Urban Community College Aid
Workforce Development Programs

Arizona's community colleges are the solution to the reskilling and recovery of our communities and the state. In FY2022 the two urban community colleges received $13M in "urban aid". Below is an outline of the workforce programs that benefitted from the urban aid funding for Maricopa Community Colleges and Pima Community College.

Maricopa County Community College District- $10,400,000

Develop the West Valley IT and Advancing Technology Academies, an IT and advanced technologies institute with a manufacturing focus.

The project is a collaboration between Glendale Community College and Estrella Mountain Community College designed to meet the growing labor market demands and to build a qualified and well-trained workforce within emerging technology and IT fields. Programs and offerings include Cybersecurity/Cyber Physical Systems, Cloud Computing, Artificial Intelligence, Programming/App Development, Big Data/Data Science, Augmented/Virtual Reality, Robotics, and Autonomous/Unmanned/Electric Systems (UAV). Course offerings focus on entry and mid-level career readiness for the IT sector, including courses to upskill incumbent workers. Learning opportunities are offered in-person, online, hybrid and in compressed scheduling models to efficiently and effectively ready students to serve local businesses. This proposal includes the design and deployment of state-of-the art IT and Advancing Technologies Centers at each college or regionally. *(see attachment for more information).*

Project Name: West Valley IT and Advancing Technology Academies

Contact Information:
- Dr. Susan Campbell, Glendale Community College, Dean Academic Affairs - CTE, susan.j.campbell@gccaz.edu

- Paula Livingston, Estrella Mountain Community College, Dean of Instruction and Occupational Education, paula.livingston@estrellamountain.edu

Project Description and Purpose:

Information Technology (IT) and Advancing Technologies are rapidly growing industries in Arizona and across the nation. The West Valley Maricopa IT and Advancing Technology Academies is a collaboration between Glendale Community College and Estrella Mountain Community College designed to meet the growing labor market demands and to build a qualified and well-trained workforce within emerging technology and IT fields. Programs and offerings include Cybersecurity/Cyber Physical Systems, Cloud Computing, Artificial Intelligence, Programming/App Development, Big Data/Data Science, Augmented/Virtual Reality, Robotics, and Autonomous/Unmanned/Electric Systems (UAV). Course offerings focus on entry and mid-level career readiness for the IT sector, including courses to upskill incumbent workers. Learning opportunities are offered in-person, online, hybrid and in compressed scheduling models to efficiently and effectively ready students to serve local businesses. This proposal includes the design and deployment of state-of-the art IT and Advancing Technologies Centers at each college or regionally.

Classes are offered at two convenient locations to serve the west valley. Curriculum models can be expanded to include accelerated boot camps, short-term, non-credit, and credit options to increase student enrollment and provide industry with a skilled workforce that addresses critical employment needs and brings high paying jobs to the state and west valley. Partnering with regional industry/employers, local municipalities, and community organizations is critical to the success of this project and will support the goal of increasing the number of tech companies looking to start or expand their business in the West Valley.

Budget including renovations to current facilities

Item	Cost	Annual or One-time
Faculty for development and delivery of new programs (4 X $150,000/year)	$1,800,000	$600,000 Annually for 3 years
Lab Services Coordinator Sr. (2 X $85,000/year)	$510,000	$170,000 Annually for 3 years

Student Navigator (2 X $85,000/year)	$510,000	$170,000 Annually for 3 years
Professional Development ($20,000/year)	$60,000	$20,000 Annually for 3 years
Test Exam Fees - 1000 students approx $150/exam	$150,000	
Marketing	$200,000	
Curriculum Development (including Bachelor's Degrees in IT)	$200,000	
Mobile Training Units	$1,000,000	
Capital/Maintenance/ Renovations to current facilities (both GCC and EMCC) *Construction, Design fees, Contingency, FF&E, Technology & Security*	$6,000,000	One-time
TOTAL Proposal Budget	**$10,430,000**	**Over 3 years**

