by: Mark Kiker & Steve Stafford

Revit in High School

Meet Two Progressive Teachers and their program

WHO ARE THEY?

They are Glen Stevenson and Bill Brown and they are full-time "Drafting" teachers at Santiago HS. They think that their school may be the only one, at this time in the state of California, that has two full time teachers like them. Santiago High School in Corona, CA is located near the I15 and I91 interchange. There are about 4000 students in the comprehensive high school that is part of the Corona-Norco Unified School District.

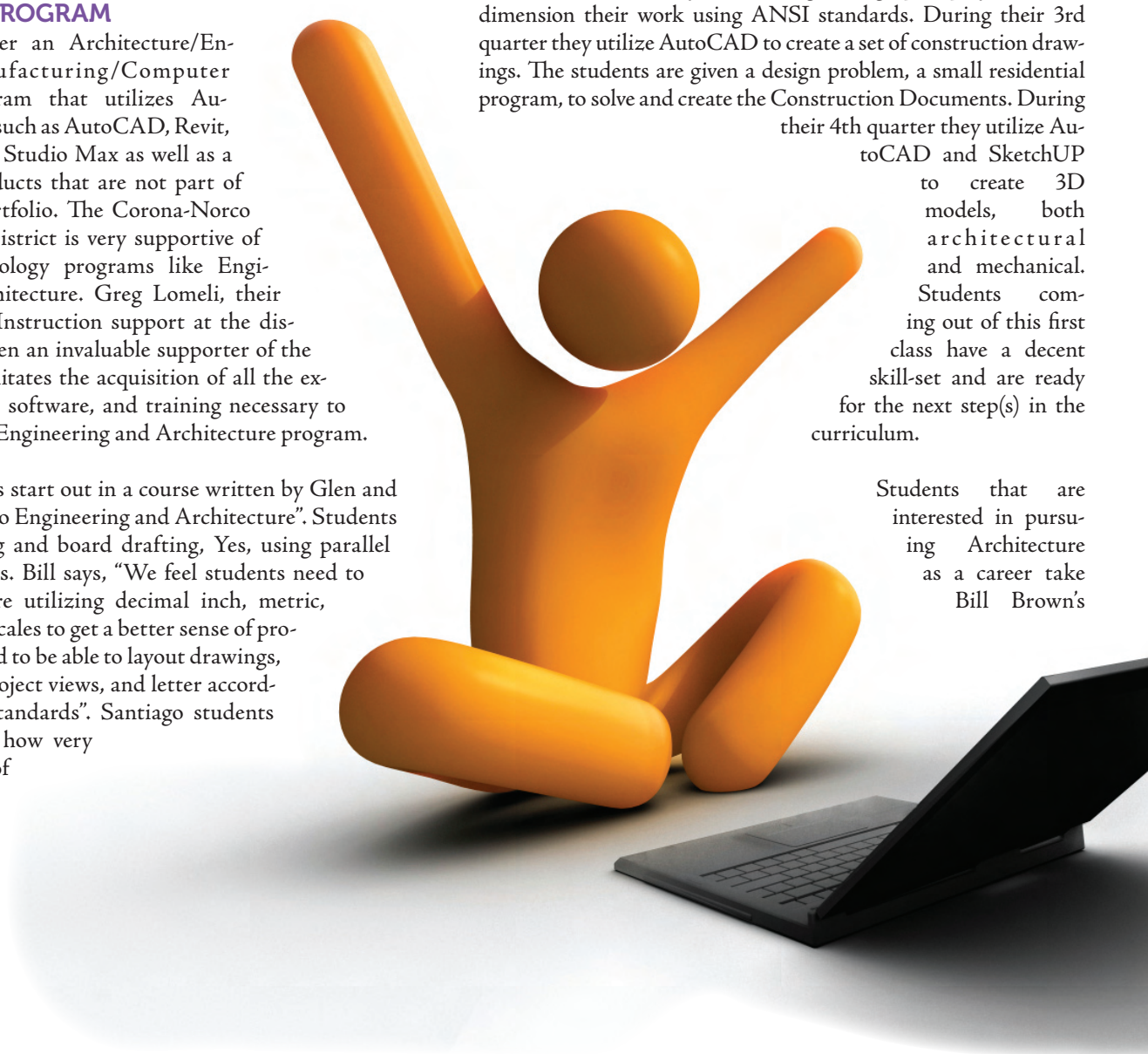
ABOUT THE PROGRAM

They put together an Architecture/Engineering/Manufacturing/Computer Animation program that utilizes Autodesk's software such as AutoCAD, Revit, Inventor and 3D Studio Max as well as a couple other products that are not part of the Autodesk portfolio. The Corona-Norco Unified School District is very supportive of Industrial Technology programs like Engineering and Architecture. Greg Lomeli, their Curriculum and Instruction support at the district level, has been an invaluable supporter of the program. He facilitates the acquisition of all the expensive hardware, software, and training necessary to run a progressive Engineering and Architecture program.

