skills to such a point that they could pass the Tests of General Educational Development. Most of these classes have been provided during evening hours at off-campus locations in order to eliminate as many barriers as possible by making the classes accessible and convenient to our students. In addition, classroom space is at a premium at the Signal Peak Campus; classrooms have not been available for these classes in the past.

Adults who already have their high school or equivalency diplomas but still lack proficiency in basic reading, writing, and/or math skills are not enrolled in these classes but rather are referred to the college registration process, including ASSET testing for

Although the course content of our ABE/GED offerings may be developmental in nature, in most cases these courses are delivered at off-campus locations to a population that wants and needs classes at convenient times and locations and so should continue to be a part of the Workforce Development/Workforce and Community Education Division. We do currently attempt to transition our ABE/GED students into the campus programs. For example, we regularly request that the admissions coordinator and/or CAC ambassadors visit the classrooms to inform students of all of the certificate and degree programs we offer. We hold GED graduations on campus and periodically conduct orientation sessions on campus to give our ABE/GED students a welcoming “feel” for what the campus can offer.

Recommendation: Increase our efforts to create a more seamless bridge from the community GED classes to College programs.

Workplace Education

We have offered Workplace Education classes in a couple of manufacturing establishments in the recent past. These have primarily been geared toward ELL adults, so we provided contextualized ESL instruction. Command Spanish® has also been offered through the Workforce Development (WFD)—Workforce and Community Education (WCE) Division to English speakers who needed to learn to communicate more effectively with their mono-lingual Spanish employees. Other courses that are typically included in Workplace Literacy programs are basic reading, writing, technical writing, math, GED preparation, and team-building. We develop on-site training courses that are tailored to meet the needs of both employer and employee. Although the ultimate goals of Workplace Education are increased productivity and lower costs to employers as well as increased

success and morale among employees, our attempts to implement an actual Workplace Education program have been hampered by the seeming reluctance of business and industry to absorb the cost of course development and/or delivery. The Adult Education section of the Signal Peak Campus WFD/WCE division has met with and made proposals to several local employers within the past year; however, none have followed through with requesting any courses that they would have to pay for.

Recommendation: If the College wants to move more aggressively into the arena of Workplace Education, we will have to adjust the budget and absorb some or all of the cost of customizing curriculum and delivering instruction.

The WFD/WCE is in the best position to assume the responsibility for a Workforce Education Program, given our flexibility and the fact that we are wholly geared towards outreach into the communities we serve.

Recommendation: There can be more collaboration with other College divisions when we offer classes at workplace sites that are in their content areas

Developmental Education Courses

Recommendation: Information should be gathered and addressed before making substantial changes to existing programs.

The math faculty estimate that 95% of the students that move through its program start in developmental courses. The flow between developmental and transferable math courses is virtually seamless as all math faculty teach at all levels. Courses can be easily adjusted to suit the needs of the student population. The department does not have enough faculty to split the instructors between developmental and transferable divisions.

Currently developmental reading and English courses are serving at least 3 very different populations:

- Students who speak English as their 1st language and need assistance to rise to the college reading and writing level require developmental reading and writing courses.
- Students who speak, read, and write fluently in a language other than English and need continuing language instruction in English to get their skills to the college survival level require ESL language courses.
- Students who were raised speaking the family's native language, but were educated in English for some part of their K-12 years in the American school system might require either ESL or Developmental, or may need both.

Recommendation: The Math and Communication Divisions feel that it would be more advantageous to create an interdisciplinary group comprised of math, reading, writing, ESL,

GED, and Student Services professionals from all campuses to consider better integration of programs and services for these specific populations of students.

Distance Education

More than 95 percent of the courses offered at CAC are delivered face to face in the classroom. There is considerable interest in increasing the number of non-traditional delivery course offerings to meet the needs of current and potential learners. This includes Interactive Television (ITV), online, and hybrid courses. Hybrid courses mix technological delivery with traditional face-to-face instruction. CAC uses the Blackboard course management system for the primary delivery of online courses. In the spring 2003 semester CAC had 98 fully online course sites and 50 online supplements to traditional and various types of hybrid courses. The number of hybrid courses is difficult to track as they use any combination of modalities. It is anticipated that their number will increase. The College also has created a committee to ensure the integrity of distance delivery classes.

All online and ITV courses must meet the same quality review as traditional courses at CAC. This includes the review and evaluation of student learning outcomes and standards for appropriateness of proposed delivery methods. CAC seeks to insure that all students, regardless of modality, have access to the highest possible quality of education.

CAC is in the process of expanding its ITV system to all CAC locations and into the high schools within Pinal County. The system currently includes connection to three classrooms at each of the CAC campuses, one center, one administrative office at a center, office to District Special Needs Coordinator, and two county high schools. Connections to the high schools have been utilized to provide opportunities for high school students to take dual enrollment courses. CAC is working in conjunction with Central Arizona Valley Institute of Technology (CAVIT) and other community stakeholders to expand the system to other county schools and the Gila River Indian Community. Connections to the other centers and offices are also planned for the future, including through the scheduled construction of the University Center on the Signal Peak campus which will permit the distribution of upper-division, university-based courses throughout the County.

Use of technology in the classroom appears to be increasing. While not all courses require constant use of the computers and the Internet, instructors should be encouraged to incorporate the use of technology within their courses. Courses that are scheduled in the computer classrooms include all of the computer application, programming, and networking, composition, reading and mathematics. Courses that utilize the computer classrooms on an intermittent basis include astronomy, history, political science, ethics, biology, chemistry, economics and accounting.

The number of on-line courses has eclipsed the number of ITV courses in recent semesters. The ITV system is an excellent vehicle for transmitting synchronous classes and other learning activities. A drawback to this technology is that both student and teacher must be available at the same time and currently CAC can only broadcast two (2) channels

simultaneously. On-line courses, on the other hand, are asynchronous, permitting learners expanded accesses to classes anytime and anywhere. Growth in on-line courses requires sophistication among faculty and students alike in direct application of technology, unlike ITV where traditional lecture formats predominate. A key part of the College's progress in providing on-line education lies in faculty development.

While the number of on-line courses is expanding, CAC has not yet pursued permission from the Higher Learning Commission of the North Central Association to offer degrees totally on-line. The College has wanted to ensure that necessary support services are in place before making application. While such a stance appears prudent, it can also stymie program growth as the College waits until all services are deliverable totally on-line. In contrast, a number of support services in successful on-line enterprises are available via email, fax, and telephone, a service delivery model that CAC should seriously consider while awaiting complete on-line student support services. There are several programs in which CAC has little or no competition that could be established as on-line degree programs. Both the dietetics and early childhood programs could quickly be made available on-line.

