Siemens Cooperates with Education (SCE)

Building the pipeline for manufacturing talent by connecting industry to academia
Building applicable practical know-how

Support for schools interested in engaging with leading edge industrial technologies.

Through the Siemens Cooperates with Education (SCE) initiative, universities, K-12 schools, and community colleges are afforded the opportunity to partner with Siemens on leading edge industrial technologies in their classrooms and research projects. We provide support through equipment, software, instructor training and technical guidance.

SCE program offers curriculums and automation training based on Massive Open Online Course (MOOC) and blended learning concepts for conveying know-how on Digitalization. Educational institutions benefit from special conditions, support and partnerships.

For more information, see Siemens Cooperates with Education usa.siemens.com/sce

"By teaching Siemens, our students are much more attractive in the job market. Companies come from far away to recruit at our school (a small rural community college). We now have a German company recruiting students to take to Germany and train there for 2 years and then come back to work in the U.S. for them."

Accounties Smith, Tri-County Technical College
Siemens welcomes all educational institutions to explore the Siemens Cooperates with Education (SCE) program benefits along with our global leading technology offerings.

Schools interested in participating can complete the SCE Application Form and get connected to Siemens information.

**Sign Up Today**
- Complete form at [usa.siemens.com/sce](http://usa.siemens.com/sce)
- Once your application is validated, your school becomes eligible for discounts and access to our training and curriculum resources as a SCE member.

**Benefits for Partner Schools**

Siemens Cooperates with Education Global Offer to Schools for Academic use:
- Discounted trainer packages of hardware and software.
- Access to the same industry training as our customers. Tuition waved for qualified educators.
- Earn CEU's, download completed curriculum to decrease the time to develop technical courses.
- Students use the same industrial technologies as local customers. Make classes more relevant for students.
- 6 packs of PLC's and HMI's with software and peripheral items outfit 6 workstations with hardware and software at discounts of over 60% of published pricing!

Close ties between industry and education have been a long-standing tradition at Siemens. SCE is our customized offer for public education research, development and training centers worldwide.
Training Resources

SCE provides comprehensive support to schools interested in engaging with leading industrial technologies with a variety of resources to assist instructors and students.

**Beginner Tutorials** – For excellent beginner tutorials, check out the following Siemens offerings:
- Siemens You Tube Channel – “Automation Tasks in 10 minutes or less” - https://www.youtube.com/playlist?list=PLC76AD9A5EF6E8212

**Tech Support** – Contact Siemens Engineering Support Center during business hours – 1 (800) 333-7421 or submit your requests to either of our industry support sites: support.usa.automation@siemens.com or support.industry.siemens.com

**Hosting Workshops** – Interested in hosting a local SCE Educator workshop? We strive to provide hands-on technical training to as many educators as possible. Contact your SCE team to inquire about upcoming workshop schedules and the possibility of scheduling one at your own campus. sce.industry@siemens.com

**Training Schedules** – Attend a SITRAIN industry training course. Tuition for educators has been waived. We encourage educators to check our website for upcoming training classes at www.sitrain-lms.com

**Academic Programs**

**Siemens GO PLM program**: Offers academic partnerships and a wealth of resources from the leading global provider of product lifecycle management software. Free student downloads of software including Solid Edge are available to build a stronger pipeline of designers and engineers. Read more at plm.automation.siemens.com

**LEAP: Lifelong Educational Advantage Program** – A robust certification program in milling and turning with complete classroom curriculum and hands-on training modules. For more information, visit www.usa.siemens.com/cnc-leap

**Automation Fundamentals Certificate** – Provides a structured, repeatable method to validate the knowledge of Siemens Totally Integrated Automation solutions while utilizing recommended SIMATIC best practices. The online certification exam is offered to instructors and students of automation and related fields. For more information, visit www.siemens.com/sce

**Siemens Mechatronics Systems Certification Program (SMSCP)** – is the global standard in Mechatronics Certification. Instructors who complete the required courses at schools where the requirements are satisfied, can offer certification to students on these systems and troubleshooting approach to teaching Mechatronics. Read more at: www.siemens-certifications.com
Trainer Packages for Educators
Assembling individual products is time-consuming and expensive. SCE has made it easy for instructors by offering more than 80 Trainer Packages featuring innovative hardware and software for state-of-the-art automation and drive technology. Our trainer packages are available at special discounted pricing and are excellent for practice-oriented education.

Common Trainer Packages:
- **LOGO!** programmable relay six pack with expansion module and LOGO!Soft software is a compact platform used in industry for a variety of applications. Ethernet ready with integrated webservice and a user-friendly simulation included makes LOGO! a great option for education.

- **S7-1200 PLC** six pack is a compact, expandable controller suitable for small to mid-range automation applications. Included are analog output modules, digital input switches (x6), Ethernet cables and six TIA Portal Basic floating software licenses. The performance and features of the S7-1200 offer robust options using industry relevant hardware and software for schools.

