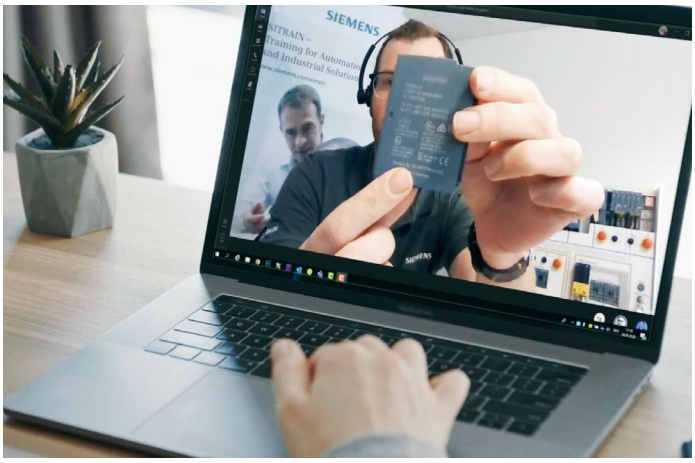
2024 COURSE CATALOG

SITRAIN® Digital Industries Learning

usa.siemens.com/sitrain

SIEMENS

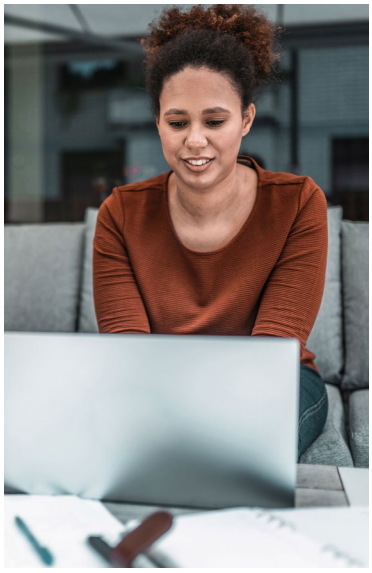
What our customers are saying...



"

The instructor did an extraordinary job in delivering the subject matter and content. He makes very efficient use of the time and emphasizes more critical or more important topics appropriately.

Class participant



"

The instructor explained the concepts very well and showed many examples that helped my understanding. I can apply this learning to my plant PCS7 system.

Class participant

How we approach your workforce learning challenges


SIEMENS
Online S
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Find Courses

Index

Introduction to the learning environment

Course descriptions and learning maps

Workforce performance improvement consulting

Siemens experts can develop a comprehensive learning plan that improves productivity for your entire workforce.

A recent report from Deloitte and the Manufacturing Institute (MI) projects more than three million U.S. manufacturing jobs will open up over the next decade. Two million of those vacancies are expected to go unfilled.

Experts have warned for years about the manufacturing workforce reality created by retiring baby boomers taking decades of knowledge with them as they leave. While candidates are lining up for these jobs, many do not yet have the digital skills required for the changing workplace creating a manufacturing skills gap challenge.

The solution to bridging this skills gap is to improve performance by identifying and increasing the related competencies for the specific job or role, thereby increasing job performance as well as overall organizational performance.

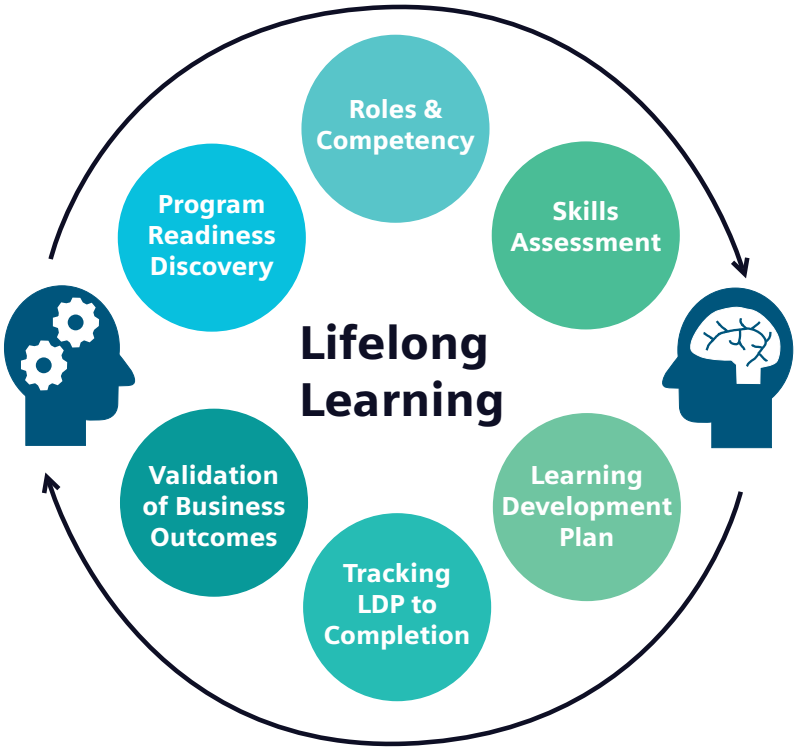
Workforce Performance Improvement consulting

Siemens Workforce Performance Improvement consulting is a well-defined, six-stage cyclic program providing transparency into employee job skills for success. Our program begins by aligning current worker competency to business targets.

Each of the six stages have been carefully designed with the end in mind. The improvement process begins by identifying your key performance indicators (KPI) related to workforce learning.

As part of the process, employees are evaluated and set on purposeful and self-sustaining performance-based skill development paths – paths which result in a highly skilled, confident and motivated workforce. This, in turn, results in less downtime, reduced turnover and, ultimately, an improved bottom line for your operation.

Siemens approaches the learning process from your business perspective. We have a common goal: improving job performance based on your business needs.



Credentials matter

Continuing Education Units

SITRAIN Digital Industries Learning is an Accredited Provider of IACET Continuing Education Units (CEU). Our accreditation with IACET is a demonstration of SITRAIN US' commitment to quality adult education and high standards for all of our learners. We are very pleased to maintain our relationship with such a prestigious organization as well as an elite group of organizations that offer excellent continuing education and learning programs.

Digital badges

Through SITRAIN – Digital Industries Learning Micro-credentialing Program, you can easily display knowledge and competencies to employers, colleagues, and professional organizations on your email signature, social media sites and other electronic media.

Key benefits for learnings include:

- Employers can easily track student competency badges.
- Track employee competencies across the workforce for new technologies
- Employees can digitally display competencies

Once you have successfully completed your course, you will receive your Micro-credential badge.

Key benefits for learners include:

- Transferable CEUs between cooperating organizations
- Vendor of choice is made easier by recognizing IACET brand
- Assurance of quality programming
- Assurance of standards-based record keeping

Did you know you can convert your CEUs to Learning Units (LU) or to Professional Development Hours (PDH)?

- 1.0 CEU = 10 PDHs for engineers
- 1.0 PDH = 1.0 Clock Hour (minimum 50 minutes)

Building **applicable, practical know-how**

Siemens Cooperates with Education – 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, research projects and workforce development programs. We provide support through equipment, software, instructor training and technical guidance.

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

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

Curriculum	Workshops & Classes	Trainer Packages	Learning Systems	Promoters
Course material and instructional tools.	Know-how transfer. Products, innovations and solutions.	Leading technologies, with deep discounts for schools.	Professional systems offered by our Didactic Partners.	Face-to-face support worldwide–in many regions.

"

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 US for them.

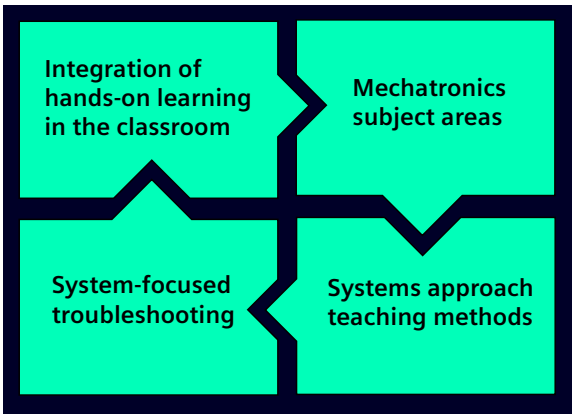
Tri-County Technical College

SMSCP: Siemens Mechatronic Systems Certification Program

Success factor of SMSCP: Holistic approach to mechatronic systems

Our systems approach is the core of the Siemens Mechatronic Systems Certification Program (SMSCP), which has been used with a high degree of effectiveness in training Siemens' own engineers in Germany. All SMSCP courses are supposed to be integrated within a high school, college, or university curriculum, or to be implemented as continuing education.

Mechatronics is not only the marriage of electrical, mechanical, and computer technologies; it is also a philosophy for looking at systems. Under the systems approach, students learn about the complexities of the system in a holistic fashion. Afterwards they do not only have a Siemens mechatronics certification, more important they are capable of easily transfering their knowledge to other systems, resulting in flexible and autonomous employees. The systems approach is the core of the **Siemens Mechatronic Systems Certification Program (SMSCP)**.



Benefits for partner schools

Partner schools can rely on Siemens' 130 years of experience combined with new teaching methods based on the German dual system. You can benefit from worldwide standards for the training and the certification set by Siemens, our holistic approach of teaching mechatronics to meet skills requirements from industry, and future-proof content such as the digital enterprise.