The competition for on-line community college students is intense. For example, Rio Salado College in the Maricopa Community College District enrolled more than 38,000 headcount credit students in 2002-2003 and more than 16,000 noncredit students. This growth means that Rio Salado is now the sixth fastest-growing public two-year college in the nation. A majority of students live in Maricopa County but Rio Salado enrolls students in nearly all 50 states and on six continents. Central Arizona College cannot hope to match these enrollments in the near-term, given Rio Salado's long experience in delivering distance programs and degrees, nor is it desirable to try to replicate the range of offerings now offered by Rio Salado. However, placing one or more unique degree programs on the web would differentiate CAC from other community colleges and may be a source of enrollment growth.

Central Arizona College is encouraged to take advantage of various collaborative course delivery opportunities made available through programs like Project SAIL (Specialty Asynchronous Industry Learning) of the League for Innovation in the Community College. Project SAIL is a national network promoting access, exchange, and dissemination of specialized industry-driven programs. This network expands opportunities for Online learning in a cost effective way and minimizes the time delay and start-up costs for new programs and the enhancement of established programs. For example, CAC could benefit from Project SAIL in meeting current and future growth needs by exploring the following:

- Enhancing CAC's current nursing program by collaborating with the Community College of Denver to offer an Advanced Placement/Online Nursing program
- Expanding GED course offerings by making GED available on-line in collaboration with Lakeland Community College in Illinois

- Enhancing and expanding CAC's new construction program by offering the Heating, Ventilation, Air Conditioning & Refrigeration (HVACR) from HVACR Education
- Collaborative programs like Project SAIL provide a way for CAC to respond quickly to workforce and training demands, accelerates implementation and delivery, conserves resources through collaboration, and expands Online educational opportunities.

In addition, collaborative programs like Project SAIL provide an avenue for increased revenue and cost recovery for Central Arizona College by sharing or leasing already established programs of CAC. For example, distance learning programs like Early Care and Education and the Diabetes Prevention Certificate are already available to collaborative community colleges nationwide. Other programs of CAC could be added to this list, thus increasing enrollment and expanding nationwide and even global markets.

Workforce Development

Workforce Development strategies have transformative value for the institution and if properly configured will shape the economic future of Pinal County, especially in the area of customized business training. What is now Workforce Development started as Continuing Education and was at one time one of the larger academic units of the College. As traditional community interest courses were picked up by Parks and Recreation departments and the needs of community members changed, the scope of Continuing Education decreased. Workforce Development currently is the unit of the College charged with adult basic education, business and industry solutions, community education, distributive programs, and external sites. The programs in this reporting area currently generate over 30% of the College's annual FTSE. [2003-2004]

The College has partnered with Pinal County Workforce Development, Inc. and the Arizona Department of Economic Security to form the Pinal County One-Stop Center to provide information for job seekers, employers, and entrepreneurs. The College also houses the Center for Economic Research which provides economic data through the measurement, analysis, and forecasting of the Northern Pinal economy. This Center seeks to inform the community about changing economic factors that can impact business.

The Small Business Development Center is part of the Workforce and Economic Development Division and is housed in Casa Grande but has outreach activities across the county (Display 21). It has memberships in Chambers of Commerce throughout Pinal County and provides seminars, workshops, and counseling sessions for new and existing businesses.

Small Business Development Center

Activity	Actual 2003
Number of Clients	239
Economic Impact Clients	30
Seminars Conducted	9
Seminar Attendance	190
Business Start-Ups	8
Business Expansions	1
New Capital Formation	5 (\$241,000)
Net New Employees	9FT/9PT
Existing Business Closings	4

The College recently has expressed its intention to be the countywide convener and facilitator of efforts to build a stronger industrial base in the county, a commendable goal.²⁷ The growth service sector jobs and especially the need to prepare managers for the service sector should also receive equal attention.

The development of customized business training requires a carefully articulated 10-step process such as in use in South Carolina, a state recognized as a leader in community college workforce collaborations.²⁸ These 10 steps include²⁹:

Step One – the analysis of work process and eventual design of the curriculum is focused around the actual desired work tasks done on site at the company.

Step Two – timelines are driven by the operational needs and demands of the corporation.

Step Three – trainee recruitment is completed around the predetermined qualifications established by both partners.

Step Four – training locations are constructed/designed at sites agreed upon by the partners.

Step Five – curriculum is designed by college workforce development staff but with extensive review, input, and eventual agreement of corporate personnel.

Step Six – instructors are selected and trained with the corporate needs in mind; often trainers are paid to learn the job for which they will train to ensure the appropriate skill transfer.

Step Seven – project management of a range processes is provided by the local college workforce development manager to assist the corporation in preparation for opening or expansion.

Step Eight and Ten – support training (organizational development and/or continuing education) is provided to corporate personnel to improve business operations and enhance relationships in the community.

Step Nine – via on the job training, trainees capitalize on the skills of currently employed personnel to test and enhance skills, and become immersed in the corporate culture; this is also a step where common CQI (continuous quality improvement) measurements are used to determine training success and jointly improved curriculum.

The 10 step process could be used in a similar manner as the College's Strategic Goals. In other words, decisions about new and day-to-day procedures are made in accordance to and based on the Strategic Goals. Standardizing and imbedding the 10 step process in its procedures when marketing to business and industry may also show that CAC is using standard corporate practices similar to ISO as mentioned above and therefore mirroring business processes instead of standard educational procedures.

These steps to develop specific business training are in place at Central Arizona College, but need visibility and potential refinement. As noted ahead, the employment base in the County has been flat at a time when there have been shifts among sectors. With the arrival of more service industry jobs, and potentially more embedded technology jobs, it is important that the College incorporate these steps into a recognizable, nimble delivery system. Best practices for Workforce Development at community colleges include clear mission statements that reflect the value of a custom fit for employers while recognizing the strength of the institution. Workforce Development programs succeed when there is commitment by all College leaders, board members, and faculty. This process, like other processes that rely on Continuous Quality Improvement, require "actionable data," or information, that is shared by stakeholders and used to improve services and programming.

Responsiveness of Current Programs to Business/Industry Needs

Central Arizona College will confront many challenges as population density increases in the County. Foremost among those challenges will be to provide the responsiveness that business and industry will expect from the College. There are some very simple things that can be done to increase the responsiveness of current programs, the first of which is to increase the number of afternoon, evening, weekend, and compressed classes throughout the district. This should be accomplished strategically, based on survey work and contact with local education agencies and citizen groups. Obviously, the College cannot schedule classes in places and at times for no enrollment. However, there is ample evidence, especially in the math and communication areas, that evening and weekend scheduling works, proving that there is a considerable market to be served. Administrators were unanimous in their opinion that the College could increase the availability of classes and programs throughout the district.

