

HIGH QUALITY

CAREER

PATHWAYS

2024 ANALYSIS

Greater Phoenix Metro Region

 **ELEVATETM**
EDAZ

**GREATER PHOENIX CHAMBER
FOUNDATION**

*ElevateEdAZ is an initiative of the
Greater Phoenix Chamber Foundation*



The Need for High Quality Career Pathways

Section 1

Fostering Economic Growth and Prosperity

Arizona faces both challenges and opportunities in the rapidly evolving economic landscape. By 2028, 70% of all jobs in Arizona will require an education beyond a high school diploma. While Arizona has a current statewide graduation rate of 78%, only 27% of high school graduates earn a postsecondary credential by their mid-twenties.^[1] This gap will need to be closed if Arizona wishes to remain competitive.

Moreover, Arizona has an ambitious goal to reach 60 percent education attainment by 2030. Reaching this goal will mean that 60 percent of the state's working adult population (ages 25-64) will have a certificate, license, or degree—contributing to greater economic and individual prosperity, reduced social spending, and a more vibrant state economy for all Arizonans.^[2]

Increasing high school students' access to high-quality career pathways that include career exploration, credential attainment, and work-based learning in high-wage, high-demand industry sectors is vital for reaching this attainment goal and securing the future prosperity of Arizona's economy. In fact, specializing in career and technical education (CTE) in high school is among the top promising changes that can improve young people's likelihood of attaining a good job at age 30.^[3] This approach ensures that students are better prepared to meet the demands of the modern workforce, contribute to the growth of the state's economy, and addresses issues such as skill gaps and underemployment.



Fostering Economic Growth and Prosperity

Addressing Skill Gaps

A primary benefit of promoting high-wage, high-demand career pathways in high schools is the immediate, direct impact on students' workforce readiness. By providing students with access to aligned pathways, students can learn the critical technical knowledge and skills needed across the state's priority industries and reduce the skills gaps that exist currently.

Increasing Earning Potential

Promoting high-wage, high-demand career pathways in high schools ensures that students can pursue occupations that lead not only to good-paying jobs but also increased job security. Additionally, research shows that individuals with higher incomes are more likely to invest back in their communities, supporting a more meaningful quality of life for everyone.

Reducing Underemployment

By aligning high school pathways with the needs of the labor market, Arizona can reduce its underemployment rates [\[4\]](#), create a more stable economic environment, and better ensure its young people are skilled and ready to secure good-paying jobs upon graduation.