Benefits for students

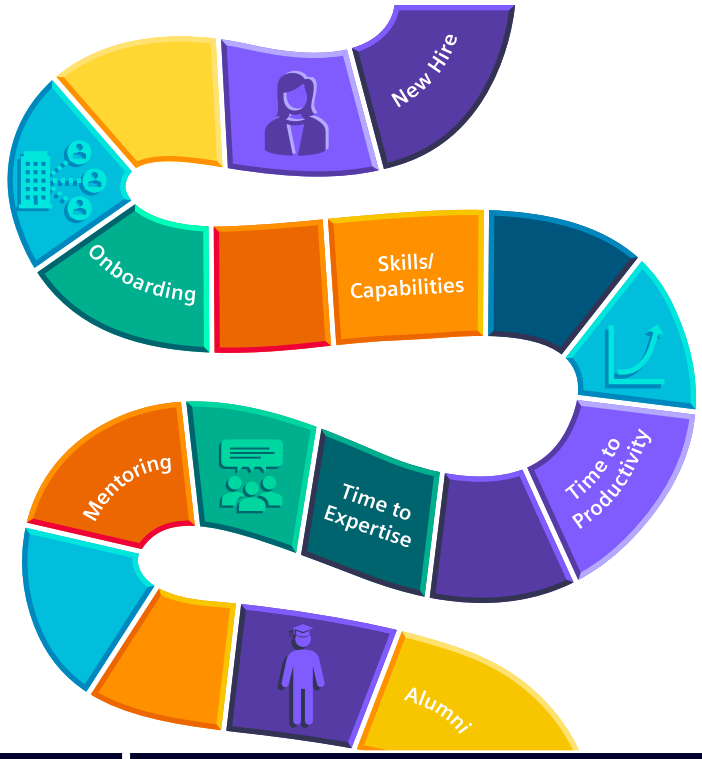
SMSCP increases the employability of students and speeds up their transition into the job based on extensive troubleshooting training on real systems. SMSCP is a recognized, international industrial certification, and lets students obtain an industry certification, in addition to a certificate or a degree. It's integrated in the current studies and comes at low costs.

Benefits for employers

With SMSCP, students are ready for the job, reducing on-the-job training and preparing them for the tasks that industry seeks today and in the future. Our vendor-neutral broad-based training with worldwide standards, the certification set by Siemens increase efficiency and productivity among machine operators, technicians, and engineers.

The **learning** path

Providing innovative and adaptive learning services resulting in extraordinary business performance



	The challenge	Our solution
New Hire	• Capability to Learn • Day 1 Readiness (Tools / Systems / Equipment) • Onboarding	• Entry-level skills identification workshops • Assessment center development / consulting • Strategic Workforce Planning consulting
Onboarding	• Onboarding • General / Specific Role Info	• Entry level technical skill intros (virtual / WBT) • Siemens' technology intros
Skills / Capabilities	• Existing Skill Levels / Role Requirements • Assessment Tools • Learning Paths (by position/role)	• Workforce Performance Improvement consulting • Technology learning paths by role • Refresher training or new requirements
Time to Productivity	• Skills Mapping / Transferrable Skills • Learning Paths (by position/role) • Learning Path with Soft Skill Mapping	• Workforce Performance Improvement consulting • Technology learning paths
Time to Expertise	• Capability to Learn • Day 1 Readiness (Tools / Systems / Equipment) • Onboarding	• Entry-level skills identification workshops • Assessment center development / consulting • Strategic Workforce Planning consulting
Mentoring	• Capability to Learn • Day 1 Readiness (Tools / Systems / Equipment) • Onboarding	• Entry-level skills identification workshops • Assessment center development / consulting • Strategic Workforce Planning consulting
Alumni	• Capability to Learn • Day 1 Readiness (Tools / Systems / Equipment) • Onboarding	• Entry-level skills identification workshops • Assessment center development / consulting • Strategic Workforce Planning consulting

Learning Memberships available to you

With Learning Membership, you get access to the extensive and constantly growing range of self-learning units on SITRAIN access, the digital learning platform. Search and find specific learning content or just browse – anywhere and anytime. Memberships promote a modern learning culture through self-reliant, continuous learning and transparency about the learning success within your team and company.

How-to Video Library
Access refresher videos on-demand, in short, easy-to-understand bites. Our How-to Video Library offers an impressive and growing collection of short videos reminding you how to perform the critical tasks you learned in class. Can be deployed as post training refreshers, a support tool for OJT and technical coaching, and production line fault troubleshooting and resolution.

Online Self-paced Learning
Access a broad selection of self-guided, interactive, industrial courses designed to meet your needs. Available 24/7, these courses are perfect for building a staff training plan and on-boarding new employees. Our catalog contains over 400 unique titles which can be completed in one to two hours. Our courses include high-quality graphics, well-written on-screen text, supporting voiceover narration, and interactive exercises and end with an exam. Test scores and completion certificates are available to you on "My Dashboard", which is accessible from the menu once you have logged in.

SITRAIN Access
SITRAIN access is the digital learning platform for industry. It facilitates digital, innovative learning and professional education in all sectors. It's online, flexible, continuous, and personalized. Our knowledge offerings are curated by our experts, arranged in modular form, and can be accessed to suit your own requirements. SITRAIN access is more than just a video platform: Constant additions to its content, together with the ability to monitor your progress and complete practical exercises, fulfill all the requirements for sustainable learning.

How-to video Library
Click to learn more

Online Self-paced Learning
Click to learn more

SITRAIN Access
Click to learn more

Learning Events, a compact and guided way to acquire knowledge

With Learning Events, you will reach a set learning goal in the shortest possible time. The learning consultant guides you through the practical exercises and is also available to you for the entire duration of the theoretical units. Focus on your learning in a protected learning environment away from everyday work: virtually, in the training center, or in your company.

Face-to-face Instructor-led Learning
Learn together with others, guided by a learning consultant. Face-to-face learning can take place in the SITRAIN Learning Center or at your company.

Virtual Instructor-led Learning
Our Virtual Instructor-led Learning courses give students a live, classroom experience with the convenience and cost savings of remote learning. The courses help build critical skills and knowledge. They provide hands-on instruction and live interaction as effectively as our classroom courses, while being delivered in the comfort of your office or home.

Simulator systems

World-class performance assist tools available for purchase

Engineered to provide a real-world experience, Siemens simulators are fully functional, ready-to-use systems available in formats ranging from simple PLCSIM to fully integrated motion control systems. System-level design makes the simulators an invaluable tool for program testing and debugging, reinforcing learning, shop floor troubleshooting, and more. With portable construction and hard-shell cases, they can be easily transported. Custom-built systems are also available.

For additional details and pricing, please call 770-625-5644 or email: ***sitrain.registrar.industry@siemens.com***.

Or ***download the catalog***.

Virtual Machine Rental and Mentoring

The online virtual machine is a web browser-based format requiring no additional software installation on the attendee's computer. Your rental includes exclusive 24-hour access to a cloud-based virtual machine identical to that used in face-to-face and virtual classroom training with all necessary software pre-loaded.

Virtual Machine rental is intended for anyone who has attended Siemens Digital Industries Learning courses. They provide an opportunity to enhance your training experience with continued practice and exploration.

Creating Experts in your organization

Siemens certification programs

Certified expertise – worldwide
Shorter innovation cycles combined with market pressures on productivity, cost and quality make highly skilled staff a necessity. Siemens offers training backed by certifications which enable the efficient use of Siemens technologies and provide an assurance of staff skills and capabilities. Having the relevant expertise is an essential prerequisite for competent, effective action, which leads to shorter commissioning times, lower maintenance expenditures, minimized downtime and much more.

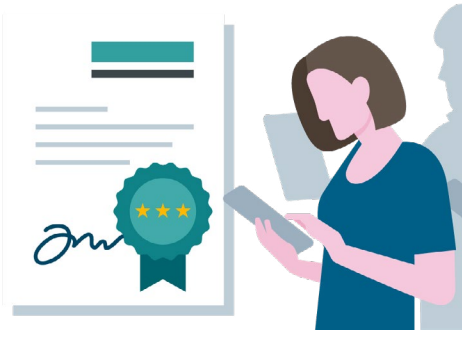
Getting started
Getting started with the Siemens Certification program is easy. Simply attend the specified courses for the desired certification path. Once complete we recommend you build applied experience on your application and have ready access to STEP 7 software for reviewing and reinforcing the subjects covered in the training courses. Continued review and practice of course materials and lab exercises are critical to passing the certification exam. The exam is a combination of written test plus hands-on with the S7 simulator systems.

Certification program benefits
- Flexible and confident workforce
- Proven competence
- Globally recognized credentials
- Comprehensive skill set definition

Certification skills summary
- Structure and create programs using complex data types, multi-instance block functionality, and indirect addressing
- Program quickly, efficiently, and safely
- Efficiently program CPU resources, communications, data passing, and integrated diagnostics
- Design program structures for automation projects

Certification Programs:

Click here for a list of our current Certification Programs.



Virtual Instructor-led Learning

Classroom lectures delivered in the convenience of your home or office

Our Virtual Instructor-led Learning courses give students a live, classroom experience with the convenience and cost savings of remote learning. The courses help build critical skills and knowledge. They provide hands-on instruction and live interaction as effectively as our classroom courses, while being delivered in the comfort of your office or home.

