



Desert View High School

Precision Machining and Mechanical Drafting

Manufacturing Career Cluster

Overview

While only in its third year of operation, the Precision Machining and Mechanical Drafting programs of study at Desert View High School in Tucson, Arizona boast the partnerships, work-based learning opportunities and attendance of much more

	Secondary Precision Machining (97 students)	Secondary Mechanical Drafting (140 students)	Postsecondary (199 students)
Male	79%	65%	89%
Female	18%	35%	11%
Minority	90%	90%	52%
Low-income	56%	86%	N/A

seasoned programs. Developed with and for the Tucson business community to strengthen their pipeline, the machining programs are truly co-owned by Desert View High School and their amazing industry partners. The programs of study also have incredible partnerships with postsecondary institutions, offering a multitude of dual enrollment and certification opportunities

Industry Support Sets Program up for Success

The machining programs of study are a direct result of industry and business support in Tucson. With tightening public budgets for Career Technical Education (CTE) and soaring regional demand for qualified machinists, industry and business leaders took charge, and partnered with education leaders to create the Southern Arizona Manufacturing Partnership (SAMP). SAMP's nearly **30 members** guide, advise and provide resources to Desert View high School to advance its goal of developing a pipeline of qualified students to enter machining careers.

Specifically, this coalition provides Desert View High School access to some of the top leaders in the machining industry, including Raytheon, Abrams Airborne Manufacturing and Zygo, who have not only aided in the programs' design and curriculum development, but also offer internships and mentoring for students. Additionally, to ensure students are kept up-to-date with the latest trends and technology in the field, employers have offered the lead program instructor two-month externships. Along with keeping the curriculum and staff abreast of developments, SAMP has led to the school's

*"When an industry comes forward and tells a district or administration, 'our community needs this program, and we will support you,' this becomes the leverage for change that enables the school to make those difficult decisions, to prioritize your program. **Companies are moving to Tucson** because they see a pipeline and workforce being built. This program has created an economic development change for our community." – Kathy Prather, Director of CTE at Sunnyside Unified School District*

installation of CNC equipment, a 3-D printer and CNC simulators, all of which will help train students on the equipment they will work with in the field.

While many advisory groups meet a few times a year, Desert View High School's meets monthly to ensure continuous program improvement. This incredible engagement has led to a world-class machining program that has enticed businesses to move to the city.

Dual Enrollment and CTSO Engagement Prepare Students for Future

Desert View High School has built robust pathways from secondary to postsecondary education for students through strong education partnerships. Students are able to earn up to **12 college credits** at Pima County Community College, which is also a member of SAMP. Additionally, Desert View High School offers nationally-recognized industry certifications including Solidworks and the National Institute of Metalworking Skills (NIMS), inspiring Pima County Community College to also adopt the NIMS certification so the programs are more closely aligned across secondary and postsecondary.



SkillsUSA has also played a vital role in the programs' success. While SkillsUSA allows students to gain many of the skills that will serve them well in the workplace, such as collaboration, leadership and communication, the group has also opened the eyes of many students who participate in state and national competitions, many of whom had never left the city of Tucson before participating in SkillsUSA. "When [a student] sees a new environment, they come back with a different sense of what they want to do with their lives," said lead instructor Cesar Gutierrez. "Things students thought they weren't capable of are now within their reach."

Success by the Numbers

The strong partnerships, commitment from the community, and leadership by Desert View High School have resulted in a program that prepares students for success.



43%

Earned Postsecondary Credit



95%

Participated in Work-based Learning



87%

Earned Industry-recognized Credential



100%

Graduated High School



91%

Enrolled in Postsecondary Education and/or entered the workplace and/or military

Data based on 2014-2015 school year