Defining High Quality Career Pathways

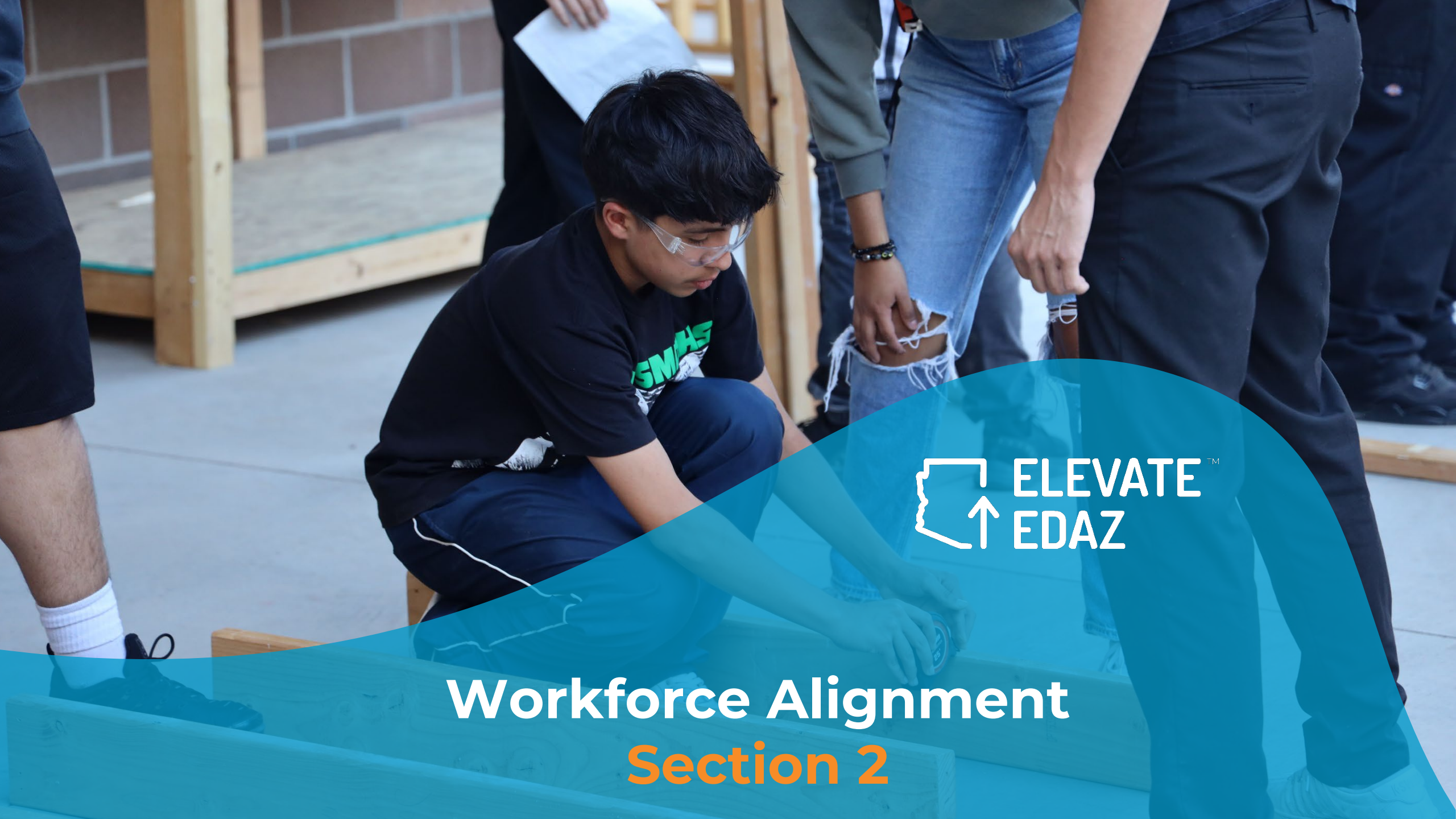
High-Quality Pathways

A high-quality career pathway is a sequence of interconnected academic and workforce experiences that enable learners to master a set of competencies, earn one or more employer-valued credentials, and go on to pursue skilled, higher-wage careers in high-demand industry sectors.

Pathways that begin in K-12 and span postsecondary to the workplace create direct connections between learner experiences and the world of work. They provide learners with opportunities to:

- Master core and critical academic knowledge
- Gain industry sector-specific technical skills, as well as all-important employability skills
- Earn industry and postsecondary credentials valued by employers
- Apply their learning through a continuum of work-based learning experiences





Workforce Alignment

Section 2



Opportunity Analysis Approach

Overview

To understand which career pathways offer the most return on investment for students and the economy of the Greater Phoenix region, ElevateEdAZ partnered with **Insightful Education Solutions** to update the occupation wage and demand thresholds published in a 2022 analysis, and to examine targeted occupations within ElevateEdAZ-supported Career Pathways¹ by wage and demand strength. This examination also identified opportunities for expanding ElevateEdAZ Career Pathways to achieve full alignment with priority and emerging industry sector strands.

¹ : For purposes of this review, the “Career Pathway” term equates to a Career Cluster.

Opportunity Analysis Approach

Occupation Wage Threshold

To support the identification of sustainable wage occupations, a threshold is set to gauge actual viability of targeted occupations by ElevateEdAZ Career Pathways.

Benchmark:

Average Wage for Phoenix MSA = \$64,890 (annual mean wage)/ \$31.20 (mean hourly wage)²

New Wage Threshold:

80% of Average Wage for Phoenix MSA = \$51,912/ \$24.96

2 : BLS, May 2023

Notes: AZ OEO uses BLS wage data

MIT Living Wage (Feb 2024) for Phoenix MSA = \$51,376/ \$24.70 (1 adult, no child);
statewide = \$48,672/\$23.40 (1 adult, no child)



Opportunity Analysis Approach

Occupation Demand Threshold

To support the identification of sustainable occupation growth, an in-demand metric was established, and percentage ranges were used to gauge actual viability of targeted occupations by ElevateEdAZ Career Pathways.

