

Staatliche Feintechnikschule Schwenningen

TAKING TECHNICAL TRAINING INTO THE 21ST CENTURY WITH SOLIDWORKS



By teaching SolidWorks software, FTS better prepares its students for employment with leading German manufacturers.

CHALLENGE:

To better prepare students enrolled at 30 German technical schools for employment as designers and technicians with leading manufacturers or for continued study at the university level.

SOLUTION:

Implement SolidWorks Education 3D CAD software – in combination with integrated SolidCAM CAM software – to provide students with the certified 3D product development and automation skills that they need to succeed.

RESULTS:

- Accelerated CAD instruction and real-world application experience
- Better prepared students for employment with leading manufacturers
- Established a CSWA Certification Program to provide students with skills certification
- Forged productive partnerships with top German companies

Staatliche Feintechnikschule Schwenningen – also known as the FTS College for Precision Technology – plays a pivotal role in providing vocational and technical training services in an important manufacturing region of Germany. With roots going back to its founding in 1900 as the Royal Württemberg College of Precision Engineering, Electrical Mechanics, and Watchmaking, FTS has a storied history of training the skilled artisans, engineers, and technicians that support Germany's extensive manufacturing base.

The school leverages new technologies in its efforts to maintain Germany's position as one of the world's largest exporters and most successful manufacturers. As more German companies implemented 3D development tools, FTS foresaw the need to transition its focus to 3D design, according to Jürgen Kubas, technical teacher for Mechanical Engineering.

"FTS serves as a model for other vocational training schools in the Freiburg district," Kubas explains. "When we investigated the move to 3D design in 1999, FTS led the way for other schools in the district."

After evaluating leading 3D CAD systems, FTS chose SolidWorks® Education design software. By 2002, the school made SolidWorks training mandatory. In 2004, 28 other technical schools added SolidWorks Education software along with the Certified Gold SolidCAM® CAM product from SolidCAM, Inc. Today, more than 4,000 students use over 1,500 licenses of SolidWorks and SolidCAM software as they prepare for careers in German industry. The schools' licenses are supported by SolidPro GmbH, the SolidWorks and SolidCAM reseller in Germany.

“SolidWorks has become the conduit through which we have established valuable partnerships with local manufacturers. Whether our students intend to immediately enter the workforce or go on to the university, this kind of hands-on experience is increasingly relevant and important for their future prospects.”

Jürgen Kubas
Technical Teacher for
Mechanical Engineering



SolidWorks has enabled FTS to implement the Certified SolidWorks Associate (CSWA) Program not only for its students but for its teachers as well.

FTS selected SolidWorks Education software because it is easy for students to learn and use, and has a broad presence among local manufacturers. “In our region of Germany, many companies work with SolidWorks, which creates opportunities for our students,” Kubas points out. “It requires less time for them to become proficient with the software, and our students can also use the software at home with the SolidWorks Student Design Kit.”

Move to 3D parallels industry

The implementation of SolidWorks software at technical schools in the Freiburg district brought the schools into the 21st century because their training services now directly parallel the needs of local industry. Before upgrading to SolidWorks, most student projects at FTS were classroom exercises. Now, companies bring design and manufacturing challenges to the schools and give students the chance to work on actual applications.

“With SolidWorks, our students have the opportunity to use real-world tools to solve real-life problems, such as using SolidWorks eDrawings® files to communicate design information with a partner company,” Kubas notes. “SolidWorks has become the conduit through which we have established valuable partnerships with local manufacturers. Whether our students intend to immediately enter the workforce or go on to the university, this kind of hands-on experience is increasingly relevant and important for their future prospects.”

Integrated CAM speeds learning

In addition to establishing a mandatory, project-focused SolidWorks CAD training course, FTS leverages the complete integration of SolidWorks and SolidCAM CAM software with its advanced machining equipment to duplicate industrial conditions in a school setting. Because students learn how to design parts and generate the G code to machine them, they are already familiar with the entire production process when they leave school to seek employment.

“Because SolidCAM uses SolidWorks as its internal modeler, students learn how to transition from design to production more quickly than in the past,” Kubas stresses. “This level of integration enables our students to progress to a much higher level than when we used 2D tools. They are simply better prepared to join the workforce when they leave us because of the integration of SolidWorks and SolidCAM software.”

Teaching the teachers

The move to SolidWorks has also enabled FTS to implement a formal CAD skills certification program for its students and teachers. Kubas says he was the first person in the Freiburg district to pass the Certified SolidWorks Associate (CSWA) examination, which provides the same CAD certification that engineers seek. Kubas is responsible for training his fellow teachers at other schools and encourages both students and colleagues to complete the CSWA Certification Program.

“The CSWA exam requires not only an understanding of SolidWorks, but also the use of other tools such as Simulation,” Kubas says. “Some of our industrial design students at another school make great use of PhotoWorks™ rendering software. An important benefit of SolidWorks is that it meets a variety of training needs, which I strive to impart to my colleagues when I am teaching them how to use SolidWorks.”



Dassault Systèmes SolidWorks Corp.
300 Baker Avenue
Concord, MA 01742 USA
Phone: 1 800 693 9000
Outside the US: +1 978 371 5011
Email: info@solidworks.com
www.solidworks.com



Staatliche Feintechnikschule Schwenningen
Rietenstraße 9
78054 VS-Schwenningen GERMANY
Phone: +49 07720/8334-0
www.fts-tg.de/fts.php?a=1
VAR: SolidPro GmbH,
Vöhringen, GERMANY