The length of each course varies depending on the content. Most courses are 4 to 5 days per week, and range from 2 to 5 hours per day. These sessions provide students with lecture, demonstration, lab exercises and Q & A presented by a Siemens certified instructor. Students will have 24-hour access to fully functional Siemens software to complete assignments via a virtual cloud-based application.

Virtual Instructor-led courses include:

- Live scheduled lectures and demonstrations
- Live group and individual Q & A session
- Fully functional automation projects using Siemens simulation tools
- Lab exercises and solution reviews
- Student and instructor desktop sharing
- Access to recorded lectures

All digital product offerings

To view the schedule, please visit:
https://www.sitrain.us/LMS/Online.aspx

- Online Self-paced technology and safety library
- Virtual Instructor-led courses build foundation knowledge with flexibility
- How-to Video Library offers task-based 1-5 minute videos

Visit *https://www.sitrain.us/LMS/VirtualInstructorLed.aspx* to view all Virtual Instructor-led learning.

Classroom Learning

Expert and professional instructors, proven course-ware and quality workstations combine for the most effective classroom experience possible

Studies indicate that when students practice what they have learned in a classroom setting they will retain 75% of the lesson, as compared with lecture-only settings where they retain just 20% of the lesson. Designed to mimic real-world environments, Siemens simulator workstations provide a safe and risk-free platform for job training, project testing, design engineering, and troubleshooting.

Our learning content is reviewed and approved by Siemens technical and operational experts to ensure compliance with the highest industry, health, safety, and environmental standards. For more information visit usa.siemens.com/sitrain.

We combine technology and industry experience to deliver highly effective, customized learning programs.

- Job targeted courses
- Hands-on learning and skill building
- System-level training approach
- Extensive schedule of classes
- Various media and course length options
- On-site and custom courses
- Multiple training center locations
- Packaged services and products

Benefits to employees

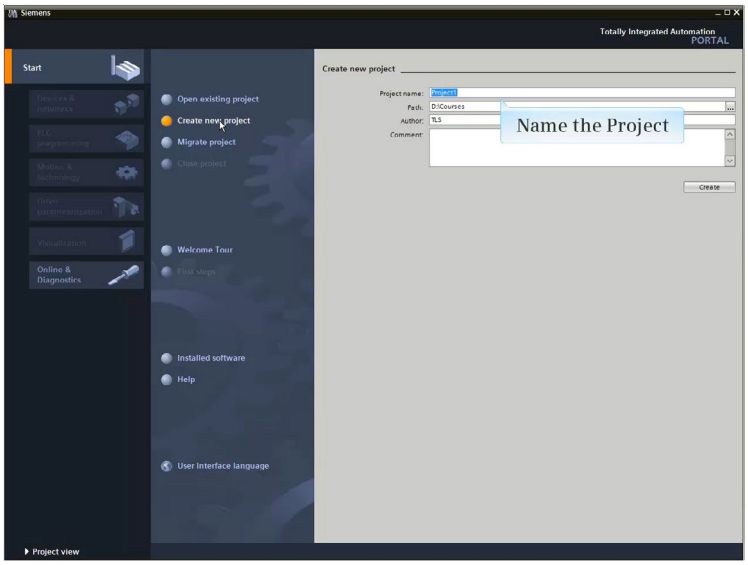
SITRAIN learning programs provide your employees with the opportunity to achieve personal goals, while at the same time, positively impacting your operating and financial goals. Benefits include:

- Increased productivity and efficiency
- Reduced employee turnover
- Decreased downtime and faster error resolution
- Improved safety and risk management
- Flexibility to adopt new technologies/ methods
- Enhanced company image and talent recruiting

How-to **Video Library**

Quick, affordable, performance assist tools that cover a broad range of automation topics

This extensive library of short videos was created by our instructional experts to meet the real-world needs of industry, with all levels of experience in mind. By providing on-demand, how-to instruction in easy-to-understand snippets, the How-to Video Library helps maintain the critical industrial and manufacturing knowlege as well as the skills developed during instructor-led training courses. Videos are typically three-minutes long and conveniently available via any computer or mobile device with Internet access.



Learning begins once you've completed registration

- Start your subscription at any time – videos are available 24/7/365
- Purchase one, three, six or twelve month subscriptions by technology or in one complete bundle
- Take advantage of our most-flexible option – ultimate access with a full, one-year subscription

Want to learn more?

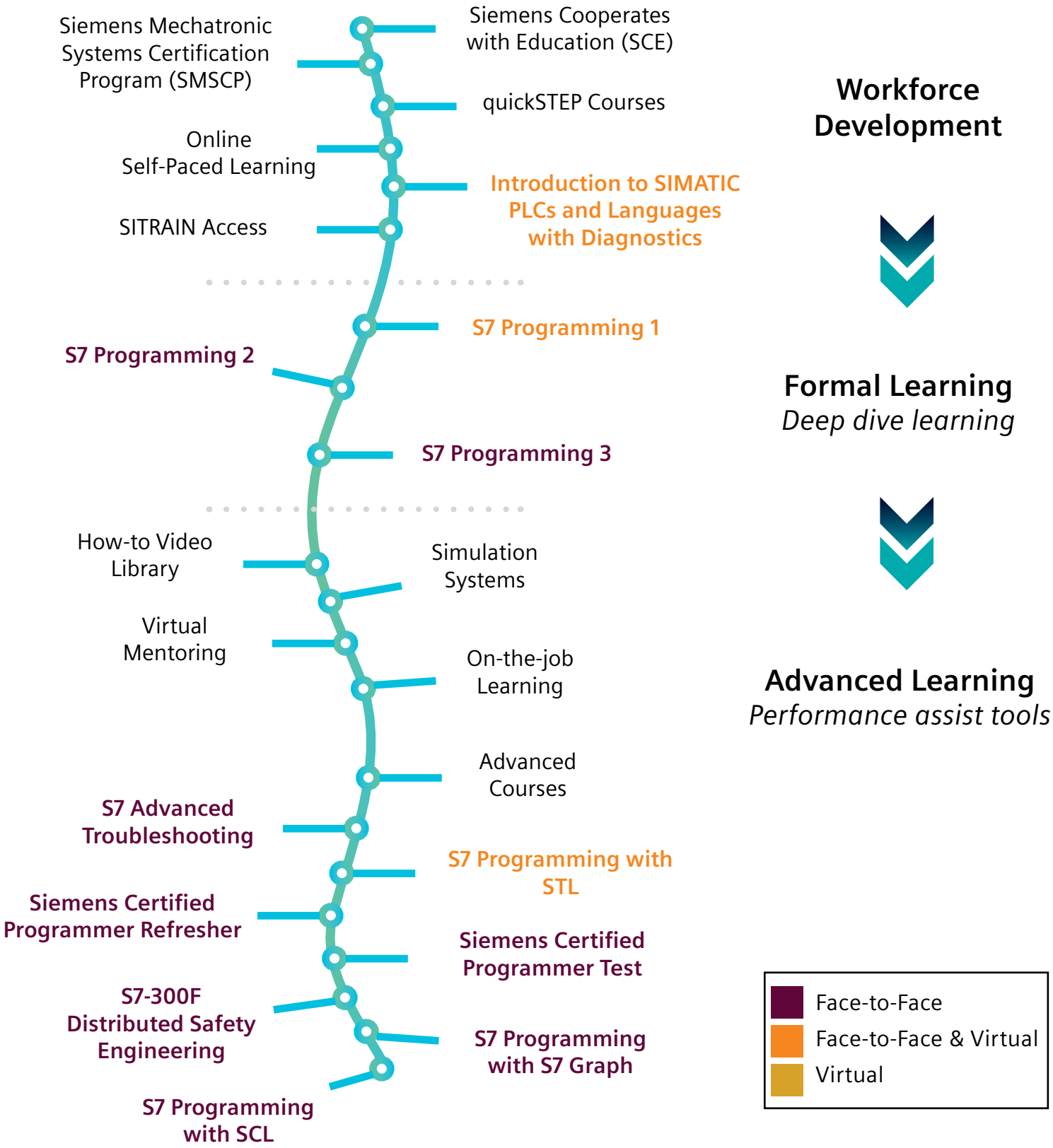
Browse our complete library of How-to Video Library at: https://www.sitrain.us/LMS/HtVL.aspx

How-to Videos

- Automation – SIMATIC S7 with STEP 7 v5.x
- Automation – SIMATIC S7 with TIA Portal
- CNC – SINUMERIK Power Line & Solution Line
- SINAMICS Drives
- Process Control – SIMATIC PCS7
- Even more technology categories are being added this year!

Course offerings and learning paths

Discrete Automation: Engineering Core
S7-300 / S7-400 / STEP 7 V5.X Learning Map



Discrete Automation: Engineering Core
S7-300 / S7-400 / STEP 7 V5.X (cont'd.)

Introduction to SIMATIC PLCs & Languages with Diagnostics

Course code face-to-face: SCT-S7BADIA
Course code virtual: SCT-S7OILBADIA

Target audience
This course is for engineers and maintenance personnel who are new to PLC programming - who will be creating, modifying, or diagnosing hardware issues in S7 PLC systems with SIMATIC STEP 7 software.

Profile
This course is designed to provide the student with core SIMATIC PLC program fundamentals. For learners new to PLC applications, this course is an ideal preparation to the S7 Programming 1 or S7 Automation Maintenance 1 courses. Whether designing a PLC program or Diagnosing hardware issues in a control system, this course builds fundamental skills and confidence in key concepts, navigation, tools, and procedures for a successful continuous learning path. Students needing a solid introduction to the core PLC programming languages will find this a great fit. Three program editors, LAD, FBD and STL are introduced with the primary development and troubleshooting tools. Basic logic development and data memory management complete the curriculum and help the student build skills in PLC program basics.