The following are influenced by (a) AZ OEO's in-demand metric, which is used to report statewide and regional occupational count, growth and turnover/openings, and (b) BLS' occupation percentage ranges.

In-Demand Metric

10-year Projected employment change

Occupation Percentage Ranges

Faster than Average Growth = 9% or higher

Average Growth = 5% to 8%

Growth, but Slower than Average = 2% to 4%

Little or No Change = less than 2% growth to a decrease of 1%

New Demand Threshold: Average Growth = 5% to 8%

Comparison of Priority Industry Sectors

Priority Industry Sectors by Statewide, Phoenix MSA, Maricopa County, ElevateEdAZ						
Arizona Commerce Authority	Advanced Manufacturing	Aerospace and Defense	Bioscience and Health Care	Business and Financial Services	Technology and Innovation	Film and Digital Media
Maricopa Association of Governments	Advanced Manufacturing	Aerospace	Finance	Health Care	Information Technology	Warehouse and Distribution
Greater Phoenix Economic Council	Advanced Manufacturing	Aerospace and Defense	Business/ Business Services	Finance and Insurance	Green Technology	Information Technology
Greater Phoenix Chamber (workforce collaboratives)	Advanced Manufacturing	Construction	IT/ Cybersecurity	Financial Services	Health Care	
ElevateEdAZ (currently supported career pathways)	Advanced Manufacturing	Business Management/ Marketing/ Sales	Construction/ Architecture	Education	Engineering	Financial Services
	Health Sciences	IT/ Cybersecurity	Law/ Public Safety	Transportation		

Key:

Grid Box = occupations cross multiple industry sectors

White Box = listed once

White Font = listed once

Opportunity Analysis Approach



Results

What follows are targeted high-wage, high-demand occupations aligned to existing ElevateEdAZ-supported Career Pathways¹, and new expansion pathways that can prepare K-12 learners for a range of opportunities in the region.

¹ : For purposes of this review, the “Career Pathway” term equates to a Career Cluster.

ElevateEdAZ Supported Career Pathways

Currently Supported Pathways

- Advanced Manufacturing
- Architecture & Construction
- Business Management, Marketing & Sales
- Education
- Engineering
- Financial Services
- Health Sciences
- Information Technology & Cybersecurity
- Law & Public Safety
- Transportation

1 : For purposes of this review, the “Career Pathway” term equates to a Career Cluster.



Targeted Occupations by ElevateEdAZ Career Pathways

All targeted occupations are identified by their natural alignments to specific ElevateEdAZ career pathways:

Wage Threshold

- 85% of Annual Mean Wage = \$55,157/ \$26.52
- 80% of Annual Mean Wage = \$51,912/ \$24.96
- 61% of Annual Mean Wage = \$39,583/ \$19.03⁷

Demand Strength Threshold

Projected Employment Change

- Strong/Healthy
- Limited
- Underperforming

Occupation Percentage Ranges

- Faster than Average Growth = 9% or higher
- Average Growth = 5% - 8%
- Growth, but Slower than Average = 2% to 4%
- Little or No Change = less than 2% growth to a decrease of 1%

○ = The two thresholds selected by ElevateEdAZ for identifying targeted occupations:
1) 80% of Annual Mean Wage and
2) 5% or greater growth in 10-year projected employment change

Targeted Occupations by ElevateEdAZ Career Pathways

EEAZ Career Pathway	EEAZ Supported CTE POS	Targeted Occupation (SOC)	Annual Mean Hourly Wage	Overall Occupation Demand	10 Yr Projected Overall Change (2022-32)
Advanced Manufacturing	Aerospace	Aircraft Technician (49-3011)	\$38.14		15.7%
		Aerospace Technician (17-3021)	\$28.87	Limited / Emerging	14.4%
		Aerospace Engineer (17-2011)	\$69.54	Limited / Emerging	16.6%
	Automation	Electro-Mechanical Mech Technician (17-3024)	\$37.25	Limited / Emerging	36.8%
		Mechanical Engineer (17-2124)	\$48.87		22.6%
	Precision Machining	Machinist (51-4041)	\$26.75		14.0%