The College currently provides some scheduling flexibility within the credit program. Open Entry/Open Exit (OEOX) courses, those classes in which students can start and end a

course in flexible formats are mostly found at the Arizona State Prison, attributable to prisoner mobility in correctional facilities. The early childhood and dietetics programs, originating from the Signal Peak campus, also offer a number of credit classes in OEOX formats. Short-term classes, those classes that do not cross over the state census date for reporting enrollment and are compressed to meet learner needs, include the Adult Basic Education, GED, ESL, technology, and health occupations areas at the Signal Peak campus. Subtracting the OEOX classes available at the Arizona State prison, about 7 percent of the College's total FTSE is generated from OEOX classes and another 6 percent are generated from short-term classes.⁵⁰ There is considerable room for more classes in OEOX and short-term formats, especially to accommodate rising student preferences for compressed learning experiences.

Another productive way to expand access to programs is through distance education delivery discussed elsewhere in this report. There is no more responsive route to educational opportunities in which students with access to the Internet can access education "anytime, anywhere, and anyplace." However, while on-line programs and ITV will be growth areas for CAC, they will not and should not replace traditional face-to-face instructional modes. Students will expect technology to be embedded in traditional courses as well as to have access to course content solely through on-line mechanisms. All technological applications to the education process should proceed simultaneously.

Over the long-term, judgments about program responsiveness are made by both learners and business/industry as they "vote with their feet." There is evidence discussed earlier that certain programs at the College are not growing despite the general increase in course enrollment. It is unrealistic to expect that all programs should grow apace with the College enrollment growth since--to a certain extent--the demand for program graduates becomes saturated in any market. Welding is an excellent example of a program whose demand is cyclical. In these circumstances the College needs to get ahead of market demand and only implement these programs when there is documented need and then contract them when the market becomes saturated.

The heart of program responsiveness lies ultimately in whether prospective learners and business/industry find course content attractive. Consumers continually evaluate the quality of products they buy and higher education is no exception. Here, the term "responsiveness" takes on meaning apart from scheduling options and market saturation. While program enrollments and lack of scheduling are indicators of unresponsiveness, they also may be symptomatic of lack of perceived quality. The College has recently committed to hiring a workforce curriculum development specialist to link more closely the College's programs with documented business and industry needs. This will be an especially productive direction for both the near- and long-term.

Existing CAC Programs to Strengthen

Analyses of labor market projections and enrollment trends leads to conclusions about which programs the college already operates ought to be strengthened. This strengthening can be accomplished by program faculty and instructional administrators in pursuing alterations to class scheduling, creation of classes that more closely meet labor market demands, and in hiring qualified part-time faculty to add additional classes in new locations. Increased enrollment in classes will grow programs by providing additional resources to the College (see Display 22).

Education

In addition to program enhancement brought about due to unprecedented Pinal County growth; Federal and State Educational mandates compel us to bolster existing programs, especially in the Teacher Education Division. The No Child Left Behind Act is clear in mandating that our Para educators, Teachers and Administrators should be “highly qualified” to increase their effectiveness in educating our youngsters. Currently, a disturbing number of PreK-12 professionals and paraprofessionals fall short of the necessary coursework, certification and training necessary to meet their student’s current and future educational needs. The Arizona State Board of Education is preparing to act upon numerous changes to teacher and administrator regulation. The primary impact of these recommendations is in the areas of English Language Instruction and Structured English Immersion. The following changes will be in effect by August 31, 2006:

1. New Teachers who graduate after this date must have successfully completed a 3 credit course in Sheltered English Immersion
2. Existing teachers, administrators and ELL coordinators/directors must complete 1 credit hour or 15 clock hours of approved professional development in Structured English Immersion
3. All Arizona certified teachers, administrators and ELL coordinators shall obtain 3 credit hours or 45 clock hours of professional development in Structured English Immersion in order to maintain their SEI Endorsement by August 31, 2010. All of those who have the full ESL/Bilingual Endorsement also are required to obtain 3 credit hours or 45 clock hours professional development in Structured English immersion. This also applies to those applying for initial recertification in SEI

The above factors create a need to strengthen our Teacher Education division offerings in at least the areas indicated below:

- Courses in Structured English Immersion methods must be developed to assist students in Teacher Education programs in attaining compliance prior to completion of their Two year degree program. These courses would augment current coursework.
- Current and future Education Para educators presently have the opportunity to prepare for, and take, the Parapro Test and CAC to assist in qualifying them under NCLB. More comprehensive coursework, under CAC’s Teacher Education Division, should be developed to better prepare Para educators.

- The Teacher Education Division is currently assisting in the development of an Education Professions Program in concert with area High Schools. The coursework and field-based experiences need to be refined and better coordinated so that CAC is fulfilling its responsibility to insure that the “Ed Professions” program becomes a viable avenue for the training of future teachers and Para educators in Pinal County.

New Programs to Be Developed

Unlike strengthening the existing programs identified above, developing new programs is neither easy nor inexpensive. It is clear, however, that the current program mix will need to evolve to meet workforce demand both nationally and within Arizona. Several of the recommended programs can be built from existing programs and by combining faculty expertise. There are also programs that would be new endeavors for the College and ought to be pursued most logically when there are strong partnerships, especially in the medical field (Display 23).

In addition to the factors contributing to the need to strengthen existing programs, mentioned in the previous section; there remain issues in our K-12 Education system that must be addressed for effective school improvement and significant student learning to occur. Currently, over 50% of the teachers employed in Pinal County are from outside Arizona. The average new-hire leaves for other Maricopa or Pima County after 2 or 3 years. 50% of the Pinal County Students are Hispanic, yet only 11% of their teachers are. In 2002, over 10% Pinal County teachers were employed under Emergency Certification. Most districts struggle to hire teachers fully endorsed in their teaching field; included as areas of need are ESL/ELL, Special Education, qualified Guidance Counselors, Reading teachers, Secondary Mathematics, Secondary Science, School Psychologists, Occupational Therapists, Physical Therapists and Speech and Language Pathologists. These discrepancies and needs are even greater on the Gila River Reservation. New programs, primarily in Teacher Education must be developed to adequately serve the future, if not the current needs on Pinal County.

