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Siemens Cooperates with Education

An innovative program provides colleges and universities with the tools to train students for the next industrial revolution.

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At leading institutions nationwide, Siemens is supporting educators in creating the manufacturing workforce of tomorrow. Through the Siemens Cooperates with Education program, hundreds of colleges and universities have access to the advanced curriculum, technical training and equipment that helps prepare students for work in the manufacturing sector.

Industry Challenges

Training the next generation manufacturing workforce has never been more of a challenge for colleges and universities. Rapid advancements in industrial automation and other technologies used in manufacturing have left academic institutions struggling to keep up. Acquiring the latest technology for the classroom, and then training instructors, puts a strain on department budgets and personnel.

At the same time, creating a highly skilled workforce has never been more important. Due to demographic shifts, the manufacturing industry faces a skills shortage. Experienced workers are retiring, and there are not enough younger workers with the right training to take the reins.

Siemens Solution

As a technological leader, Siemens values the important role that colleges and universities play in workforce development. The Siemens Cooperates with Education (SCE) program was developed to support their efforts. Through SCE, Siemens provides educators the tools they need to ensure students have the skills to succeed in today's technology-minded manufacturing sector.

"Mechatronics is an emerging field to meet new technical challenges and needs. While we are the largest Mechatronics Engineering Department in the USA, Siemens has been a vital part in our achievements, especially our students' great success in both education and career development."

Chan Ham, Ph.D

Associate Professor & Chair, Dept. of Mechatronics Engineering Endowed Siemens Distinguished Scholar Southern Polytechnic College of Engineering and Engineering Tech.

The program, available to high schools and 2- and 4-year institutions, brings the latest Siemens technology and know-how directly into the classroom. SCE services include:

- Training curriculums addressing modern industrial solutions, including automation and drives
- Trainer packages, including the latest controls and HMI hardware and software for classroom use
- Specific courses and workshops that convey up-to-date specialist knowledge
- Individualized support and unique, school-specific programs

Program Results

Since its inception, the SCE program has partnered with more than 400 schools nationwide to create and support the classroom training necessary for students to succeed in manufacturing. SCE participants include:

Auburn University (Auburn, AL) – Auburn’s Industrial and Systems Engineering students learn new skills using a revolutionary lean manufacturing simulation, known as the “Lego Manufacturing Lab.” Students implement lean practices in the building of Lego cars and measure factory performance to compare different designs. In the following semester these simulated factories run at high volume assembly, incorporating all aspects of manufacturing, including robots, PLCs, and line balancing.

PLCs, HMI panels, and TIA Portal software from Siemens are key elements in this living lab. “We have installed all of the best manufacturing practices to provide students experiential learning,” says Tom Devall, director of automotive initiatives in the Department of Industrial and Systems Engineering. “Our students will be well-versed in these tools and systems, better preparing them for jobs in the industry.”

Kennesaw State University (Kennesaw, GA) – Siemens and Kennesaw State University share a long-standing partnership. Siemens support for the Kennesaw Southern Polytechnic College of Engineering and Engineering Technology includes technology investments as well as sponsorship of engineering challenges hosted at the University. Siemens has played an important role in the development of KSU’s undergraduate mechatronics degree program, including endowment for a Professor of Mechatronics and funding for an annual Mechatronics Engineering Student scholarship.

In 2016, the engineering program garnered a trifecta of engineering accolades, earning three of the top six awards from the Georgia Society of Professional Engineers including 2016 Georgia Engineer of the Year, Georgia Engineering Student of the Year, and the Georgia Engineering Technology Student of the Year.

“The unique multidisciplinary Mechatronics is an emerging field to meet new technical challenges and needs. While we are the largest Mechatronics Engineering Department in the USA, Siemens has been a vital part in our achievements, especially our students’ great success in both education and career development,” says Dr. Chan Ham, Department Chair.

The University of Toledo (Toledo, OH)

– Ohio is one state at the epicenter of a manufacturing resurgence. When members of The University of Toledo visited companies in their state, they noticed many were adopting Siemens technologies. Dr. William Ted Evans, a professor in the College of Engineering, saw an opportunity for partnership.

Dr. Evans has completed multiple courses utilizing Siemens PLC and HMI technologies in the classroom. He has also authored a text on PLC programming and created labs and lectures covering Siemens and other PLC manufacturers. What’s been the result of this hands-on experience? “Now, students get jobs,” he says. “Multiple offers.”



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