

# MT. SAN ANTONIO COLLEGE

## HELPING GRADUATES OBTAIN EMPLOYMENT VIA CERTIFICATION WITH SOLIDWORKS EDUCATION EDITION



By incorporating SOLIDWORKS Education Edition design and engineering software—and the Certified SOLIDWORKS Associate (CSWA) and Certified SOLIDWORKS Professional (CSWP) exams—into its Industrial Design Engineering Program, Mt. San Antonio College is helping students improve their chances for employment upon graduation.

### **Challenge:**

Transition Engineering Design Technology Program to a two-year industrial design/manufacturing degree by replacing 2D tools with a 3D design platform.

### **Solution:**

Implement SOLIDWORKS Education Edition software.

### **Benefits:**

- Provided industry-recognized certification to students
- Utilized SOLIDWORKS certification exams for midterms and finals
- Increased opportunities for graduates to secure employment
- Laid groundwork for new Industrial Design/Manufacturing Program

The largest of the 112 California community colleges with 29,000 full-time students, Mt. San Antonio College (Mt. SAC) has provided quality, affordable educational opportunities to more than a million students of all ages. Mt. SAC offers more than 200 degree and certificate programs, and has earned statewide and national distinction in a number of disciplines. Of particular note is the college's Engineering Design Technology Program, graduates of which have been quite successful at landing jobs.

As the manufacturing world increasingly turns to 3D design methods, so has Mt. SAC, which is transitioning away from AutoCAD® 2D tools in favor of 3D technology, according to Professor Emeritus Max Lizarraga. "In 2005, we began evaluating affordable 3D parametric design packages to replace the AutoCAD 2D software that we used in our curriculum," Lizarraga recalls. "A new 3D paradigm was emerging in industry, and we wanted to transition to 3D design technology to better prepare our students for the jobs they would seek following graduation.

"Prospective employers want new hires to hit the deck running, so choosing the right 3D package was critical to our success," Lizarraga adds. "We spoke with many of the companies in our region and discovered that many of them had moved from AutoCAD to SOLIDWORKS® 3D design software. There was a tidal wave of word-of-mouth references regarding SOLIDWORKS, so we decided to purchase a few seats of SOLIDWORKS Education Edition software to make sure we were choosing the best solution for our students."

Mt. SAC incorporated SOLIDWORKS Education Edition in its Introduction to Design Technology course, providing eight weeks of instruction in AutoCAD and eight weeks of instruction in SOLIDWORKS. "Our students took hold of SOLIDWORKS and wouldn't let it go," Lizarraga recounts. "At the end of the course, students must submit corrections to their design portfolios. However, most students refused to go back and do corrections in AutoCAD. If they needed to work on drawings,

they preferred working on them in SOLIDWORKS.

"With employers and students both telling us that they prefer SOLIDWORKS, we knew that we had made the right choice," Lizarraga adds.

### **CSWA MIDTERM, CSWP FINAL EXAMS**

After acquiring 75 SOLIDWORKS Education Edition licenses to support its Introduction, Intermediate, and Advanced Design Technology courses, Mt. SAC began to incorporate SOLIDWORKS certification tests, which document proficiency in the use of SOLIDWORKS, into its curriculum.

Adjunct Professor Gerardo Miranda teaches the Advanced Design Technology course, for which the Certified SOLIDWORKS Associate (CSWA) test serves as the midterm exam and the Certified SOLIDWORKS Professional (CSWP) test as the final exam.



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### **CERTIFICATION INCREASES CHANCES FOR EMPLOYMENT**

Because 80 to 90 percent of Mt. SAC students pass the CSWA and CSWP exams, they have more opportunities to land a job following graduation. "I often tell students, 'The definition of lucky is being ready when the opportunity arises, so be prepared to be lucky,' because many of the industry people that I converse with regularly tell me that they look for SOLIDWORKS certification when evaluating prospective employees," Lizarraga notes. "Students leave here with something of value plus a degree. They leave with a certificate that affirms a very marketable skill."

"Having either the CSWA or CSWP certification definitely helps new graduates get a foot in the door," Miranda concurs. "Someone who has a SOLIDWORKS certification will definitely get an interview over someone who does not."

### 3D DRIVES PROGRAM TRANSITION

Mt. SAC's investment in SOLIDWORKS Education Edition software is also facilitating the college's transition of its existing Engineering Design Technology Program to a more extensive Industrial Design/Manufacturing Program. "We continually ask ourselves, 'Are we accomplishing what we are trying to do?'" Lizarraga says. "Now that we have a program in place that certifies use of a leading 3D CAD system, we're expanding into CNC machining and manufacturing, and SOLIDWORKS is helping us make the transition.

"Not only does SOLIDWORKS 3D data integrate well with CAM software, it also saves time," Lizarraga continues. "The software's so easy to learn and use, and eliminates so many repetitive, time-consuming tasks, that it's set the stage to grow our program by encompassing both design and manufacturing functions, which will help to even better prepare students for work in the real world."

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Using SOLIDWORKS Education Edition software, Mt. San Antonio College industrial design engineering students can more effectively develop, fabricate, and build real-world quality products, such as the air compressor shown here.

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