- Development of a 1 credit class in Structure English Immersion to assist existing K-12 teachers and administrators in compliance with the August 2006 SEI Certification Mandate
- Development of Post-Baccalaureate Endorsements in the areas of ESL/ Bilingual Ed and SEI
- Support for a partnership with Arizona State University that would allow the recruitment, selection, training, certification, placement and mentoring of qualified teachers from Sonora or other Mexican states to meet the ELL needs in Pinal County Schools
- Exploration of the expansion of the Teacher Education Division to four year status, with a significant emphasis on distance learning; providing the means to more than

adequately address Pinal County Education needs and also facilitating undergraduate student growth

Display 22

Existing CAC Programs to Strengthen		
Program	Rationale	Desired Outcome
Construction Trades	Accelerated growth in Pinal County and throughout Arizona.	Expanded open-entry/open-exit classes.
Computer Information Science	46 percent growth to 2012. Current program does not teach an array of programming courses; enrollment not sufficient to match College need to produce educated workforce.	Reinvigorate program to include a range of programming
Early Childhood Education	36 percent growth to 2012. Enrollment gains and fast labor market growth.	Increased enrollment. Continued development of open-entry/open-exit capability
Education	23 percent growth in teacher assistants to 2012. Moderate enrollment declines. Need for program has accelerated under the federal No Child Left Behind Act.	Continued development of certified teachers aides and provision of transfer opportunities to train teachers.
Engineering Technology	Declining enrollment and increased competition from neighboring community colleges and proprietary institutions.	Identification of a niche within high tech manufacturing that has direct employment potential for graduates.
English as a Second Language	Number of immigrants and current residents require English to enter the workforce and to pursue CAC programs.	Expanded open-entry/open-exit classes throughout the County.
Food Service	A fast growing occupation.	Increased enrollment.
Foreign Languages	Declines in Spanish and other languages do not match local and global needs.	Increased enrollment and expanded class availability.
General Education Development (GED)	County demographics demonstrate a fundamental need to boost college readiness.	Expanded open-entry/open-exit classes throughout the County.
Home Health Aide	48 percent growth to 2012. Unique program. Accelerated employment demand nationally and in Arizona.	Increased student capacity.
Medical Assisting	59 percent growth to 2012.	Program expansion.
Multimedia	High technology area for which the College has equipment.	Identification of a niche within multimedia that has direct employment potential for graduates.
Nursing	27 percent growth to 2010. Accelerated employment demand nationally and in Arizona.	Increased student capacity to meet labor market needs.
System Networking	57 percent growth to 2012. Current Enrollment not sufficient to match College need to produce educated workforce.	Establish program to prepare graduates to provide network support for businesses.
Tourism/Hospitality Management	Arizona is a tourist destination and the eastern part of Pinal County holds several attractions. Demand for program could be diminished by availability of students since entry level jobs are not high paying.	Tourism recently been articulated with ASU. The Hospitality program should be expanded.

Display 23

Recommended New Programs		
Program	Rationale	Cost
Computer security systems	Growth opportunity given national security issues. The volume of sensitive data generated every second growing rapidly, data integrity, backup systems, and database security have become increasingly important.	Medium
Business Specialist	Pinal County employers express the need for employees with basic business "hard" and human relations "soft" skills.	Medium
Dental assisting/hygienist	43 percent growth in job demand to the year 2012.	High
Environmental science technicians	37 percent growth in job demand to the year 2012. Fits with non-active mining operations in eastern Pinal County.	High
Fitness trainers and aerobics instructors	44 percent growth in job demand to the year 2012. Fits with likely lifestyles of in-migrants to Pinal County.	Medium
Food safety	New program designed to support local food manufacturers. Potential tie to existing dietetics program.	Medium
Global Information Systems	The number of professionals using GIS as a part of their job in the US is approaching 500,000 with an equal number in the rest of the world. Perhaps 10% of this number or 50,000 are doing GIS full time. These numbers are growing at about 15% a year.	Medium
Hazardous materials removal	43 percent growth to year 2012. Also fits with non-active mining operations in Pinal county.	High
Manufacturing Specialist	Manufacturers are increasingly likely to train workers to their own specifications. Program in this area would provide foundation mathematics, science, critical thinking, manufacturing, and soft skills for mid-entry employment.	Medium
Occupational therapist assisting	39 percent growth to year 2012.	High
Physical therapist assistants	46 percent growth to year 2012.	High
Retail Sales Management	Salespersons are the largest growing job category in Arizona. The College could develop management curriculum around this need.	Medium
Security guards	32 percent growth to year 2012. Fits with the state prison location in Florence although ADOC prefers to do their own training.	Medium
Social and human service assistants	49 percent growth to 2010. Government services will increase in Pinal County along side population growth.	Medium
Veterinary technology	44 percent growth to year 2012. Program could assist veterinarians engaged in agriculture and hobbyists.	High

Downsizing and Alteration of Programs

While certain programs should be strengthened due to labor market demand and certain programs should be developed, CAC also has programs that should be downsized or altered. Reconfiguring and/or eliminating programs can free up resources for new program development.

Automotive programs at the College lack partnerships with a major cooperation. Toyota, Ford, and GM have created cooperative programs with community colleges to provide state-of-the-art access to their technology and expertise. The current relatively low enrollment in automotive programs suggests that the College should pursue one or more corporate partnerships or consider downsizing the program. An alternative is to transition it to a noncredit program since it primarily serves hobbyists at the present time.

Computer science and computer networking are areas in need of immediate attention at the College. Both areas are under-enrolled for a college of CAC's size and lack a breadth of courses to prepare students for work or further study. Further, knowledgeable technical professional personnel from the College could be asked to teach in their areas of programming and networking expertise.

Construction Trades enrollment has been declining and while this may be the result of full-employment throughout the County as the housing market booms, there nonetheless is room for growth. The College is planning to expand its efforts in this area beginning in the fall of 2004.²⁴ Relationships with trade organizations and unions appear strong. Delivery of instruction in construction techniques nearer construction zones might be investigated.

Engineering Technology is a program in need of strengthening. It has lost significant enrollment over time, causing administrators to question its return on investment. The loss of primary high tech manufacturing jobs in Arizona complicates this picture. While there have been excellent relations forged with Intel, there may not be sufficient placements for students to sustain more investment in the program. The College should consider the feasibility of creating a Manufacturing Specialist certificate to train generalists in this area that can be subsequently trained in conjunction with the College, in-house according to manufacturer's specifications.

Welding is a program whose job cycle rises and falls. It would be a candidate for periodic recycling as a program by offering it on a periodic basis, say, once every three years, matched to demand.

Organizational Structure to Support Program Delivery

CAC has made a firm commitment to develop and implement competency-based learning for all students and to address the processes that contribute to the achievement of those major objectives that complement student learning and fulfill the institution's mission.

Since 1997, CAC has been actively involved in the process to insure that all courses have clearly articulated student learning outcomes and established standards of proficiency for those outcomes. In order to maintain this level of academic quality, CAC has determined that all courses offered in the institution will be reviewed and, if necessary, revised on a three-year rotational cycle to evaluate the accuracy, relevancy, and quality of the course content as reflected in the student learning outcomes and standards.