5-year Program/Project Outcomes:
- Enroll up to 500 credit and non-credit students/year once fully operational.
- Increase the number of industry-recognized credentials/certifications earned by students in IT and Advancing Technology fields to at least 1000 over the next three years.
- Increase graduates/completers by 25% with equity.
- Expand current work-based experiences programs to compliment in-class learning with real-world experiences and forge connections between students and employers utilizing the Pipeline AZ platform. Serve at least 150 students annually with work-based experiences supporting their career exploration in IT and Advancing Technology fields.
- Expand on current partnerships with industry experts and professionals, such as Amazon, Microsoft, and Intel to develop cutting-edge programs with relevant and future focused curriculum, intentionally embedding industry certifications within certificate/degree pathways.
- Design and deploy high-end classrooms, lab spaces, and experiences to address critical hands-on, real-world experiences to address workforce skills gaps and allow students opportunities to hone and perfect their technical skills.
- Strengthen partnerships with K-12 schools and educators to develop current and on-going training in IT and advancing technology areas to support growth of dual enrollment pathways.
- Provide professional development opportunities for current and new faculty to keep relevant with advancing technologies.

- Design and deploy mobile training environments that will allow technology experiences and training opportunities to be taken to high schools, communities and businesses.

Specific Degrees, Certificates, Certifications:
- AAS: Artificial Intelligence and Machine Learning #3891 and CCL: 5897N
- AAS: Cybersecurity #3197
- AAS: Information Technology #3196
- AAS: Network and Systems Administration #3189
- More than 19 CCLs in Information Technology and Cloud Computing
- UAV/Drones - shared with CGCC

Sampling of Specific Jobs. There are many in addition to this:
- Cyber Security Specialist
- Data Analyst
- Software Developer
- Network and Systems Administrator
- Data Center Professional
- Information Security
- Cloud Security Professional
- Programmer
- Database Manager
- Data Security Analyst
- IT Specialist
- Robotics Technician
- Engineering Technician
- Aircraft Mechanics and Service Technicians (UAV- unmanned aerial vehicles)
- Drone\Pilot
- Drone Survey Technician

Return On Investment

There is a workforce shortage in IT and cybersecurity. This funding will allow for the creation and expansion of high-demand IT and Advancing Technology programs to provide a skilled workforce. The high-paying jobs that the technology industry brings to Arizona equates to a large return on investment. Arizona will see an increase in student enrollment and completion and an increase in graduates' current and lifetime earnings and tax contributions. According to an economic impact study conducted for the Maricopa Colleges District, the average student sees an annual rate of return of 15.5 percent. Taxpayers see an annual rate of return of 12.0 percent. For every dollar spent, students see a return of $4.00 and taxpayers a return of $4.30. These estimates are looking at students in all of Maricopa's programs. Students in high-paying IT and Technology fields should see a higher benefit.
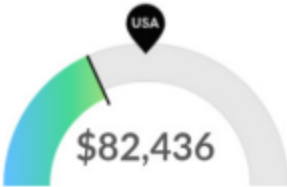
Computer Related Occupations and Compensation in 2019

Average Job Posting Demand Over an Average Supply of Regional Jobs
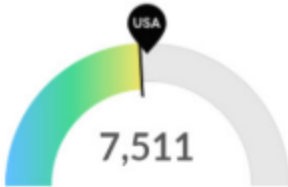
95,071

Jobs (2019)

Arizona is about average for this kind of job. The national average for an area this size is 86,312* employees, while there are 95,071 here.

