



## Challenge

Desert View High School is in close proximity to major manufacturing plants including Raytheon and B/E Aerospace. With all of this happening within just a few miles of the school, Desert View faculty and staff knew the industry was struggling to find skilled workers in their area and decided to address the issue.

Desert View became involved with SAMP, the Southern Arizona Manufacturing Partnership, and created a manufacturing program within its school. The program started out with barely any equipment, no teacher, and a lot of work to be done. During the re-launch of the precision machining program in 2012, 25 local manufacturing industry representatives showed up at the school for a local meeting to see how they could help, becoming the central group of SAMP. Desert View High School is the only high school in the Tucson defense/aerospace corridor area to offer a manufacturing program.

## Action

Desert View created manufacturing programs that include precision machining, mechanical drafting, and engineering. These programs are delivered based on standards developed by the Arizona Department of Education Career and Technical Education Skills Commission and are aligned to provide students with nationally recognized industry certifications. Desert View High School is an official SolidWorks testing center and is working toward certification as a NIMS training facility and a MasterCam certified site.

*"I research opportunities for my students to grow and advance in the industry, college and life. Most importantly, I let them create, design, and love what they are doing,"*  
- Cesar Gutierrez, Instructor

During the day, students attend either their drafting or precision manufacturing class, where they work in a NIMS-directed classroom. Many of the

students are so focused on achieving their industry certification goals that they even come in after school for an additional hour or two.

Desert View also works in partnership with the local Pima Community College to provide students with a manufacturing career pathway. Students in the program may obtain up to six dual credits for the machining courses offered at Pima Community College, students in the mechanical drafting class earn 3 dual Pima Community college credits in CAD, and students engaged in the Engineering program's advanced class are able to obtain three dual credits for the University of Arizona's engineering course.

To further promote their manufacturing programs, Desert View High School works with special assistance from the Pima County One Stop who sets up tours for students of local manufacturing plants and helps provide the bridge between education and industry. The school makes a special effort to encourage female students to participate in these tours as well.

## Results

### >> Pipeline Development

Every year the program's enrollment numbers have increased. The program has become so popular, students must request to be enrolled instead of placed. For the 2014/2015 school year, 160 students are enrolled in the mechanical drafting and precision machining programs, and over 100 students are enrolled in the engineering program.

### >> Qualified Candidates

The success of the program is largely due to the dedication of the teachers to partner with the vibrant local aerospace manufacturing community. Desert View offering these manufacturing opportunities produces real success with students progressing in manufacturing career pathways.

### >> A Clear Pathway

Fourteen high school senior students are working in an on-site internship program, ten 2014 graduates are working in manufacturing-related fields, and eight graduates are finishing up their manufacturing programs at Pima Community College.

As of September 2014, Desert View has produced 16 certified students in NIMS Level I-Safety and Measurement and 10 certified students in SolidWorks CSWA.

In addition, out of the 2013 graduates, 11 received paid externships and scholarships upon high school graduation and they are still working in the manufacturing community.



*"Desert View High School is doing a great job of preparing our future work force in manufacturing. By working with industry to provide industry with a trained work force prepared for the future & training to standards industry can use now."*

- Don Theriault, President of Industrial Tool, Die & Engineering, Inc