Targeted Occupations by ElevateEdAZ Career Pathways

EEAZ Career Pathway	EEAZ Supported CTE POS	Targeted Occupation (SOC)	Annual Mean Hourly Wage	Overall Occupation Demand	10 Yr Projected Overall Change (2022-32)
Architecture / Construction	Construction	Carpenter (47-2031)	\$26.74		11.5%
	Drafting and Design	Architectural / Civil Drafters (17-3011)	\$29.61		12.7%
		Architect (17-1011)	\$48.28		15.2%
	Electrical Wiring	Electrician (47-2111)	\$28.58		19.9%
	Welding	Welders (51-4121)	\$25.33		15.3%

Note: In today's construction and maintenance of residential and commercial buildings, technical knowledge in the installation, servicing and maintenance of HVAC, electrical, and plumbing is essential. Recognizing this, several states now promote an MEP (mechanical, electrical, and plumbing) program of study at the high school level, which allows students to immerse themselves in all three critical occupational fields. Additionally, these states move their MEP students immediately into pre-apprentice or apprentice opportunities, allowing them to specialize in at least one of the fields while in high school or immediately following graduation. This seamless learning pathway ensures students possess the knowledge and skills to become highly qualified entry-level or higher technicians.

To support this growing industry expectation, ElevateEdAZ will work with the Arizona Department of Education to develop a new MEP program of study that addresses the technical knowledge and skills in installing, servicing, and maintaining HVAC, electrical, and plumbing.

Targeted Occupations by ElevateEdAZ Career Pathways

EEAZ Career Pathway	EEAZ Supported CTE POS	Targeted Occupation (SOC)	Annual Mean Hourly Wage	Overall Occupation Demand	10 Yr Projected Overall Change (2022-32)
Business Management, Marketing, Sales	Business Marketing	Marketing Analyst / Specialist (13-1161)	\$38.33		27.1%
		Marketing Manager (11-2021)	\$75.63		17.2%
	Sports Marketing	(See above)			
	Business Management, Leadership	General / Operations Manager (11-1021)	\$57.09		17.3%
		First Line Supervisor (43-1011)	\$32.15		7.8%
	Business Operations	General / Operations Manager (11-1021)	\$57.09		17.3%
		Business Operations Specialist (13-1199)	\$44.71		15.0%

Targeted Occupations by ElevateEdAZ Career Pathways

EEAZ Career Pathway	EEAZ Supported CTE POS	Targeted Occupation (SOC)	Annual Mean Hourly Wage	Overall Occupation Demand	10 Yr Projected Overall Change (2022-32)
Business Management, Marketing, Sales (cross cutting)	Graphic Design	Graphic Designers (27-1024)	\$30.08		13.8%
		Special Effects Artists and Animators (27-1014)	\$39.71		9.1%
		Commercial and Industrial Designers (27-1021)	\$45.90	Limited	15.4%

Note: Though the Digital Arts sector is not an identified regional priority, it is pervasive across all industries in the region. Recognizing this, ElevateEdAZ has identified regional high-wage, high-demand opportunities in the fields of graphic design and digital design that can be supported through ElevateEdAZ's career pathways footprint. Though both graphic design work and digital design work support high-wage, high-demand occupations, based on current market trends, digital design reflects higher wages and larger demand due to the region's increasing reliance on online and digital mediums. In both cases, however, there are tremendous economic and occupational opportunities currently and going forward.

To support these trends, ElevateEdAZ will add Graphic Design as a cross-cutting pathway to its career pathways footprint for Business Management, Marketing, and Sales cluster, placing a specific emphasis on graphic design and digital design. Additionally, ElevateEdAZ will advocate for the Arizona Department of Education to collapse its four current overlapping digital arts-related programs while working with the department to develop a new comprehensive program of study focused on the technical knowledge and skills found in digital design work. Several states already promote a singular digital design program of study, and ElevateEdAZ will lean on their existing work to support this more directed transformation.