$82,436

Compensation

Earnings are low in Arizona. The national median salary for Computer Occupations is $88,409, compared to $82,436 here.
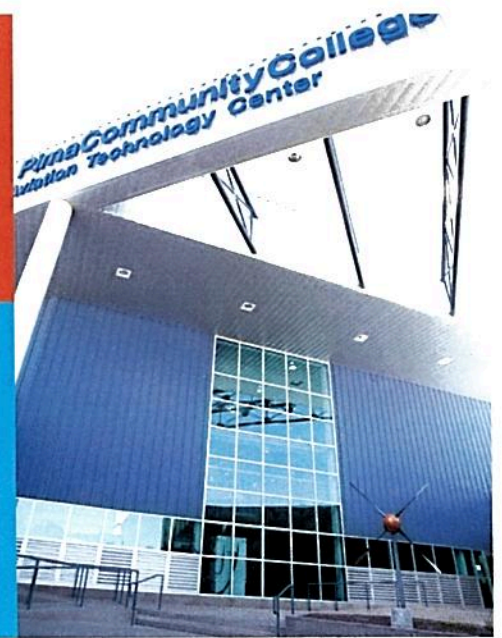
7,511

Job Posting Demand

Job posting activity is about average in Arizona. The national average for an area this size is 7,894* job postings/mo, while there are 7,511 here.

Pima County Community College District- $2,600,000

Capital Projects funded:

- I.T. Center of Excellence Uninterruptible Power Supplies Equipment
- Aviation Technology Center Expansion *(see attachment for more information)*.
  - Furnishings (Governing Board approved this purchase in September)
  - Aviation Twin Engine Aircraft
  - Aviation Turbine Engine

Pima Community College

Expanding PCC's Aviation Technology Program

Better Alignment with the Needs of Industry

The region's major aerospace and aircraft employers posted strong gains in recent years. However, many employers are having trouble hiring enough workers to sustain this growth. Employers have told PCC, "We could hire every one of your Aviation graduates and it still would not meet our employment needs."

Targeted funding of a **$20 million allocation** is needed to increase the capacity of PCC students enrolled in Aviation Technology from 125 to 250. This expansion would support 300 new Aviation jobs within five years.

BUDGET INCLUDES:

- Facilities, including a second aircraft hanger, new lab spaces, and three new classrooms.

- Faculty and Staff, including Part 147 and Part 65 certified instructors, Quality Assurance, Student Services, and Lab Specialists.

- New Equipment, including furnishings for classrooms and labs, numerous maintenance trainers, and multiple fixed and rotary-wing aircraft.

FOR MORE INFORMATION, CONTACT PIMA COMMUNITY COLLEGE:

Libby Howell
Executive Director/Media, Community, & Government Relations
520-206-4778 | ehowell1@pima.edu

Dr. Ian Roark
Vice President/Workforce Development
520-206-6424 | iroark@pima.edu

PimaCommunityCollege

About PCC's Program

Pima Community College's (PCC) premier **Aviation Technology Program** currently provides **125-150 students per year** the opportunity to study aircraft maintenance in a hands-on learning environment at the Aviation Technology Center (ATC), a state-of-the-art training facility located on the grounds of the Tucson International Airport. The program combines lectures, hands-on work, and independent projects, and places nearly 90 percent of its graduates in high-demand jobs in aerospace and defense soon after graduation.