- **KTP700 HMI Operator Panel**: The 7” color HMI, five port Scalance Ethernet switch and industrial Ethernet cables offer schools a tool for projects that require visualization. Students can build projects using the TIA Portal software (in the S7-1200 PLC package) with innovative graphical user interfaces for intuitive operation and monitoring.

Additional trainer packages are available including variable frequency drives, advanced WinCC and TIA Portal Professional software packages, SINUMERIK and SINUTRAIN CNC bundles. www.usa.siemens.com/sce

**Hardware**

Updating Firmware: If you have PLC's with firmware that you would like to update, many times the update is available from Industry Online Support along with instructions at: https://support.industry.siemens.com Firmware must be downloaded to a Siemens SD card and then installed on the PLC module using the SD Memory card. You must create a login on the Industry Support site for most downloads.

**Software**

Which DVD's to install: SCE trainer packages come with TIA Portal and STEP 7 v5.5 software DVD's along with a USB dongle containing combo licensing for both. Users teaching TIA Portal should only install TIA Portal software DVD's SIMATIC STEP 7 TIA PORTAL software.

Q. Can I run multiple versions of Siemens software (i.e. TIA Portal v11 and v13) on the same computer?
A. Yes, see Industry Online Support for details.

License Keys – Need information on handling license keys that are located on a central server or on a local computer? Visit: http://support.automation.siemens.com/WW/view/en/18602618

Over $10k worth of equipment and software!
Six packs of PLC's and HMI's with software and peripheral items outfit six workstations with hardware and software.
Communications, Curriculum and Credentials

Solutions for Common Connection Issues

Networking: Some school security and firewall settings can make initial connections from the PC with TIA Portal software to the S7-1200 PLC challenging. “No accessible devices” can occur if the devices trying to communicate are on different networks. The S7-1200 IP Tool Utility can be downloaded along with the Industry Online Support site for FAQ’s. Siemens “Easy S7-1200 Book” is also a valuable resource that can be downloaded from the SCE site.

Server installation: Many schools utilize servers in software license management. A few tips:
- Server PC port 4410 (default) must be open
- Transfer of License Keys to a network PC (ALM must be installed on the server)
- Use of License Keys on a network PC (ALM must be installed on the server)

Additional Equipment and Software

Additional Purchases: If schools are interested in purchasing additional product, SCE can help streamline the process with your local automation distributor for the best discount available. Students who wish to purchase their own product may also check with their local distributor for an authorized reseller. Online retailers also offer individual product for purchase: www.studica.com. Contact your local distributor at www.usa.siemens.com/distributorlocator or the SCE Team for more information.

Trial Software: Several 21, 30 and 90 day trial software licenses are available for your evaluation. Visit our support site for a list of options. https://support.industry.siemens.com

Licenses: If additional software or upgrades are needed, the school should purchase a trainer package software upgrade as the most economical option. Software upgrade packages are listed under “Trainer Packages” on the SCE site and the local automation distributor can locate and provide part numbers.

Tools: You can resolve many questions on Siemens products and versions with Siemens compatibility tool. This unique tool provides a compatible selection of software products and checks existing configurations for compatibility. www.siemens.com/kompatool. To review helpful modernization and conversion tools visit: www.usa.siemens.com/modernization-tools

Curriculum and Credentials

Curriculum: SCE provides modular, project-based curriculum free of charge to SCE Partner Schools. From the LOGO! to S7-1200/1500/300/400, VFD’s and CNC technologies, we cover entry level to moderately complex topics for academic use. The curriculum built for the TIA Portal platform and CNC technologies support our online assessment and certification.

Textbooks: A number of textbooks are available for purchase from third party authors. Visit www.usa.siemens.com/sce to see a complete list and consult with your SCE Program manager for recommendations specific to your region or technology.

Credentials: Siemens Automation Fundamentals Certificates are available to partner schools to provide students with an industry credential for basic PLC programming, VFD commissioning and machine tool automation. Our curriculum and credential programs are designed to give graduates a career-enabling knowledge foundation.
Successful Partnerships

What partner instructors are saying:

"Stories from students getting more job offers, better offers and challenging jobs is where it is at."

- Dr. William Ted Evans, professor at the University of Toledo

"Our partnership with Siemens has enhanced our curriculum as we now offer the latest PLC training in a state of the art facility. We are now training three disciplines using Siemens PLC’s; Mechatronics, Robotics and Electronics. Our students leave here with ‘real world’ hands-on experience."

- Steve Quinn, Spartanburg Community College

"My goal is to equip students with critical job skills before they leave my classroom. The Siemens equipment helps me do just that. It really makes a difference in our educational offering and level of skill of our graduates"

- Accounties Smith, Program Coordinator Industrial Electronics Technology, Tri-County Technical College

"CVCC believes that industry support partnerships like Siemens Cooperates with Education and training programs like the “Summer with Siemens” workshops are important to building a solid foundation of automation skills on which to support a mechatronics program."

- Jim Thomas, Department Head, Engineering Technologies, Catawba Valley Community College