This is a live, virtual instructor led course delivered in 2-hour learning modules through an innovative web application. Access to fully functional STEP 7 software will be provided through a cloud-based application. Learners are encouraged to complete assigned lab exercises during and after each session to reinforce the learning modules throughout the week. Professional Siemens instructors are available to answer student questions outside of scheduled class times.

Enroll here

S7 Programming 1

Course code face-to-face: SCT-S7TIAP1C
Course code virtual: SCT-S7OILTIAP1C

Target audience
This course is for SIMATIC S7-300/400 PLC users who are involved with developing or sustaining automation systems and their application programs.

Profile
This highly engaging, virtual course is the first in a three-part series which builds basic programming skills using Siemens STEP7 software. Students will learn S7 project management, program design and application development. This is an aggressively paced curriculum covering S7 programming with Ladder logic. The basics of programming with Function Block Diagram (FBD), and Statement List (STL) languages are also covered. Key software tools and best practices techniques are taught. Participants employ the Totally Integrate Automation concept by integrating an S7300 PLC, HMI, ET200S remote I/O station and a desktop conveyor system connected by PROFIBUS.

Throughout this course participants build and manage a STEP7 project from beginning to end, learning proper program structure and documenting. Software diagnostic tools are used for troubleshooting both hardware and code. Various instruction sets, memory areas, program blocks, and libraries are introduced to provide the student with solid concepts of structured programming.

This course employs the current adult learning techniques featuring brief lectures followed by multiple engaging, task-based skills completed in a virtual environment that begin early Monday morning and continue all week long. Access to fully functional STEP7 programming software, a virtual conveyor, and exercises are provided through a cloud-based application.

Instructors verify student skills and sign off on a task completion list throughout the week. At the end of the week, participants complete an independent project to showcase and reinforce the skills they have learned during the week.

Enroll here

Discrete Automation: Engineering Core
S7-300 / S7-400 / STEP 7 V5.X (cont'd.)

S7 Programming 2

Course code face-to-face: SCT-S7TIAP2B

Target audience
This course is for SIMATIC S7-300/400 PLC users with basic engineering experience in the design and sustaining of SIMATIC automation systems and their application programs.

Profile
This course is the second in a three-part series which increases skills with Siemens STEP7 Totally Integrated Automation. Students will learn to leverage the power of SIMATIC software with advanced structured programming techniques. A systems approach to the integration of efficiently programming the S7300/400 PLCs, plus connectivity and functionality of an HMI and Micro Master Drive are the central focus of this course. Emphasis on Statement List (STL) programming for both direct and indirect addressing is an integral part of the course.

The core issues of efficient use of CPU resources, establishing communications, passing information, and managing integrated diagnostics are included. Skills in error management and extended diagnostics are reinforced throughout this agenda. This course includes classroom instruction, demonstration and considerable hands-on lab work.

Enroll here

S7 Programming 3

Course code face-to-face: SCT-S7TIAP3B

Target audience
This course is for advanced SIMATIC S7-300/400 users who are involved with developing or maintaining automation systems and their control applications.

Profile
This course builds advanced skills in control system programming in a control systems environment. Workstations will include the S7 PLC, Touch Panel HMI, Drive system and both PROFIBUS and Ethernet networks. Students will be challenged with a number of advanced programming techniques including data management routines, advanced system functions, new program efficiency tools and error handling. Advanced level blocks, functions, tools and libraries are discussed and demonstrated. In addition, students will learn systems integration techniques which build efficiency in control systems management. Students will perform basic configurations and integration of the HMI and Drive systems maximizing system efficiency and diagnostics. The course concludes with a brief review of Siemens optional program editors and engineering tools.

The course format consists of instruction and hands-on exercises. Students will use advanced software tools of STEP7 to complete the troubleshooting, commissioning, advanced programming and system integration labs.advantages.

Enroll here

S7 Advanced Troubleshooting

Course code face-to-face: SCT-S7TIATBL

Target audience
This course is for experienced SIMATIC S7-300/400 PLC Maintenance Technicians, Service Technicians, and Service Engineers. Learners will expand their knowledge in diagnostic troubleshooting using Siemens STEP7 Totally Integrated Automation Software.

Profile
This is an advanced course focused on diagnostic troubleshooting using Siemens STEP7 Totally Integrated Automation Software. Learners will expand their knowledge on how to troubleshoot, diagnose, and repair programming and hardware configuration issues within Siemens S7300/400 PLC's. This course includes classroom instruction, demonstration, and considerable hands-on lab work.

Enroll here

Discrete Automation: Engineering Core
S7-300 / S7-400 / STEP 7 V5.X (cont'd.)

S7 Programming with Statement List (STL)

Course code face-to-face: SCT-S7STLP2B
Course code virtual: SCT-S7OILSTLP2C

Target audience
This course is intended for SIMATIC S7-300/400 PLC users with basic programming experience in designing and sustaining SIMATIC automation systems and associated Statement List application programs.

Profile
The Statement List programming course is designed to provide participants with STL programming skills using a blended learning approach utilizing classroom lecture, instructor demonstration and hands-on tasks. These tasks increase Siemens STEP7 Totally Integrated Automation (TIA) skills through the creation of a Siemens TIA project.

This course reviews S7 programming concepts and structures. Each option is detailed using advanced programming structures. Multiple addressing methods and special program control instructions are covered, presenting the student with even more flexibility in programming.

Students should have a solid working knowledge of STEP7, SIMATIC Manager and the basic diagnostics and editor tools. This course provides comparisons of program elements and basic program code examples in STL and traditional Ladder Logic (LAD). This course reviews the most typical program elements used with their STL representation. This course does not cover program design strategy of programming best practices but provides multiple examples of program code segments written in STL.

The course format consists of equal parts instruction and hands-on exercises

Enroll here

Siemens Certified Programmer Refresher

Course code face-to-face: SCT-S7TIAR3A

Target audience
This course is intended for experienced STEP 7 programmers seeking a Siemens Certification which is recognized globally. This refresher course will help prepare the participant for the Siemens Certified Programmer Certification Test.

Profile
This hands-on, instructor led course provides a focused review and skills refresher of topics taught in TIA Programming 1, 2, and 3 courses. This refresher is intended to prepare the student for the Siemens Certified Programmer Test, course code SCT-S7TIAC3A. The certification test is conducted separately from the refresher course and is typically scheduled on the day following the refresher course.

Enroll here

Siemens Certified Programmer – Test

Course code face-to-face: SCT-S7TIAC3A

Target audience
This Siemens Programmer Certification Test is intended for experienced STEP 7 programmers who have met the prerequisites below and have applied skills.

Profile
This is a comprehensive performance test designed to assess the skills of a PLC (Programmable Logic Controller) programmer applicant for Siemens PLC systems.

This is a practical, skills-based certification test covering topics taught during TIA Programming 1, 2, and 3. It is recommended that the student attend the "Siemens Certified Programmer Refresher" in preparation for the test (course code SCT-S7TIAR3A). Students will be provided a set of programming tasks and are expected to demonstrate skills and best practices.

Enroll here

Discrete Automation: Engineering Core
S7-300 / S7-400 / STEP 7 V5.X (cont'd.)

S7-300F Distributed Safety Engineering

Course code face-to-face: SCT-S7SFTE1A

Target audience
This course is for engineers and personnel responsible for implementing SIMATIC Distributed Safety systems.

Profile
This course introduces the student to a Siemens Distributed Safety PLC application. Participants receive knowledge on applying the system per relevant standards, Failsafe Hardware Module details and parameterization, Safety Program structure and implementation, Safety Communications, System Diagnostics, and introduction to Drive Safety.

The course format is a combination of instruction and hands-on exercises. A realistic model is used for demonstrations and student exercises. Exercises allow students to practice tasks such as configuration, programming, and code debugging .The student take-away from this course is a USB containing all course content. The USB is used throughout the course delivery.

Enroll here

S7 Programming with S7 Graph

Course code face-to-face: SCT-S7GPHP1A

Target audience
This course is for SIMATIC S7-300/400 PLC users involved in developing or sustaining automation systems that use of S7Graph.

Profile
This course concentrates on the S7 GRAPH programming language with a review of the S7 block architecture focusing on the Function Block and the Instance Data Block. The STEP 7 software tools and S7 GRAPH programming element's structure are introduced within the course to guide the student through the development of a realistic application. The use of test, debug and diagnostic tools complete the programming exercises. The course is a combination of instruction and hands-on exercises.