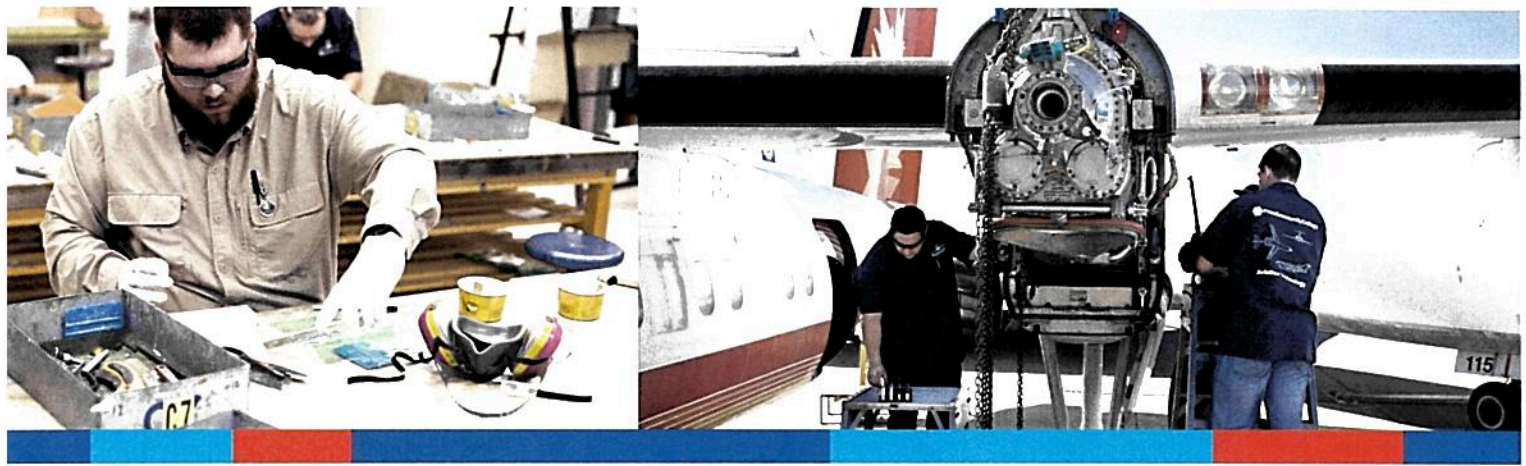## RIGOROUS TRAINING MEETING THE INDUSTRY'S HIGHEST STANDARDS:

The program offers an Associate of Applied Science degree in Aviation Technology and accompanying certificates for direct employment in the core skill areas of: **(1)** Airframe and Power-plant **(2)** Structural Repair, and **(3)** Avionics. The program is designed to replicate the industry to provide students with a real-world experience throughout the program.

SPECIALIZED TRAINING:

- PCC is one of very few schools in the U.S. teaching the highly sought after and well-paying specialty of **Advanced Structural Repair and Modification**.
- PCC is one of a handful out of approximately 160 FAA-approved schools with curriculum targeting **commercial jet transports**.
- PCC is one of 87 U.S. colleges (about half the FAA-approved schools in the U.S.) offering an **aviation maintenance degree**.

HIGHLY COMPETITIVE GRADUATES:

- PCC Aviation Technology graduates secure jobs around the country, including employment at approximately **15 Arizona aviation employers**.
- PCC's Aviation Program provides skilled workers for **high-wage jobs** in an important and growing sector of the state's economy. The median annual earnings range from $57,000 for Aircraft Mechanics to $65,000 per year for Avionics Technicians, for a 40-hour work week; most industry jobs also have overtime and shift differential pay.

Economic Impact of Expansion

2019-2023 *(Source: Sun Corridor, Inc.)*

MEDIAN ANNUAL EARNINGS

- Aircraft Structure, Surfaces, Rigging, & Systems Assemblers: $39,068
- Aircraft Mechanics & Service Technicians: $57,616
- Avionics Technicians: $65,790

JOBS AND PAYROLL

- Additional direct jobs filled: 300
- New direct payroll: $15,600,000
- Average payroll per employee: $52,000

NEW STATE TAX REVENUE:

- Sales: $1,208,9081
- Personal Income: $1,669,571

NEW LOCAL TAX REVENUE:

- Property: $2,423,107
- Sales: $445,634
- State Shared Revenues: $895,894
- HURF's: $365,054

ECONOMIC IMPACT

- Total value economic impact: $225,582,489
- Total new jobs supported: 455
- Total new payroll supported: $65,520,047
- Household spending supported: $58,316,785

SUMMARY

In summary, the PCC aviation program expansion would help with the creation of 300 additional direct jobs in the industry over 5 years, and a total job impact of over 455 jobs, including suppliers and consumer industry.

The total economic impact is over **$225.5 million** over **5 years**.