Additionally, CAC has revised the Academic Program Review process to streamline the data collection process and to link curriculum review with five-year planning cycle for programs, budget review process and AQIP. This should provide the institution a much clearer picture of internal trends within programs and the impact that those programs have on the community

To meet accelerated growth and the need to streamline decision-making processes and accountability, the current division structure will be examined. The increased demand for afternoon, evening, weekend, and compressed classes requires corresponding actions by CAC. As the district expands its offerings it will be increasingly important to ensure quality control and sharing of instructional expertise. To provide flexibility in year-round planning, course management and delivery, and to cover course and program delivery in new locations, the College should consider consolidating instructional divisions, placing full-time administrators in charge of reconfigured divisions, and employing an appropriate number of faculty and academic services support staff on 12-month contracts.

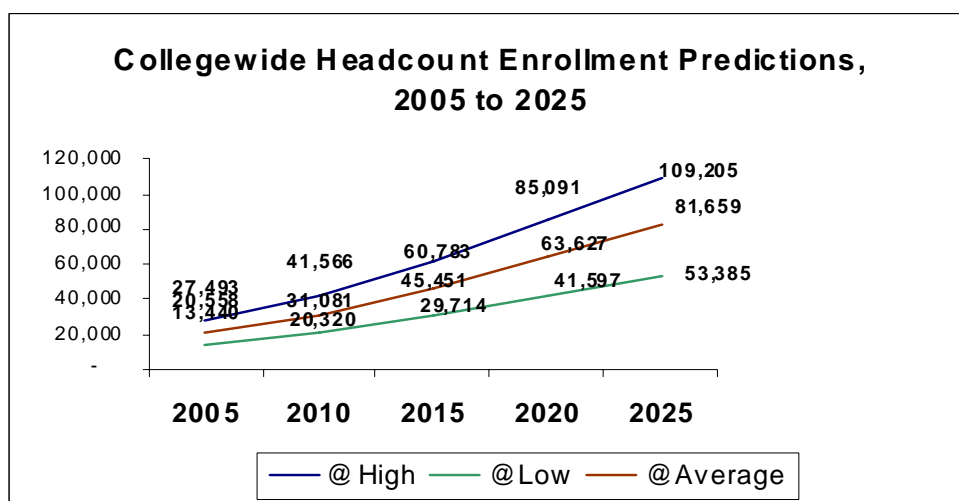
A push to redesign courses in conjunction with business and industry should be initiated throughout the academic services area of the College. The recent decision to hire a curriculum specialist for workforce development is an important step. The College ought to look at creating a menu of competencies for all of its courses and include within it specified levels of performance signifying when competencies have been met. Organizationally, this will require much effort in convening faculty and business/industry committees. While the volume of work will be large, the dividends will be great.

Several consolidations appear logical. First, the College should consider consolidating all developmental education efforts (study skills, tutoring services, GED, ESL, and developmental English, math, and reading) in one unit. This would provide standardization of all courses throughout delivery sites, greater visibility for the entire developmental program, and synergies in new course development. Second, combining all health programs in one division may be logical for the same reasons.

Projections for Enrollments, Programs, Support Services

County population is expected to increase to nearly 1 million individuals by 2025, setting off unprecedented demand for community college programs and support services. According to projections made by Applied Economics, this growth will sharply increase beyond the year 2010 as the first wave of in-migration serves as impetus and accelerator for more growth. The College will need to carefully monitor these population changes to adjust its programs and services in major growth areas (see Display 24).

Display 24



There are three scenarios for overall headcount growth at Central Arizona College, a low, medium, and high prediction based on linear projection of current participation rates. By the year 2025, the College could serve more than 100,000 unduplicated students each year as a high prediction. A low projection based on the current countywide participation calls for more than 53,000 students. What is the difference between these two numbers? First, there is considerable future variability in participation rates, owing to factors the College can control and factors it cannot. The College can optimally configure the mix of programs and their availability to prospective students to increase its participation rate. Several techniques for accomplishing these goals already have been discussed in this report. At the same time, economic and competitive factors enter into play. When the economy is functioning well and full- or near-full employment is occurring, community college enrollments tend to drop as prospective students find the option of making money more attractive than spending money on school. The opposite is true as well. Beyond simple economics, the competition for students continues to escalate. The University of Phoenix for example is on their way to

enrolling more than 100,000 online learners. Other private, credential-based learning providers are also drawing students away from traditional institutions while CAC faces increased competition from two major community college districts on its borders. The Maricopa and Pima districts are also located next to the Arizona's major employers. These variables contribute to uncertainty in projections for unduplicated headcount, especially in years beyond 2010.

At conclusion of this initial master planning process, it appears that two new campuses and a variety of centers will be required to meet population growth in the County. These new facilities will be placed in locations where unprecedented population growth is predicted to occur alongside the expanded use of centers in places that are now underserved. The countywide delivery system will be built around this configuration that provides for permanent campuses, learning centers, business assistance centers, and distance delivery. Campuses will house several degree programs and provide a full-range of student services. Centers, on the other hand, would provide classes in appropriate areas matched to local needs and would not provide a full-range of student support services. As enrollment grows, student services personnel will be added to each campus. Student Services generalists could staff the centers as a first step.

For the purposes of this report the following definitions are used:

- **Campus:** Campuses offer core community college education program and a full range of student services. Students will be able to complete degree programs. Starter campus will contain facilities, such as Administrative space, classrooms, ITV classrooms, student services, library, dining facility, fitness center, and a central plant large enough to support phased build-out. Minimum sized site shall be 80 -100 acres. The college should consider working with local communities to investigate the joint use of some facilities, such as libraries, lecture halls, fitness centers and community meeting rooms.

As a rule of thumb a population of 45-50,000 people within a 12-15 mile radius of a preferred site can support the first phase of a campus. As the population grows additional phases will need to be built to accommodate the growth. Campuses will probably start at 80,000 to 120,000 square feet in size and may grow to about 400,000 square feet as the population increases.

- **Center:** A center provides a range of classes and programs, but not a full range of student services and no on-site degree completion. A center can be in leased facilities, such as store-front shopping centers, existing K-12 schools or newly constructed space and contains components such as administrative services, regular classrooms, specialty classrooms, ITV and distance learning rooms, and meeting spaces.

A center could be later expanded to a full campus depending on population growth, course offerings and land availability. Centers serve a population of 20,000 to 45,000

people and can be used to support a campus. Sites for newly constructed centers will need to be 10 - 20 acres.

- **Leased Facilities:** Leasing facilities is a low risk, short or long term solution to bringing education to where the population is located, especially in the eastern part of the country where projections indicate less growth potential. Leasing facilities in communities such as Coolidge, Florence, San Tan or others may provide a short term solution to introducing the local population to CAC until new centers or campuses are developed.