Enroll here

S7 Programming with SCL

Course code face-to-face: SCT-S7SCLP1A
Course code virtual: SCT-S7OILSCLP1A

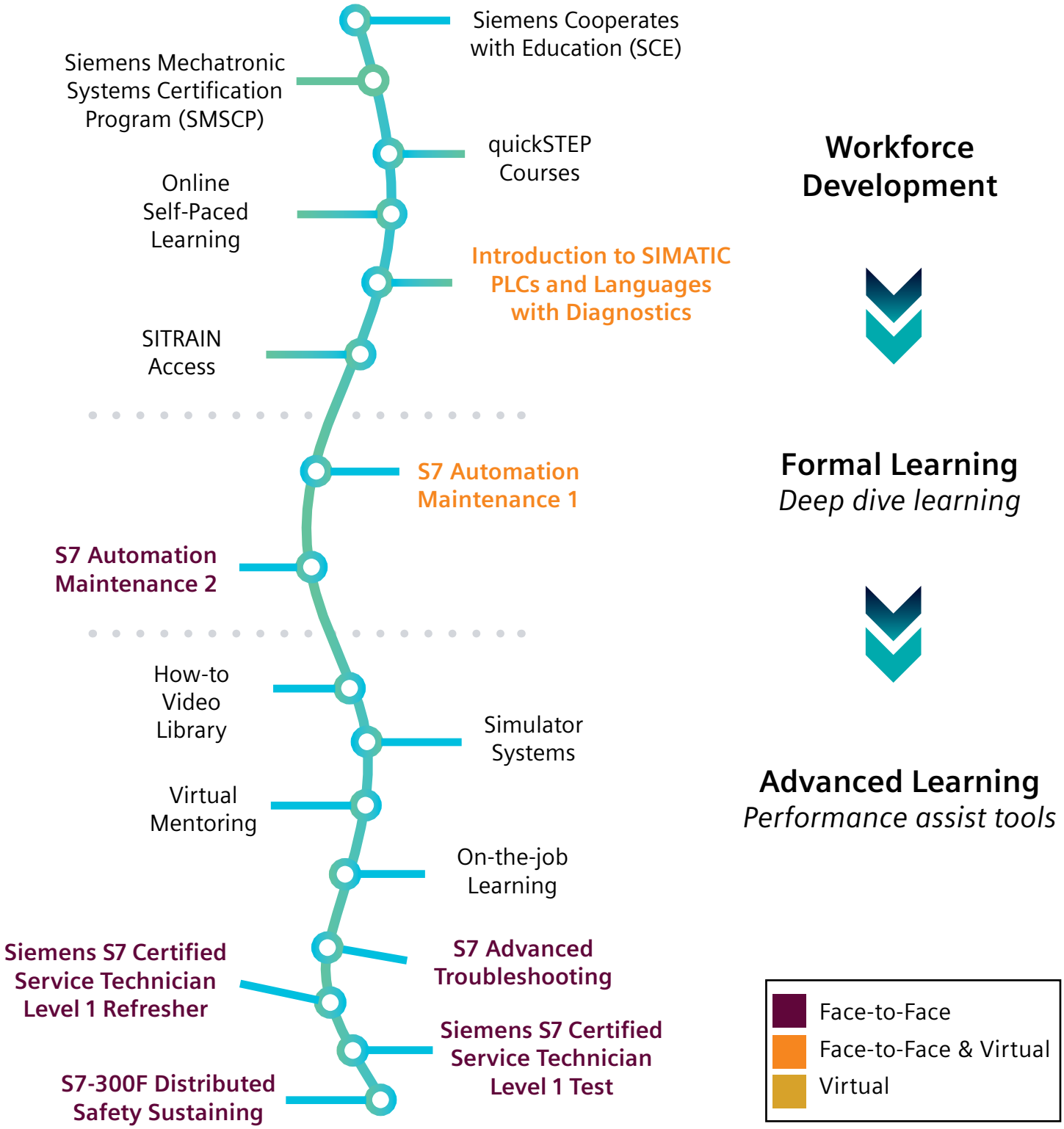
Target audience
This course is for engineering and maintenance personnel, who create, diagnose and troubleshoot SIMATIC STEP7 applications with Structured Control Language (SCL) content.

Profile
This course provides an in depth look at STEP7 programming and program troubleshooting with a focus on the Structured Control Language (SCL) - a PASCAL- similar high level text language for programming mathematical algorithms, data management and organization tasks for Siemens automation systems.

Students should have a solid working knowledge of STEP7, SIMATIC Manager and the basic diagnostics and editor tools. This is a hands-on course filled with programming exercises in SCL. Students will use advanced software tools of STEP7 including PLCSIM to complete system integration programming, troubleshooting, and functional testing of applications.

Enroll here

Discrete Automation: Maintenance
S7-300 / S7-400 / STEP 7 V5.X Learning Map



Discrete Automation: Maintenance
S7-300 / S7-400 / STEP 7 V5.X (cont'd.)

Introduction to SIMATIC PLCs & Languages with Diagnostics

Course code face-to-face: SCT-S7BADIA
Course code virtual: SCT-S7OILBADIA

Target audience
This course is for engineers and maintenance personnel who are new to PLC programming - who will be creating, modifying, or diagnosing hardware issues in S7 PLC systems with SIMATIC STEP 7 software.

Profile
This course is designed to provide the student with core SIMATIC PLC program fundamentals. For learners new to PLC applications, this course is an ideal preparation to the S7 Programming 1 or S7 Automation Maintenance 1 courses. Whether designing a PLC program or Diagnosing hardware issues in a control system, this course builds fundamental skills and confidence in key concepts, navigation, tools, and procedures for a successful continuous learning path. Students needing a solid introduction to the core PLC programming languages will find this a great fit. Three program editors, LAD, FBD and STL are introduced with the primary development and troubleshooting tools. Basic logic development and data memory management complete the curriculum and help the student build skills in PLC program basics.

This is a live, virtual instructor led course delivered in 2-hour learning modules through an innovative web application. Access to fully functional STEP 7 software will be provided through a cloud-based application. Learners are encouraged to complete assigned lab exercises during and after each session to reinforce the learning modules throughout the week. Professional Siemens instructors are available to answer student questions outside of scheduled class times.

Enroll here

S7 Automation Maintenance 1

Course code face-to-face: SCT-S7300S1C
Course code virtual: SCT-S7OIL300S1C

Target audience
This course is the first of a two-part series designed for maintainers and “first responders” to Siemens S7 automated control systems. Maintenance technicians, electricians, supervisors and others, who need to develop active skills using their Siemens Hardware system, should attend this course to maximize line uptime. This course also provides a great platform for those new to automation systems and state-of-the-art industrial electronics.

Profile
Automation Maintenance 1 is a new course designed using Performance-Based Learning strategy which adopts current Adult Learning and Development standards and practices.

The result is a course with well-defined performance-based learning objectives that emphasizes task-based assessments of student performance. To successfully complete each module in the course, a student must demonstrate his/her ability to perform a specific automation task demonstrating the application of automation knowledge and skills.

Brief instructor led discussions followed by numerous hands-on exercises using a Totally Integrated Automation (TIA) plant model develop and reinforce practical experience. The TIA plant model consists of an S7-300 automation system, ET200S distributed I/O station, SIMATIC HMI Touch Panel, and a working conveyor model.

Students perform visual and multi-meter wire checks, hardware component diagnostics and troubleshooting as well as equipment replacement and restoring a failed PLC system to a normal operating state. Upon completion of the course, maintenance technicians should be able to establish communications to a Siemens PLC system, diagnose, troubleshoot, and restore basic faults on an S7 hardware system, reducing costly downtimes. This course offers 60% hands-on lab time and 40% lecture/discussion/Q and A.

Modular in design, this course is fully customizable for those interested in on-site training. Topics are designed for adjustments to meet plant specific needs. Call 1.800.241.4453 for more details.

Enroll here

Discrete Automation: Maintenance
S7-300 / S7-400 / STEP 7 V5.X (cont'd.)

S7 Automation Maintenance 2

Course code face-to-face: SCT-S7300S2C

Target audience
This course is the second of a two-part series designed for maintainers of and "first responders" to Siemens S7 automated control systems. Maintenance technicians, electricians, and supervisors who need to develop active skills using their Siemens hardware system, should attend this course to maximize process uptime. This course also provides a great platform for those new to automation systems and state-of-the-art industrial electronics.

Profile
Automation Maintenance 2 is a new course designed for using Performance-Based Learning strategy which adopts current Adult Learning and Development standards and practices. The result is a course with well-defined performance-based learning objectives that emphasizes task-based assessments of student performance. To successfully complete each module in the course, a student must demonstrate his/her ability to perform a specific automation task demonstrating the application of automation knowledge and skills.

Automation Maintenance 2 is a course designed with brief instructor led discussions followed by numerous hands-on exercises using a Totally Integrated Automation (TIA) plant model to develop and reinforce practical experience. The TIA plant model consists of an S7-300 automation system, ET200S and ET200pro distributed I/O stations, SIMATIC HMI Touch Panel, and a working conveyor model, all communicating over PROFINET.

Students perform hardware and software diagnostics and troubleshooting as well as restoring a faulted PLC system to a normal operating state. This course builds on the knowledge obtained in Automation Maintenance 1 (SCT-S7300S1C) and offers 60% hands-on lab time and 40% lecture/discussion/Q and A.

Enroll here

S7 Advanced Troubleshooting

Course code face-to-face: SCT-S7TIATBL

Target audience
This course is for experienced SIMATIC S7-300/400 PLC Maintenance Technicians, Service Technicians, and Service Engineers. Learners will expand their knowledge in diagnostic troubleshooting using Siemens STEP7 Totally Integrated Automation Software.

Profile
This is an advanced course focused on diagnostic troubleshooting using Siemens STEP7 Totally Integrated Automation Software. Learners will expand their knowledge on how to troubleshoot, diagnose, and repair programming and hardware configuration issues within Siemens S7300/400 PLC's. This course includes classroom instruction, demonstration, and considerable hands-on lab work.