Targeted Occupations by ElevateEdAZ Career Pathways

EEAZ Career Pathway	EEAZ Supported CTE POS	Targeted Occupation (SOC)	Annual Mean Hourly Wage	Overall Occupation Demand	10 Yr Projected Overall Change (2022-32)
Education	Education Professions	Elementary (25-2-21)	\$25.74		4.5%
		Middle (25-2022)	\$26.30		4.9%
		High School (25-2031)	\$30.06		5.0%

Targeted Occupations by ElevateEdAZ Career Pathways

EEAZ Career Pathway	EEAZ Supported CTE POS	Targeted Occupation (SOC)	Annual Mean Hourly Wage	Overall Occupation Demand	10 Yr Projected Overall Change (2022-32)
Engineering	Engineering	Engineering Technician (17-3029)	\$29.07	Limited	16.5%
		Mechanical Engineer (17-2141)	\$48.87		22.6%
		Civil Engineer (17-2051)	\$45.37		14.4%

Targeted Occupations by ElevateEdAZ Career Pathways

EEAZ Career Pathway	EEAZ Supported CTE POS	Targeted Occupation (SOC)	Annual Mean Hourly Wage	Overall Occupation Demand	10 Yr Projected Overall Change (2022-32)
Financial Services	Accounting	Bookkeeping / Accounting (43-3031)	\$24.47		5.8%
		Accountant (13-2011)	\$43.23		15.8%
	Financial Services	Financial / Investment Analyst (13-2-51)	\$50.23		18.1%
		Personal Financial Advisor (13-2052)	\$54.13		25.9%

Targeted Occupations by ElevateEdAZ Career Pathways

EAAZ Career Pathway	EAAZ Supported CTE POS	Targeted Occupation (SOC)	Annual Mean Hourly Wage	Overall Occupation Demand	10 Yr Projected Overall Change (2022-32)
Health Sciences	Bioscience / Biomedical	Clinical Lab Technician (29-2010)	\$30.97		27.2%
		Epidemiologist (19-1041)	\$31.49	Limited	34.8%
		Biomedical Engineer (17-2031)	\$59.12	Limited	39.1%
		Biological Technician (19-4021)	\$25.84	Limited	16.8%
	Emergency Medical Technician	Paramedic (29-2043)	\$24.36		24.1%
	Nursing	Licensed Practical Nurse (29-2061)	\$32.58		28.7%
		Registered Nurse (29-1141)	\$44.49		24.0%
	Sports Medicine	Athletic Trainer (29-9091)	\$32.71	Limited	24.7%
		Physical Therapist Assistant (31-2021)	\$29.00	Limited	52.1%
		Physical Therapist (29-1123)	\$48.24		33.9%
		Occupational Therapist (29-1122)	\$45.53		31.8%

Note: The healthcare industry is distinct from any other industry sector. Its diversity and complexity are a direct reflection of the work and services it promotes and provides for the overall well-being of every individual. This is why healthcare is a universal priority in every state, region, and community.

ElevateEdAZ is committed to ensuring that every high school student is afforded an opportunity to experience a learning pathway that can lead them to greater economic freedom in the future, and occupations in the healthcare industry are no exception.

Presently, the Arizona Department of Education promotes a dental assisting program of study, and though it reflects a high growth occupation, it is low wage. On the other hand, a dental hygienist occupation, which is not an offered program by the department, reflects not only high-growth, but also high-wage. Though the educational requirements to become a dental hygienist are slightly more than those required to become a dental assistant, the long-term economic benefits for the student can be life-changing.

In recognition of this, ElevateEdAZ will advocate for the Arizona Department of Education to develop a dental hygienist program of study that ensures greater opportunities for students interested in the dentistry field.

Targeted Occupations by ElevateEdAZ Career Pathways

EEAZ Career Pathway	EEAZ Supported CTE POS	Targeted Occupation (SOC)	Annual Mean Hourly Wage	Overall Occupation Demand	10 Yr Projected Overall Change (2022-32)
IT / Cybersecurity	Computer Maintenance (i.e., technology devices maintenance)	User Support Specialist (15-1232)	\$31.48		15.8%
		Computer Hardware Engineer (17-2-61)	\$69.69	Limited	10.9%
	Network Technologies (reflects cybersecurity and network security)	Information Security Analyst (15-1212)	\$56.57		41.1%
		Computer Systems Analyst (15-1211)	\$49.14		22.7%
		Network Support Specialist (15-1231)	\$36.04		10.9%
		Network Systems Administrator (15-1244)	\$49.76		14.2%
	Software and App Design	Software Developer (15-1252)	\$62.07		38.4%
		Software Quality Assurance Analyst (15-1253)	\$47.87		32.4%