It appears that logical places for construction of new campuses are the Maricopa and San Tan areas, locations where the bulk of the County's growth is predicted to occur. These campuses would initially provide a core of general education classes and one or more career and technical programs alongside a full range of student services (Display 25). A full range of student services include admission, registration, orientation to college, placement & testing, academic advisement, career & personal counseling, special needs, student employment, financial aid and academic support programs (tutoring). The placement of general education offerings at these new locations is straightforward. More complicated is the issue of which career and technical programs to operate in which new locations and in existing locations. For example, early indications are that a new, large hospital facility may be located in the Maricopa area making that location a possibility as the hub for the College's health program. While it is too early to make firm decisions about which locations ought to house which programs in the absence of new employer partnerships, the College should prepare to situate specific programs at specific locations and to distribute them across the district through a combination of land-based and distance education technologies.

Display 25

Current and Future Facilities

Delivery Mode	Locations	Function
Campuses	Signal Peak, Superstition Mountain, Aravaipa	Transfer, career/ technical, remedial, continuing education, and community education programs.
Future Campuses	In locations of large population growth. Transition to fully-functioning campus as dictated by growth.	Transition from classes in core general education and career/technical areas to programs. Provision of remedial education. One or more signature career/technical program(s).
Learning Centers	As needed	A range of classes, but not programs. Accent on meeting short-term needs, especially community education programming directed at older adults.
Business Assistance	Casa Grande and throughout County as warranted by documented need.	Provide technical assistance to businesses and persons desiring to start or continue businesses.
Distance Education	County-wide	Delivery appropriate instruction in homes, worksites, other educational facilities.

The types of classes and programs would vary strategically by site. While there will be consistency in total general education offerings across all campuses, not all general education courses will be available in classroom-based format at each campus or at each center. Each campus would offer a range of developmental offerings but because of the one-to-one nature of these learning experiences these classes would have only limited distance education delivery potential across the district. Consideration will be given to the breadth of 200 level general education and career education courses by site; to ensure that enrollment targets are met for individual 200 level classes, instructional administrators may combine sections at one location and/or provide distance education alternatives, primarily through College's ITV, for general education and other, non-specialized classes.

In the meanwhile, the College will accelerate efforts to begin to offer courses in new locations in K-12 facilities and/or community facilities to ensure that new residents develop the habit of thinking about CAC first when their educational needs surface. Even after permanent facilities are constructed each new campus will not reach full enrollment

immediately after opening. Using the experience of community college campuses built in areas of expanding population as a guide, it would seem reasonable to expect CAC's new campuses to be open for five or more falls before they reach a student headcount that borders 4,000 students. If it is several years before new campuses are opened, say, in 2007, it is probable that they would reach that enrollment target by 2012. A staffing configuration for each new campus would ultimately depend on enrollment growth at that location but would begin with a similar level of resources. Staff projections below (Display 26) are for permanent staff charged with each functional area in student services and program support. These individuals would be assisted by other district personnel with specific expertise in each functional area as part of a campus-by-campus rotation of staff. Similarly, the full-time faculty assigned to each location would be supplemented by part-time faculty as well as rotating district faculty. Many of the common district functions, including admission, registration, financial aid, and fee payment, will be standardized across a technology platform, allowing each location to achieve economies of scale while providing for consistency in operation.

Display 26

Projected Enrollment and Staffing, New Campuses				
Headcount Enrollment	Core General Education Full-Time Faculty	Career and Technical Full-time Faculty	Student Services	Program Support¹
800, 1 st fall	1 -2	1	1	3
1,000, 2 nd fall	2-3	Variable	2	4
1,500, 3 rd fall	4-5	Variable	2	5
2,500, 4 th fall	5-6	Variable	3	5
3,500, 5 th fall	8-10	Variable	4	5

¹ Program Support includes business office, custodial, and administrative assistance

RECOMMENDATIONS

General Recommendations

CAC's functions are to deliver transfer, career and technical education, continuing education and community-based programs, developmental education, and economic development opportunities to a broad array of citizens. Central Arizona College has many noted strengths, including strong leadership, a dedicated faculty and staff, a commitment to learning, established partnerships, and community support. CAC also has a tradition of transfer programs and a series of viable career and technical programs. The College has formulated strategic goals and voluntary participation in alternative accreditation in the Higher Learning Commission's Academic Quality Improvement Project (AQIP). CAC will face many challenges in providing higher education opportunities for Pinal County citizens including the impact of intense growth, a widening economic gap between new arrivals and longer-term residents, the recent lack of job growth in the County, and disparities in secondary school completion rates, increased competition for students, and shifting preferences for accessing learning opportunities.

The recommendations below are based on study of current operations, projected enrollment and County demographics, input from community groups, and professional judgment. Central Arizona College should:

1. Continue to provide a quality-focused programming to meet learner and employer needs. These programs should be distributed throughout Pinal County through an appropriate combination of on-site and distance delivery. (AQIP "Helping Students Learn" criterion)
2. Encourage lifelong learning to assist learners to succeed in a knowledge-based economy. The College should accelerate its efforts to assist learners to acquire new knowledge, to stay current in their chosen employment, and to re-train. Key areas will include communication and human relation skills, computing literacy, critical thinking, and civic responsibility. (AQIP "Understanding Students' and Other Stakeholders' Needs" criterion)
3. Recognize that while all students are encouraged to complete a degree, the College must be equally committed to allowing students to complete intermediate, short-term goals. All programs should exhibit quality, consistent with expected exit competencies, and provide asynchronous options. Students' success in attaining their goals, whether in transfer, career, business retraining or personal enrichment programs, must be the barometer of program viability. (AQIP "Understanding Students' and Other Stakeholders' Needs" criterion)
4. Ensure that programs will be designed to meet the varied needs of the Pinal County service area as well as the State of Arizona, the nation, and the world. Program completers must be effective in any employment or educational pursuits. Assuring