Enroll here

Siemens S7 Certified Service Technician Level 1 Refresher

Course code face-to-face: SCT-S7SVCR1A

Target audience
This course is intended for experienced STEP 7 programmers seeking a Siemens Certification which is recognized globally. This refresher course will help prepare the participant for the Siemens Certified Programmer Certification Test.

Profile
This hands-on, instructor led course provides a focused review and skills refresher of topics taught in TIA Programming 1, 2, and 3 courses. This refresher is intended to prepare the student for the Siemens Certified Programmer Test, course code SCT-S7TIAC3A. The certification test is conducted separately from the refresher course and is typically scheduled on the day following the refresher course.

Enroll here

Discrete Automation: Maintenance
S7-300 / S7-400 / STEP 7 V5.X (cont'd.)

Siemens S7 Certified Service Technician Level 1 - Test

Course code face-to-face: SCT-S7SVCT1A

Target audience
This Siemens Programmer Certification Test is intended for experienced STEP 7 programmers who have met the prerequisites below and have applied skills.

Profile
This is a comprehensive performance test designed to assess the skills of a PLC (Programmable Logic Controller) programmer applicant for Siemens PLC systems.

This is a practical, skills-based certification test covering topics taught during TIA Programming 1, 2, and 3. It is recommended that the student attend the "Siemens Certified Programmer Refresher" in preparation for the test (course code SCT-S7TIAR3A). Students will be provided a set of programming tasks and are expected to demonstrate skills and best practices.

Enroll here

S7-300F Distributed Safety Sustaining

Course code face-to-face: SCT-S7SFTS1A

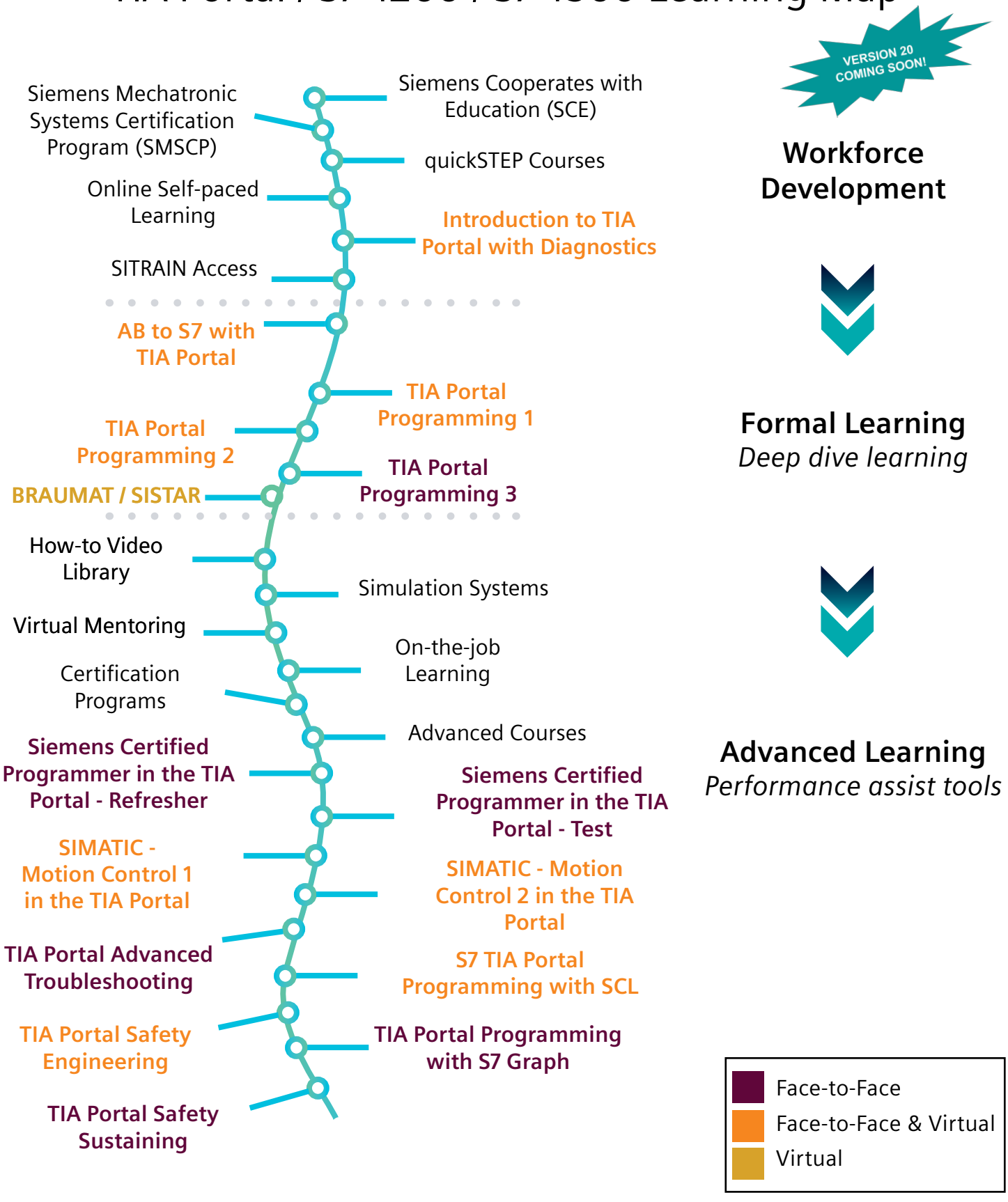
Target audience
This course is for SIMATIC S7 300F PLC users who install or maintain automation safety systems and their application programs.

Profile
This course introduces the student to a Siemens Distributed Safety PLC application. Participants will build skills on commissioning, troubleshooting and upgrading an automation safety system. Failsafe Hardware Module details and parameterization, Safety Program structure and implementation, and System Diagnostics are covered.

The course format is a combination of instruction and hands-on exercises. A realistic model is used for demonstrations and student exercises. Exercises allow students to practice tasks such as testing, debugging and using diagnostic tools.

Enroll here

Discrete Automation: Engineering Core
TIA Portal / S7-1200 / S7-1500 Learning Map



Discrete Automation: Engineering Core
TIA Portal S7-1200 / S7-1500 (cont'd.)

Bridging STEP 7 5.x to TIA Portal Programming

Course code face-to-face: SCT-PTTIAU2B
Course code virtual: SCT-PTOILTIAU2B

Target audience
This course "bridges" STEP 7 Version 5.x knowledge over to SIMATIC S7 TIA PORTAL. The fast-paced curriculum is designed for the experienced Version 5.X users who are, or will be, involved with developing or sustaining TIA PORTAL projects. The course is designed for both Engineering and Maintenance personnel with current working knowledge using Ver. 5.x STEP 7 environment, programming tools, and troubleshooting techniques.

Profile
The goal of this course is to provide experienced users, familiar with the Ver. 5.x STEP 7 environment, programming tools, and troubleshooting techniques with the "Level 2" TIA Portal System knowledge and skills. *The course begins with a brief overview of the latest SIMATIC S7-1200 and S7-1500 systems followed by in-depth discussions and hands-on exercises covering, Engineering Software Framework, Network configuration, Distributed I/O, PLC Tagging, HMI, Troubleshooting, and Integrating and Commissioning a Drive.

The course will cover using the TIA Portal and Project tools to efficiently build a system project. The key Portal tasks include Devices and Networks, PLC Programming, Visualization, Online Diagnostics, and Drive Commissioning. The key Project tasks include navigating and understanding where to locate the proper tools/editors, working with the editors, and the latest configuration and troubleshooting methods. Throughout this course participants build and utilize STEP7 projects. Software diagnostic tools will be used for debugging. Program creation will involve using various instruction sets, memory areas, program blocks, SCL, and library functionality. HMI screens for control and display will also be developed. Upon successful completion of this course, participants may enroll in the TIA Portal Programming 2 course.

Enroll here

Introduction to TIA Portal with Diagnostics

Course code face-to-face: SCT-PTBADIA
Course code virtual: SCT-PTOILBADIA

Target audience
This course is for engineers and maintenance personnel who are new to SIMATIC S7 PLCs and who will be creating, modifying, and doing hardware diagnostics on S7 PLC systems using SIMATIC TIA Portal software.

Profile
This course is an introduction to the TIA Portal Development Environment and is an ideal preparation for the TIA Portal Programming 1 or TIA Portal Service 1 courses. This course helps students unlock the potential for increased productivity by building foundational concepts and diagnostic skills. Students will learn how to apply those skills to create or open existing projects, navigate work screens and informational cross referencing, identify CPU and I/O hardware specifications, and conduct initial hardware diagnostics in TIA Portal.

This is a live instructor led on-line course delivered in 2-hour learning modules through the web. Access to fully functional TIA Portal software is provided through a cloud-based application. Students are encouraged to complete assigned lab exercises during and after each session to reinforce the learning modules throughout the week. Professional Siemens instructors are available to answer student questions outside of scheduled class times.

Enroll here

Discrete Automation: Engineering Core
TIA Portal S7-1200 / S7-1500 (cont'd.)

TIA Portal Programming 1

Course code face-to-face: SCT-PTTIAP1A
Course code virtual: SCT-PTOILTIAP1A

Target audience
This virtual course is for SIMATIC S7-1500, S7-1200, S7-300, and S7-400, PLC users who are involved with developing or sustaining automation systems and their application programs..