THE FUTURE

Today's aviation maintenance technicians require advanced knowledge, skills, and training. Boeing's *Pilot and Technician Outlook* projects **754,000 new airline maintenance technicians** will be needed worldwide over the next 20 years. In 2018, about 30 percent of the current ranks of aircraft mechanics are at or near retirement age, and they are retiring faster than they can be replaced. According to *Forbes*, within the next 10 years, 58 percent of the fleet will be comprised of planes designed and built after 2005. In addition, Economic Modeling Specialists, Inc. (EMSI) estimates a 40% increase in Aviation jobs for the Southern Arizona region alone, compared to the national average of only 10%. Pima County represents the largest concentration of aviation occupations in the Southern Arizona Region with 1,336 of the 1,534 jobs reported in 2015.

This concentration places Pima County **179% above the national average**, with the Southern Arizona Region coming in at **112% above the national average**.

PCC's Aviation Program expansion will help meet the needs of businesses and increase economic development opportunities.

FOR MORE INFORMATION, CONTACT PIMA COMMUNITY COLLEGE:

Libby Howell
Executive Director/Media, Community, & Government Relations
520-206-4778 | ehowell1@pima.edu

Dr. Ian Roark
Vice President/Workforce Development
520-206-6424 | iroark@pima.edu

PimaCommunityCollege

/// Keep striving.

1903AJ3D

Rural Community College Aid
Workforce Development Programs

Arizona's community colleges are the solution to the reskilling and recovery of our communities and the state. In FY2022 the rural community colleges received $28M in "rural aid". Below is an outline of the workforce programs that benefitted from the rural aid funding for each of Arizona's eight rural accredited community colleges.

Cochise County Community College District- $6,251,000

First Responder Training Academy with Driving/Transportation Operations Range: An enhanced academy to facilitate training for first responders in rural Arizona. The Academy will provide synergy for rural departments where staff and resources may be limited and require cross-training.

The academy and transportation operations include:
Southeast Arizona Law Enforcement Training Academy (SEALETA)
- Emergency Vehicle Operation Course (EVOC)—100 hours
  - High Risk Stops
  - High Speed Pursuit
  - Evasive Driving
    - Traffic Collision
    - Crime Scene
    - Use of Force
- **Cochise College Fire Science Program**
  - Fire Fighter I and II
  - Fire Operations I and II
  - Driver Operator
  - Emergency Response Driver Training (ERDT)
  - Wildland Fires (anticipated)
- **Cochise College EMT/Paramedicine Program**
  - Driver Operator
    - Emergency Response Driver Training (ERDT)
  - Accident Scene Simulation
    - Traffic
    - Aircraft
    - Hazmat
- **Transportation Operations**
  - CDL Instruction (anticipated)
  - Diesel Technology (anticipated)
- Continuing Education for town, city, county, and volunteer departments

Coconino County Community College District- $1,907,300

Public Safety/CTE Training Facilities
Equipment
Curriculum and start-up costs
Programs:

- Caregiver Certificate
- Respiratory Therapy
- Medical Laboratory Technician
- First Responder / Emergency Management
- Criminal Justice
- Sheriff's Office Detention Academy
- Search and Rescue Academy
- Automotive
- Welding, Electrical, HVAC
- Hotel and Apartment Maintenance
- Marine Maintenance Technician Expansion
- Early Childhood Lab

Graham County Community College District- $2,483,700

EAC Nursing and Allied Health Center of Excellence
Expansion of our Nursing and Allied Health programs to train needed healthcare professionals to support the growing needs of hospitals and medical centers. EAC's Nursing Program is an Accreditation Commission for Education in Nursing Center of Excellence. We have been approached by our local hospitals to expand our training programs to include Respiratory Therapy, Sonography, Radiology, and Surgical Technicians. Additional funding went towards expanding these programs to cover start-up capital costs for these expensive, but much-needed, programs.