Targeted Occupations by ElevateEdAZ Career Pathways

EEAZ Career Pathway	EEAZ Supported CTE POS	Targeted Occupation (SOC)	Annual Mean Hourly Wage	Overall Occupation Demand	10 Yr Projected Overall Change (2022-32)
Law / Public Safety	Law Enforcement and Public Security	Police / Sheriff Patrol Officer (33-3051)	\$39.11		5.4%

Note: Though the law and public safety industry sector is not an identified regional priority, it is a critical component to the region's overall vitality. Presently, the Arizona Department of Education offers a law and public safety program of study that is focused on public law enforcement operations and agencies. This limited focus leaves out a number of law-related occupations that are high-wage, high-demand opportunities for students and which can be supported through ElevateEdAZ's career pathways footprint.

To support this broader build-out, ElevateEdAZ will advocate for and work with the Arizona Department of Education to develop a pre-law program of study focused on the legal aspects of public safety and the rule of law.

EEAZ Career Pathway	EEAZ Supported CTE POS	Targeted Occupation (SOC)	Annual Mean Hourly Wage	Overall Occupation Demand	10 Yr Projected Overall Change (2022-32)
Transportation	Automotive Collision Repair	Automotive Body Repair (49-3021)	\$26.97		15.3%
	Automotive Technologies	Automotive Service Technician (49-3023)	\$26.57		19.7%



Considerations
ElevateEdAZ Career Pathways
Section 3

ElevateEdAZ Career Pathways Recommended Considerations

Though ElevateEdAZ does promote career pathways and programs of study occupationally aligned with statewide and regional industry priorities, there are considerations for ElevateEdAZ going forward:

1. Reprioritize and rebrand currently promoted career pathways to reflect better overall high-wage, high-demand occupation alignment.
2. Adopt occupation wage and demand thresholds that can be applied regionally and statewide, providing a consistent approach to identifying ElevateEdAZ-supported programs of study.
3. Promote the (a) development of new occupationally aligned programs of study in priority industry sectors and (b) build out of programs to ensure student mastery of industry-desired technical knowledge and skills.
4. Champion the adoption of programs of study that reflect greater occupational diversity and expanse in high-wage, high-demand occupations found in priority industry sectors in keeping with its vision.



Considerations

Potential Occupationally Aligned Expansion Programs

Section 4

Advanced Manufacturing

Aerospace

- Operations Technician
- Engineer (various)

Semiconductor

- Processing Technician
- Industrial Engineering Technician
- Microsystems Engineer

Industry

- Project Management Specialist
- Production/Planning Clerk
- Production/Operation Manager



Career Pathways Advanced Manufacturing

Industry Sector	Industry Strand	Potential Expansion Program of Study	Targeted Occupation (SOC)	Annual Mean Hourly Wage (2023)	10 Yr Projected Overall Change (2022-23)
Advanced Manufacturing	Aerospace	Promote the development of an aerospace program of study for adoption by ADE for statewide use.		Refer to occupations listed in Section 2.	
	Semiconductor	Promote the development of a new semiconductor program of study for adoption by ADE for statewide use.			
			Processing Technician (51-9141)	\$27.70	18.4%
			Industrial Engineering Technician (17-3026)	\$33.46	16.0%
			Microsystems Engineer (17-2199.06)	\$49.03	14.4%
	Industry Operations	Industry Production Operations	Production / Planning Clerk (43-5061)	\$27.53	16.9%
			Production / Operations Manager (11-3051)	\$63.93	17.1%
			Project Management Specialist (13-1082)	\$48.42	16.9%

Business

Supply Chain

- Logistician
- Supply Chain Manager

Entrepreneurship

- Management Analyst
- Small Business Owner



Career Pathways Business

Industry Sector	Industry Strand	Potential Expansion Program of Study	Targeted Occupation (SOC)	Annual Mean Hourly Wage (2023)	10 Yr Projected Overall Change (2022-23)
Business	Distribution / Logistics (strand can also fall under Transportation sector)	Supply Chain and Logistics	Logistician (13-1081)	\$39.09	35.2%
			Supply Chain Manager** (11-3071.04)	\$51.54	28.4%
	Entrepreneuership	Entrepreneuership	Small Business Owner	N/A	N/A
			Management Analyst (13-1111)	\$47.84	18.5%