Profile
This course is the first in a three-part series which builds basic programming skills with Siemens STEP7 TIA Portal software. Students will learn S7 project management, program design and application development. This aggressively paced curriculum covers the S7 programming editor with Ladder, Function Block Diagram, and Statement List, programming languages, as well as key software tools. This course takes a systems approach using the S7- 1500 PLC, plus basic connectivity, and functionality of an KP700 HMI and ET200SP, PROFINET I/O.

During the virtual session, students will build a STEP7 project from the beginning, learning proper program structure and documenting. Software diagnostic tools will be used for debugging both hardware and code. Various instruction sets, memory areas, program blocks, and libraries will be introduced to provide the student with solid concepts of structured programming.

The course format consists of instruction and exercises. Access to fully functional TIA Portal programming software, a virtual conveyor, and exercises are provided through a cloud-based application.

Enroll here

TIA Portal Programming 2

Course code: SCT-PTTIAP2A
Course code virtual: SCT-PTOILTIAP2A

Target audience
This course is for SIMATIC S7-1500 and S7-1200 PLC's users with basic engineering experience in the design and sustaining of SIMATIC automation systems and their application programs.

Profile
This course is the second in a three-part series which increases skills with Siemens SIMATIC TIA Portal. Students will learn to leverage the power of TIA Portal software with advanced structured programming techniques. A systems approach to efficiently programming the S7-1500 and S7-1200 PLC's is covered. Integration and connectivity of PROFINET IO, HMI, and G120 Drive are the central focus of this course. Programming emphasis centers on Ladder (LAD), and Statement List (STL) logic, with an introduction to Structured Control Language (SCL), and S7-GRAPH. Both direct and indirect addressing are an integral part of the course.

The core issues of efficient use of CPU resources, establishing communications, passing information, and managing integrated diagnostics are included. Skills in error management and extended diagnostics are reinforced throughout this agenda. This course includes classroom instruction, demonstration, and considerable hands-on lab work.

Enroll here

TIA Portal Programming 3

Course code face-to-face: SCT-PTTIAP3A

Target audience
This course is for SIMATIC S7-1500 and S7-1200 PLC users with basic engineering experience in the design and sustaining of SIMATIC automation systems and their application programs.

Profile
This course is the third in a three-part series which increases advanced skills with Siemens SIMATIC TIA Portal. Students will learn to leverage the power of TIA Portal software with advanced structured programming techniques. A systems approach to efficiently programming the S7-1500 and S7-1200 PLC's is covered in the training criteria. Students will expand their knowledge regarding the reusability of TIA Portal blocks and their storage in user libraries, while gaining an introduction to programming languages which include statement list (STL), Structured Control Language (SCL), and S7-GRAPH.The core issues of efficient use of CPU resources, establishing communications, passing information, and managing integrated diagnostics are included in this course criteria. This course includes classroom instruction, demonstration, and considerable hands-on lab work.

Enroll here

Discrete Automation: Engineering Core
TIA Portal S7-1200 / S7-1500 (cont'd.)

Siemens Certified Programmer, in the TIA Portal, Refresher

Course code face-to-face: SCT-PTTIAR1A

Target audience
This course is intended for experienced TIA Portal programmers seeking a Siemens Certification which is recognized globally. This refresher course will help prepare the participant for the Siemens Certified Programmer, in the TIA Portal, Certification Test.

Profile
This hands-on, instructor led course provides a focused review and skills refresher of topics taught in TIA Portal Programming 1, 2, and 3 courses. This refresher is intended to prepare the student for the Siemens Certified Programmer Test, course code SCT-PTTIAC1A. The certification test is conducted separately from the refresher course and is typically scheduled on the day following the refresher course.

Enroll here

Siemens Certified Programmer, in the TIA Portal - Test

Course code face-to-face: SCT-PTTIAC1A

Target audience
This Siemens TIA Portal Programmer Certification Test is intended for experienced TIA Portal programmers who have met the prerequisites below and have applied skills.

Profile
This is a comprehensive performance test designed to assess the skills of a PLC (Programmable Logic Controller) programmer applicant for Siemens PLC systems.

This is a practical, skills-based certification test covering topics taught during TIA Programming 1, 2, and 3. It is recommended that the student attend the "Siemens Certified Programmer Refresher" in preparation for the test (course code SCT-S7TIAR3A). Students will be provided a set of programming tasks and are expected to demonstrate skills and best practices.

Enroll here

SIMATIC – Motion Control 1 in the TIA Portal

Course code face-to-face: SCT-PTTIAMC1A
Course code virtual: SCT-PTOILTIAMC1A

Target audience
This virtual course is for Programming and/or Commissioning Engineers who are responsible for maintaining systems with Siemens motion-based control systems.

Profile
In this technology course taught virtually, attendees will program the SIMATIC S7-1500 or S7-1200 controllers in the TIA Portal. They will be able to precisely control the motion of axes with the integrated motion control functions while learning step by step the benefits and use of these functions.

After each learning step, attendees will deepen their knowledge through hands-on programming. After attending the course, they will understand the interaction of the technological functions. Each learner will be able to select and configure appropriate technology objects, such as speed axis, positioning axis and synchronous axis, as well as, integrate them into the program.

During the course, access to fully functional software, virtual tools, and exercises are provided to each participant through a cloud-based application.

SPECIAL NOTE: The motion control function of standard CPUs is seamlessly extended with technology CPUs. In the SCT-PTTIAMC2A course, learners will work with the T-CPU and learn the benefits of functions such as absolute synchronous operation and camming.

Enroll here

Discrete Automation: Engineering Core
TIA Portal S7-1200 / S7-1500 (cont'd.)

SIMATIC – Motion Control 2 in the TIA Portal

Course code face-to-face: SCT-PTTIAMC2A
Course code virtual: SCT-PTOILTIAMC2A

Target audience
This virtual course is for Programming and/or Commissioning Engineers who are responsible for maintaining systems with Siemens motion-based control systems.

Profile
Using the motion control functions of the SIMATIC S7-1500 technology CPU, the learner will be able to extend applications with absolute synchronous axes or camming.

In this technology course taught virtually, attendees learn step by step the benefits and use of these functions. After learning each step, attendees will deepen their knowledge through virtual programming exercises.

During the course, access to fully functional software, virtual tools, and exercises are provided to each participant through a cloud-based application.

After completing the course, the learners understand how camming works and can efficiently assign parameters for technology objects.

Enroll here

TIA Portal Advanced Troubleshooting

Course code face-to-face: SCT-PTTIATBL

Target audience
This course is for experienced TIA Portal-1200/1500 PLC Maintenance Technicians, Service Technicians, and Service Engineers. Learners will expand their knowledge in diagnostic troubleshooting using Siemens TIA Portal Totally Integrated Automation Software.

Profile
This is an advanced course focused on diagnostic troubleshooting using Siemens TIA Portal Totally Integrated Automation Software. Learners will expand their knowledge on how to troubleshoot, diagnose, and repair programming and hardware configuration issues within Siemens 1200/1500 PLC's. This course includes classroom instruction, demonstration, and considerable hands-on lab work.

Enroll here

S7 TIA Portal Programming with SCL

Course code face-to-face: SCT-PTSCLP3A
Course code virtual: SCT-PTOILSCLP3A

Target audience
This course is for engineering and maintenance personnel, who create, diagnose and troubleshoot SIMATIC TIA Portal applications with Structured Control Language (SCL) content.

Profile
This course provides an in depth look at STEP7 programming and program troubleshooting with a focus on the Structured Control Language (SCL) - a PASCAL-similar high level text language for programming mathematical algorithms, data management and organization tasks for Siemens automation systems.

Students should have a solid working knowledge of STEP7, TIA Portal and the basic diagnostics and editor tools. This is a hands-on course filled with programming exercises in SCL. Students will use advanced software tools of TIA Portal including PLCSIM to complete system integration programming, troubleshooting, and functional testing of applications.

This is a live, instructor led, on-line course delivered in 2 hour learning modules through an innovative web application. Access to fully functional TIA Portal software will be provided to the student through a cloud based application. Students are encouraged to complete assigned lab exercises during and after each session to reinforce the learning modules throughout the week. A professional Siemens instructor will also be available to answer student questions outside of scheduled class times.

Enroll here

Discrete Automation: Engineering Core
TIA Portal S7-1200 / S7-1500 (cont'd.)

TIA Portal Safety Engineering

Course code face-to-face: SCT-PTSFTE1A
Course code virtual: SCT-PTOILSFTE1A

Target audience
This course is for engineers and personnel responsible for implementing and maintaining SIMATIC S7 TIA Portal Distributed Safety systems.

Profile
This course introduces the student to a Siemens Distributed Safety PLC application. Participants receive knowledge on applying the system per relevant standards, Failsafe/PROFIsafe settings, operation, Hardware Module details and parameterization, Safety Program structure and implementation, Safety Communications, System Diagnostics and introduction to Drive Safety.

The course format is a combination of instruction and hands-on exercises. A realistic model is used for demonstrations and student exercises. Hardware is simulated using PLCSIM Advanced and a virtual Safety Trainer. Exercises allow students to practice tasks such as configuration, programming, and code debugging.

Enroll here

AB to S7 with TIA Portal

Course code face-to-face: SCT-PTABSP1A
Course code virtual: SCT-PTOILABSP1A

Target audience
This course is for experienced AB programmers interested in an advanced training on Siemens SIMATIC S7 PLC family and STEP7 engineering software.