Current Programs:

* Registered Nurse – Associate Degree
* Sports Medicine – Associate Degree
* Paramedic – Associate of Applied Science
* Licensed Nursing Assistant - Certificate
* Medical Assistant - Certificate
* Medical Laboratory Assistant - Certificate
* Patient Care Technician - Certificate
* Emergency Medical Technician - Certificate
* Phlebotomy – Certificate

Anticipated Expansion:

* Phlebotomy for Law Enforcement (anticipated)
* Sonography (anticipated)
* Radiology Technician (anticipated)
* Surgical Technician (anticipated)

* Respiratory Therapy (anticipated)

Skills Center Facility
Facility to house and expand workforce programs crucial to the local economy and to service industry needs, including two Freeport-McMoRan mines (Greenlee and Graham County), Federal and State Prisons, and local businesses in need of trained drivers and technicians.

- HVAC Certification
- CDL Training Certification
- Welding Certifications
- Diesel Repair Certification

Mohave County Community College District - $2,388,900

- New Regional Advanced Manufacturing Training Center
- Parking lot/CDL Range and Site Improvements
- Intelitek curriculum for vocational training
- Manufacturing and industry student training equipment

Benefits for Arizona & Kingman:
- Moves the dial forward for Achieve60AZ!
- Provides incentive for new businesses to re-locate to Arizona. by increasing skilled labor pool.
- Supports state economic growth in manufacturing industries, currently the fastest growing industry in the U.S.A.

Advanced Manufacturing Training Center Project Highlights:
- Located within new 1,300-acre manufacturing/ industrial center in Kingman, AZ.
- Donated land courtesy of Sunbelt Development
- Massive community support

Primary Goals:
- Expand Education
- Certificate and degree offerings to satisfy high demand for manufacturing and training
- Move the dial on Achieve60AZ!
- Support local and state economic growth in the manufacturing sector with high quality skilled labor pool
- Create a regional education hub for training and manufacturing
- Maximize the benefit of donated land and proximity to 1,300-acre planned Kingman Industrial Logistics Center

Who Will Benefit?
Economic: Manufacturing, Transportation, Electrical, HVAC, Economic Development, KAMMA
Educational: Mohave Community College, Mohave County Schools, WAVE/CTED, Arizona@Work, ACRC and many more

Navajo County Community College District- $1,640,200

- Theramassage: Funds used for equipment to train students in this allied health program
- Surgical Technology: Funds used for equipment to train students in this allied health program
- IT Infrastructure: Investment to support NPC's to deliver its CTE and workforce development programs

Pinal County Community College District- $3,666,000

- Grew Central Arizona College's construction trades apprenticeship programs with Sundt Construction and Wilson Electric.
- Enhancements to Advanced Manufacturing program (currently in progress).
    - FANUC robot to train Advanced Manufacturing students in a range of application-specific technologies and robotics integration.

Yavapai County Community College District- $3,586,900

Enhance and grow 3D Construction Certificate and continue to develop affordable housing solutions for the construction industry. Partner with community partners and ASU by incorporating a 3D Construction Certificate into their Residential Construction Technology Program. The addition of this innovative technology to the program includes:
- Addition of two new courses
    - Setting Up, Operating & Printing with a 3D Concrete Printer
    - Blueprint Development & Software Programming of a 3D concrete printer
- Partnership with Arizona Custom Concrete Homes of Sedona, AZ for research and workforce training
- MOU with ASU to conduct research on 3D Concrete Printing
- Proof of concept home to be printed late spring 2021
- Reducing housing construction cost and time to completion as much as 30%

Economic development is one of the three priorities set by the District Governing Board. In the Fall of 2021, Yavapai launched brand new programs that will continue to support local workforce needs while allowing students who complete the program to earn a living wage.

Yuma/La Paz County Community College District- 5,270,700

Construction of Arizona Western College's Apprenticeship Center (still in design) with industry partners that will focus on construction trades and offer two certifications in plumbing and carpentry. There is a critical shortage of skilled trade workers in Yuma and La Paz counties. The Bureau of Labor Statistics listed building construction as one of the top three industry sectors for job growth, with a focus on high quality and sustainable residential construction.

Grew and expanded Arizona Western College's Manufacturing Program and Law Enforcement Training Academy.