- quality will require routine and systematic evaluation of all programs and services. (AQIP “Understanding Students’ and Other Stakeholders’ Needs” criterion)
5. Strengthen linkages with middle and senior high schools. Establish an early/middle college model with select secondary schools in Pinal County. Such models have worked well in other states and in order to provide a ladder for low-income students who heretofore might not have considered higher education. The goal is to ensure a seamless educational system (pre K-16) for Pinal County that produces greater participation in higher education opportunities. (AQIP “Building Collaborative Relationships” criterion)
 6. Develop operational plans for a countywide delivery system between now and 2010. Longer range planning to the year 2025 should be the ultimate target. However, what happens at the College over the next several years will be critical. (AQIP “Planning Continuous Improvement” criterion)
 7. Expand from current locations to include 2 other permanent campuses and other lease or rental facilities where demand is high. This system would include a strong business and continuing education presence and a highly accessible distance education learning system capable of delivering instruction into homes and businesses to supplement current distance delivery to other educational settings. (AQIP “Understanding Students’ and Other Stakeholders’ Needs” and “Helping Students Learn” criteria)
 8. Integrate learning technologies into all parts of the instructional program. Provide a mechanism for all academic areas to participate. (AQIP “Helping Students Learn” criterion)
 9. Pursue permission from the Higher Learning Commission of the North Central Association to deliver degree programs totally on-line. A logical first program to offer totally via the Internet is dietetics. (AQIP “Helping Students Learn” criterion)
 10. Encourage entrepreneurial activity Collegewide, especially among middle managers and faculty. (AQIP “Valuing People” criterion)
 11. Streamline internal processes to deliver short-term credit and noncredit classes, workplace assessments, and technical assistance to businesses in Pinal County. . (AQIP “Understanding Students’ and Other Stakeholders’ Needs” and “Building Collaborative Relationships” criteria)
 12. Expect that all employees become more active in the community through participation in community events, service clubs, and professional associations. Faculty and staff will become more active in marketing, recruiting, and employer outreach. (“Supporting Institutional Operations,” “Other Distinctive Objectives,” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)
 13. The College will not be able to compete in all markets and provide all programs to all citizens. Instead, CAC will continue to develop partnerships with other colleges and training providers. Central Arizona College has competitor, public community colleges located in immediate proximity to its service area borders in addition to developing 4-year colleges and universities. The payoff for program sharing and for developing 2 plus 2 programs in selected areas is great for students and the College, especially in high cost areas. (Building Collaborative Relationships)

Program Specific Instructional Recommendations

1. Refine the current instructional program review process to guide future program development and renewal of existing programs. Review each program on a 2-year cycle. In addition to planning for appropriate program mix in each of the College's locations, this process will provide a structure for forecasting faculty and instructional resources. (AQIP "Helping Students Learn" and "Measuring Effectiveness" criteria)
2. Examine all programs to assess the potential for increasing enrollment, to assess whether investment of resources fits the College's long-term plans, and to weigh efficiencies. (AQIP "Measuring Effectiveness" criterion)
3. Based on future labor market demand and predicted demographic shifts occurring in Pinal County, these existing programs should be strengthened: Construction Trades, Computer Information Science, Early Childhood Education, Education, Engineering Technology, ESL, Food Service, Foreign Languages, GED, Home Health Aide, Medical Assisting, Multimedia, Nursing, Real Estate, and System Networking. Several of these programs have low and/or declining enrollment while several need additional resources to reach their potential. (See Display 22) (AQIP "Understanding Students' and Other Stakeholders' Needs" criterion)
4. Overall, the College's developmental program has not kept pace with enrollment. Given the high percentage of recent high school graduates and adults with no college experience, this phenomenon warrants serious investigation. All Pinal County high school junior and seniors should have the opportunity to take a CAC college placement exam and be encouraged to participate in the Summer First Step Program to become "college ready". Outreach to adults in the community through business partnerships could also include opportunities to take the placement exam. A study of the effectiveness of the placement exams (ASSET and Compass) in predicting student success in initial courses is on the horizon. (AQIP "Helping Students Learn" criterion)
5. It appears critical to revitalize those programs aligned with the high tech employment prevalent in Maricopa and Pima Counties with particular emphasis on systems networking, computer programming, electronics and engineering technologies. These programs appear to be substantially under-enrolled and face substantial competition from established programs in the Maricopa and Pima Community College Districts as well as other, private institutions. As presently configured they provide the College with no competitive advantage. The College might consider establishing a "core certificate" for these areas and/or the possibility of partnerships with other providers. (AQIP "Understanding Students' and Other Stakeholders' Needs" criterion)
6. To meet accelerated growth and the need to streamline decision-making processes and accountability, the current division structure will be examined. The increased demand for afternoon, evening, weekend, and compressed classes will require corresponding actions by CAC. To provide flexibility in year-round planning, course management and delivery, and to cover course and program delivery in new

- locations, the College will consider consolidating instructional divisions, placing full-time administrators in charge of reconfigured divisions, and employing an appropriate number of faculty and academic services support staff on 12-month contracts. . (AQIP “Planning Continuous Improvement” criterion)
7. Consider consolidating all developmental education efforts (study skills, tutoring services, GED, ESL, and basic skills English, math, and reading) in one unit. This would provide standardization of all courses throughout delivery sites, greater visibility for the entire developmental program, and synergies in new course development. (AQIP “Helping Students Learn” criterion)
 8. Determine which new programs to pursue. This plan provides rationale for these potentials: Computer Security Systems, Business Specialist Certificate, Dental Assisting/Hygienist, Environmental Science Technology, Fitness Trainers/Aerobic Instructors, Food Safety, Global Information Systems, Hazardous Materials Removal, Manufacturing Specialist Certificate, Occupational Therapist Assisting, Physical Therapist Assisting, Retail Sales Management, Security Guard, Social and Human Service Assisting, and Veterinary Technology. One or more of these may become signature programs (see Display 23). Programs in the health care field, while attractive, should not be attempted unilaterally. Each of these potentials will require support and recognition from business and industry and from other providers, including university-based programs. . (AQIP “Understanding Students’ and Other Stakeholders’ Needs” and “Building Collaborative Relationships” criteria)
 9. Establish short-term “skills certificates” across several key employment-related areas including technology and business services. These certificates would provide College certification that holders have met the minimum expectations for entry into jobs in these areas while satisfying employer demands for communication and human relation skills, computing literacy, critical thinking, and civic responsibility in addition to minimum background in industry fundamentals. .(AQIP “Understanding Students’ and Other Stakeholders’ Needs” and “Helping Students Learn” criteria)

Specific Location Recommendations

1. All campuses need to increase the number of afternoon, evening, weekend, and compressed format classes. While not all programs can attract enrollment in evening hours, certain programs, including mathematics and communications, have demonstrated significant enrollment growth attributable to managing an evening schedule. The College should ask whether a student could complete an entire Associate degree in a reasonable timeframe, say, four years, by attending classes exclusively in the evening and weekends. (AQIP “Helping Students Learn” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)
2. Slower population growth predicted for the eastern part of Pinal County means that the Aravaipa campus will need to especially reach out to create new opportunities along the “Copper Corridor.” Offering developmental, 100-level classes, and noncredit classes targeted at older learners, where appropriate, should be considered in the Copper Corridor for storefront and K-12 locations. These sites could serve as