Energy

Renewable/Sustainable

- Technician (various)
- Engineer (various)

Power Grid

- Power-Line Installer/Repairer
- Electrical Engineer



Career Pathways Energy

Industry Sector	Industry Strand	Potential Expansion Program of Study	Targeted Occupation (SOC)	Annual Mean Hourly Wage (2023)	10 Yr Projected Overall Change (2022-23)
Energy	Renewable / Sustainable Energy	Sustainable Energies (Promote the enhancement of ADE's Energy Systems Program of Study)	Solar Photovoltaic Installers (47-2231) (other installer and technician positions could also fall under this industry strand)	\$25.59	42.2%
			Environmental Engineer (17-2081) (other engineering positions could also fall under this industry strand)	\$43.71	17.8%
	Power Grid	Power Grid Technologies	Electrical Engineer (17-2071)	\$55.93	11.5%
			Power-line Installer / Repairer (49-9051)	\$40.96	4.5%

Healthcare

Diagnostic Services

- Radiologic Technician
- Medical Sonographer
- Cardiovascular Technician

Health Informatics

- Health Informatics Specialist
- Health Information Technologist

Note: ElevateEdAZ will promote the development of a surgical technician program of study that provides the foundation for technical knowledge and skills for pursuing advanced level training to become a credentialed technician. Advanced level courses could be dual enrollment or concurrent courses required for this credential.



Career Pathways Healthcare

Industry Sector	Industry Strand	Potential Expansion Program of Study	Targeted Occupation (SOC)	Annual Mean Hourly Wage (2023)	10 Yr Projected Overall Change (2022-23)
Healthcare	Diagnostic Services	Diagnostic Services	Medical Sonographer (29-2032)	\$46.05	36.8%
			Radiologic Technician (29-2034)	\$39.05	27.9%
			Cardiovascular Technician (29-2031)	\$31.89	21.7%
	Health Informatics	Health Informatics	Health Informatics Specialist*** (15-1211.01)	\$49.14	22.7%
			Health Information Technologist (29-9021)	\$27.05	36.7%

Information Technology

Programming (reimagined)

- Programmer - Polyglot
- Project/Scrum Manager

Artificial Intelligence

- Data Scientist
- Database Architect



Career Pathways Information Technology

Industry Sector	Industry Strand	Potential Expansion Program of Study	Targeted Occupation (SOC)	Annual Mean Hourly Wage (2023)	10 Yr Projected Overall Change (2022-23)
Information Technology	Programming	Next Generation Programming	Polyglot Programmer ^ (15-1251)	\$48.88	N/A
		(Promote an update and enhancement of ADE's existing software /App design Program of Study)	Project / Scrum Manager**** (15-2051)	\$50.05	19.4%
	Artificial Intelligence	Artificial Intelligence	Data Scientist	\$55.56	49.9%
			Database Architect (15-1243)	\$59.16	19.0%

* = Microsystems Engineer falls under *Engineers, All Other (17-2199)* (sources: AZ OEO; O'Net), so the actual wage and 10-year projected may be skewed higher by companies in the semiconductor industry.

** = Supply Chain Manager falls under *Distribution Manager (11-3071)* (sources: AZ OEO; O'Net), so the actual wage and 10-year projected may differ for companies in the logistics field.

*** = Health Informatics Specialist falls under *Computer Systems Analyst (15-1211)* (sources: AZ OEO; O'Net), so the actual wage and 10-year projected may differ for healthcare companies in the health informatics field.

^ = Polyglot Programmer falls under *Programmer (15-1251)* this is the next generation occupation for programming; AZ OEO does not have information specific to this occupation yet, so the default wage is being used.

**** = Project / Scrum Manager falls under *Computer Occupations, All Other (15-1299)* (sources: AZ OEO; O'Net), so the actual wage and 10-year projected may be skewed higher by companies in the IT industry.



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