Santiago Students start out in a course written by Glen and Bill called "Intro to Engineering and Architecture". Students start by sketching and board drafting, Yes, using parallel rules and triangles. Bill says, "We feel students need to physically measure utilizing decimal inch, metric, and architecture scales to get a better sense of proportion. They need to be able to layout drawings, scale drawings, project views, and letter according to industry standards". Santiago students make blueprints, how very "old-school", of their drawings and, after a review, have the opportunity to make revisions if they are not up to industry standards.

Their goal is to guide and if necessary change the mindset of their students so they understand that drawings must be correct, not close to correct. If a change has to be made, they make it! In their first quarter students do not touch the computer, they are learning the physical side of things as mentioned before. Students start AutoCAD training during their 2nd quarter. They utilize AutoCAD to draw mechanical objects utilizing orthographic projection and dimension their work using ANSI standards. During their 3rd quarter they utilize AutoCAD to create a set of construction drawings. The students are given a design problem, a small residential program, to solve and create the Construction Documents. During their 4th quarter they utilize AutoCAD and SketchUP to create 3D models, both architectural and mechanical. Students coming out of this first class have a decent skill-set and are ready for the next step(s) in the curriculum.

Students that are interested in pursuing Architecture as a career take Bill Brown's



Architecture Design classes. Revit is used to create the working drawings for student designed work. Students get 180-360 hours of Revit training and practice through the 1-2 years they spend in the Architecture Design classes.

INSPIRATION AND ACHIEVEMENT

Six years ago Bill saw a Revit 5.1 workshop at Santa Barbara City College and felt it was the future. A month later, ADT was gone from his program and Revit was implemented. Since then some students that have been part of this Architecture design program have won the last 5 California SkillsUSA/VICA state championships in Architecture and have been in the top 8 in the nation for the last 3 years in a row. Students in this program have worked right out of high school for Revit-using companies such as Friedmutter Group, WLC Architects and HMC Architects just to name a few. Students attend AUGI Revit User Groups in Rancho Cucamonga and Irvine to network with professionals and learn the latest Revit trends.

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A STATE GRANT

Bill recently won a state grant to provide training to teachers, from the middle and high school levels to the community college and university levels, in California to properly use Revit software through 14 monthly workshops. Professional Revit users are currently teaching teachers how to use Revit at Santiago High School once a month on a Saturday from 8-4. Bill recruited some really knowledgeable Revit users from a variety of local firms and consulting organizations to teach each session. The workshop topics include Schedules, Families, Massing, Site work, Structural, Construction documents and details, Central files and Work sharing, Graphics, Materials and Rendering, Integrating other software programs into Revit, and Curtain Walls/ Storefronts. The best part is the workshops are FREE to the teachers! The grant also paid for software to begin implementation of Revit training at Riverside Community College (RCC). The "ARE 25" architecture class at RCC-Norco is now a Revit training class. Bill is currently teaching the class, but hopes to turn the class over to a Revit professional next Fall.

ENGINEERING TOO!

Santiago students also have an excellent pathway in Engineering. Glen Stevenson takes them from the Intro to Engineering class to an advanced CAD class that utilizes Autodesk Inventor to design or reverse engineer and draw parts to industry standards. They also study Design Manufacturing where students use Inventor along with MasterCAM software to produce parts utilizing CNC (computer numerically controlled) technology. Santiago students entering Engineering schools have a big advantage in that they know how to graphically communicate their design ideas (with current technology) to industry standards before they step foot on a college campus.

THE FUTURE

Santiago's Architecture and Engineering program is always looking for potential employers of its graduating students, as well as to find excellent guest speakers. Their fundamental goal is to prepare their students for real work. They strongly encourage their students to pursue summer internships while they are in college to gain "real-world" knowledge that will enhance their college experience, and better prepare them to be productive employees immediately after college. For Bill and Glen, their belief and effort in this program has provided some of the most rewarding moments of their careers.

If you'd like more information about their program you can reach them via email:

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This article was prepared/edited by Steve Stafford from documents provided to AUGI AEC Edge by Bill Brown.