- feeder locations for the Aravaipa Campus. The establishment of stable programs, especially degree programs, will be problematic. It appears that the current cycle of program implementation and contraction at Aravaipa on a one- or two-year basis is the optimal instructional strategy for the foreseeable future. (AQIP “Understanding Students’ and Other Stakeholders’ Needs” and “Helping Students Learn” criteria)
3. Some thought has been given to creating a conference center at Aravaipa that would simultaneously serve as a location for students to learn about hospitality and tourism. While there appears to be value in such discussions, Aravaipa’s location supports and mitigates against establishing such a program; the area is scenic and is a tourist draw because of local attractions. However, the current and predicted population base will not support such a program without the addition of residential facilities. (AQIP “Other Distinct Objectives” criterion)
 4. Strategically distribute programs and full-time faculty to the campuses and cluster them to provide each campus with a core academic identity as well as a general education core. (AQIP “Helping Students Learn” criterion)

Planning and Assessment

1. Develop a single, integrated planning, assessment, and budgeting system that can be continuously and systematically used to monitor and improve programs and services. (AQIP “Measuring Effectiveness” and “Planning Continuous Improvement” criteria)
2. Begin the planning cycle, as distinct from the budgeting cycle, in the fall of each year for the next academic year. When priorities are developed for the next academic year they should then be considered as part of the budgeting cycle which should commence the next spring when resources available for the next year are more fully known. . (AQIP “Planning Continuous Improvement” criterion)
3. Create an understanding of present and projected enrollments by program. The deans and chairs should work more closely with data gathered by Institutional Research. (AQIP “Measuring Effectiveness” and “Planning Continuous Improvement” criteria)
4. Continue efforts to improve the use of the Banner software system so that reports critical to the College’s management can be generated from single, authoritative databases. (AQIP “Measuring Effectiveness” and “Planning Continuous Improvement” criteria)

Technology

1. Increase the proportion of all CAC courses offered via technology in Fall 2003. This number, about five percent, should be doubled to be on par with competitor community colleges, but not with the expectation that distance education will replace face-to-face instruction. Development of ITV will be limited to Pinal County while continued growth will occur in Internet delivery. (AQIP “Helping Students Learn” criterion)
2. Work to create opportunities to deliver courses directly to homes through the Internet. (AQIP “Helping Students Learn” criterion)
3. Complete the development of an electronic “One-Stop Portal” for students and prospective students to access admission, online orientation to college, registration, records, financial aid, advising, accounts receivable, and interaction with other administrative functions. (AQIP “Supporting Institutional Operations” criterion)
4. Complete an analysis and strategic plan for strengthening the technological infrastructure to support educational programs and all other service and administrative functions of the College. This would include physical, human and financial resources to support not only the Educational Plan but the College Mission.

Student Support Services

1. Pursue alterations in access to support services, admission, financial aid, and registration procedures in conjunction with instruction and administrative units to streamline interactions with the college. (AQIP “Supporting Institutional Operations” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)
2. Continue to promote student retention as an organizing principle for student services. Linkages between instruction and student affairs in important functions such as student advisement, career placement, and academic support services should be investigated. (AQIP “Helping Students Learn,” “Supporting Institutional Operations,” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)
3. Develop a comprehensive Transitions Program that will support students from the admission process through to university transfer or goal completion. A comprehensive Transition Program includes the following: initial orientation to college, academic advising, academic monitoring, first year experience seminars, major/career exploration fair, and university transfer seminars. . (AQIP “Helping Students Learn,” “Supporting Institutional Operations,” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)
4. Implement a comprehensive Admission Program complete with a District-wide Director, additional outreach specialists, orientation to college staff, a tele-counseling program, and a welcome center at each campus. . (AQIP “Helping Students Learn,”

- “Supporting Institutional Operations,” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)
5. Develop a fully functional career services office at each campus that coordinates job placement in the community, offers workshops & career advising, coordinates student employment, and expands internship opportunities (credit and non-credit). (AQIP “Helping Students Learn,” “Supporting Institutional Operations,” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)
 6. Assemble an Enrollment Management Team from Academic & Student Services that includes the Institutional Researcher and will prepare the College for the ensuing growth. Identify key outcomes that are data driven. . (AQIP “Helping Students Learn,” “Supporting Institutional Operations,” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)
 7. Create a co-curricular student transcript that demonstrates mastery of the skills that employers are seeking, i.e. communication, problem solving, interpersonal skills, ability to work in and lead groups. . (AQIP “Helping Students Learn,” “Supporting Institutional Operations,” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)
 8. Create a Multi-Cultural Center at SPC that supports International and ethnic minority students with transition, culture shock, academic and personal counseling. . (AQIP “Helping Students Learn,” “Supporting Institutional Operations,” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)

Workforce Development

Some of the most critical recommendations in this report are the last to be offered. The future of Central Arizona College is inextricably woven with the future of economic development in Pinal County. The College is posed to play a pivotal role in shaping the destiny of Pinal County but it will require cooperation, partnerships, and the involvement of all key stakeholders.

1. Engage in customized business training. Supplement on-going work in this area with development of a menu of training activities that can be used to recruit new businesses and industries to the County and to serve better existing businesses and industries. (AQIP “Understanding Students’ and Other Stakeholders’ Needs,” “other Distinctive Objectives,” and “Building Collaborative Relationships” criteria)
2. Develop processes to respond quickly to business and industry needs. The College must be nimble requiring streamlined procedures for identifying instructors, training materials, assessments, and internal College processes. A rule of thumb is that it should not take longer to design requested training than it does to deliver it. (AQIP Supporting Institutional Operations” criterion)
3. Develop a program of Workplace Literacy to build on ESL and GED instruction offered to employers and employees. Market Workplace Literacy to new and existing employers. This program would integrate job skills with critical thinking, computer literacy, and management training to increase the economic prospects of

- low-English proficient adults. (AQIP “Helping Students Learn” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)
4. Form a consortium of manufacturing and non-manufacturing employers to assess work force needs and college responses in preparing an educated workforce to meet these needs. Analyze work processes and specific skills needed by these employers. (AQIP “Building Collaborative Relationships” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)

Expand the College’s ability via standardized assessment to identify employee skills and employer needs. Identify gaps to guide development of customized business training on both the credit and noncredit side. (AQIP “Building Collaborative Relationships” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)

Use actionable data to improve performance and share this data with business and industry partners to guide continuous quality improvement. Business will benchmark their partnerships with the College on accountability, effectiveness, time efficiency, quality, and results. (AQIP “Measuring Effectiveness,” “Building Collaborative Relationships,” and “Understanding Students’ and Other Stakeholders’ Needs” criteria)

ENDNOTES

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- ¹⁴ National Center for Education Statistics
- ¹⁵ Arizona Department of Economic Security
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²⁹ Cited in T. Callaway, "Investigating Common Indicators of Effectiveness." Doctoral dissertation, University of Texas at Austin, 1999.

³⁰ Central Arizona College, "OEOX, Short-term, and Summer FTSE by Campus and Division as of 6/30/03