Profile
This virtual course acknowledges the automation experience of the students and delivers must-know, advanced topics to experienced engineers interested in Siemens SIMATIC STEP 7 TIA Portal software. This course moves engineers / programmers quickly into the power of the STEP 7 TIA Portal engineering tool. Multiple STEP 7 program editors are presented demonstrating the flexibility and fully integrated features of STEP 7.

The course teaches Siemens STEP7 Software recognizing the previous experience students have with Allen-Bradley platforms. The instructor has familiarity with AB platforms and software from which they directly relate to the questions and experiences of students in the class.

This course concentrates on STEP 7 software, program structures, System Functions, advanced block libraries and custom block design. STEP 7 engineering tools and programming instructions are demonstrated to guide the student through the development of a realistic application. The course format consists of instruction, demonstration, and hands-on exercises. Students utilize test, debug and diagnostic tools to complete extensive programming exercises.

Access to fully functional software, virtual tools, and exercises are provided to each participant through a cloud-based application.

Enroll here

Discrete Automation: Engineering Core
TIA Portal S7-1200 / S7-1500 (cont'd.)

TIA Portal Programming with S7 Graph

Course code face-to-face: SCT-PTGPHP1A

Target audience
This course is for SIMATIC S7-1500 PLC users involved in developing or sustaining automation systems that use of S7Graph.

Profile
This course concentrates on the S7 GRAPH programming language, with a review of the S7 block architecture focusing on the Function Block and the Instance Data Block. The STEP 7 TIA Portal software tools and S7 GRAPH programming element's structure are introduced within the course to guide the student through the development of a realistic application. The use of test, debugging, and diagnostic tools complete the programming exercises. The course is a combination of instruction and hands-on exercises.

Enroll here

TIA Portal Safety Sustaining

Course code face-to-face: SCT-PTSFTP2A

Target audience
This course is for SIMATIC S7 TIA Portal PLC users who install or maintain automation safety systems and their application programs.

Profile
This course introduces the student to a Siemens Distributed Safety PLC application. Participants build skills on commissioning, troubleshooting and upgrading an automation safety system. Functional safety principles, sensor-actuator connections, device configuration of the S7-1500F and

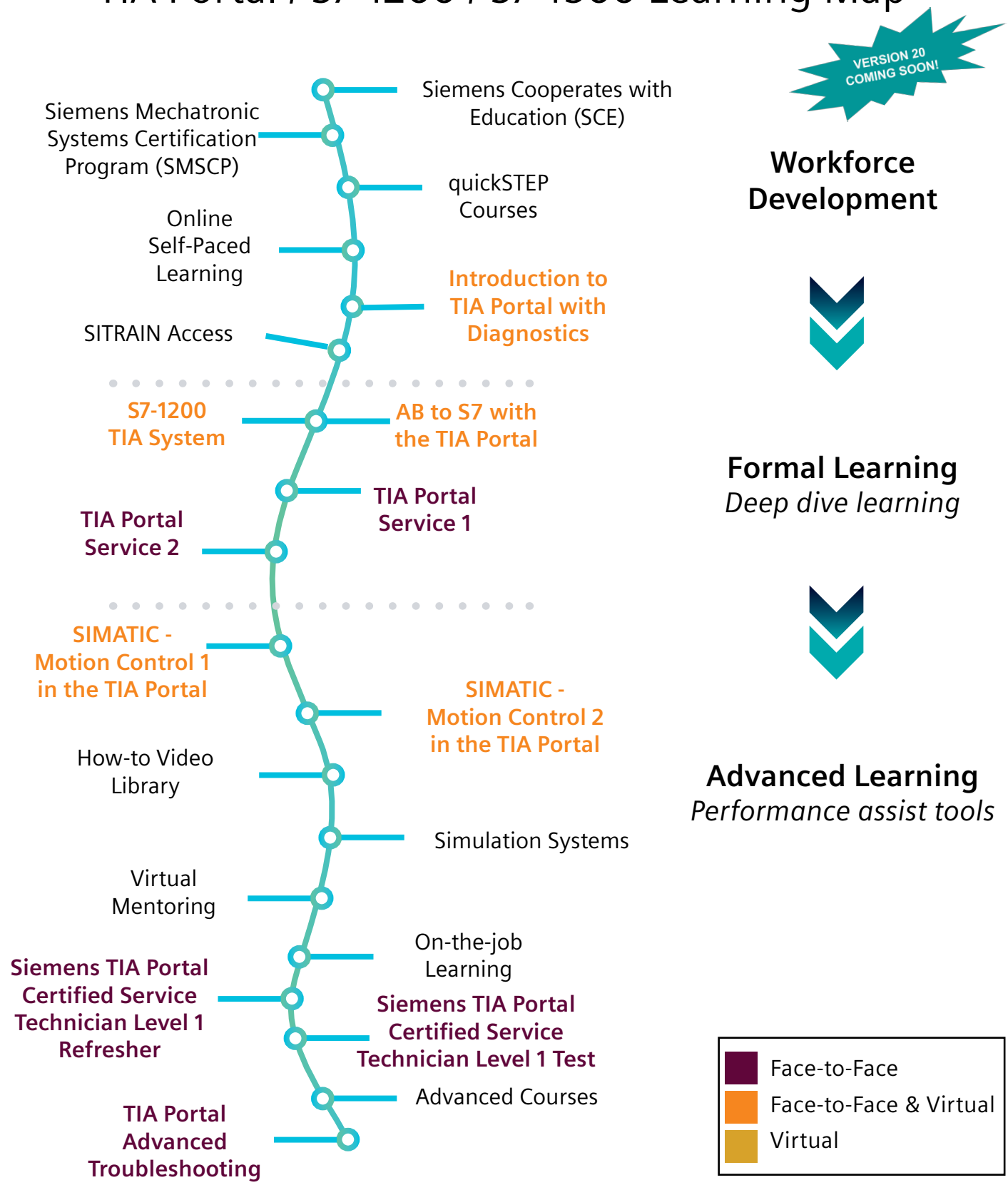
ET 200SP are covered, as well as, PROFIsafe settings and operation, restoring the system and programming the safety blocks.

The course format is a combination of instruction and hands-on exercises. A realistic model is used for demonstrations and student exercises. Exercises allow students to practice tasks such as testing, debugging and using diagnostic tools.

Enroll here

Discrete Automation: Maintenance

TIA Portal / S7-1200 / S7-1500 Learning Map



Discrete Automation: Maintenance
TIA Portal S7-1200 / S7-1500 (cont'd.)

Introduction to TIA Portal with Diagnostics

Course code face-to-face: SCT-PTBADIA
Course code virtual: SCT-PTOILBADIA

Target audience
This course is for engineers and maintenance personnel who are new to SIMATIC S7 PLCs and who will be creating, modifying, and doing hardware diagnostics on S7 PLC systems using SIMATIC TIA Portal software.

Profile
This course is an introduction to the TIA Portal Development Environment and is an ideal preparation for the TIA Portal Programming 1 or TIA Portal Service 1 courses. This course helps students unlock the potential for increased productivity by building foundational concepts and diagnostic skills. Students will learn how to apply those skills to create or open existing projects, navigate work screens and informational cross referencing, identify CPU and I/O hardware specifications, and conduct initial hardware diagnostics in TIA Portal.

This is a live instructor led on-line course delivered in 2-hour learning modules through the web. Access to fully functional TIA Portal software is provided through a cloud-based application. Students are encouraged to complete assigned lab exercises during and after each session to reinforce the learning modules throughout the week. Professional Siemens instructors are available to answer student questions outside of scheduled class times.

Enroll here

S7-1200 TIA System

Course code face-to-face: SCT-S712TP1A
Course code virtual: SCT-S7OIL12TP1A

Target audience
This system course is for SIMATIC S7-1200 PLC users who are involved with developing or sustaining automation systems and their application programs. This course is for users needing advanced programming and configuration skills and who may use the extended system functions.

Profile
The goal of this course is to help the student build skills utilizing in programming and extended system functionality of the S7-1200 system, STEP7 engineering tool and WinCC Basic, Human Machine Interface (HMI).

This course begins with a brief review of the SIMATIC S7-1200 system, its components and the HMI Basic Panels. It then follows with discussions on the integrated engineering system SIMATIC STEP 7 Basic for the controller and WinCC Basic for the HMI.

The course will cover using the Portal and Project tools to efficiently build a system project. The key Portal tasks include: Device and Networks, PLC Programming, Visualization, and Online and Diagnostics. The key Project tasks includes: working with editors and their elements.

This course also covers a primary set of extended functions including process loop control, pulse functions, networking and basic motion control.

Throughout this course students will build a STEP7 project from the beginning. Software diagnostic tools will be used for debugging. Program creation will involve using various instruction sets, memory areas, program blocks, and libraries. HMI screens for control and display will also be developed.

Enroll here

Discrete Automation: Maintenance
TIA Portal S7-1200 / S7-1500 (cont'd.)

TIA Portal Service 1

Course code face-to-face: SCT-PTTIAS1A

Target audience
This course is designed for "first responders" to industry operations utilizing Siemens S7 Automated Control Systems. Maintenance technicians, electricians, supervisors, and others who need an understanding of their Siemens control systems. Service personnel should attend this course to maximize line uptime and keep systems running the way they should. This course also provides a great platform for those new to automation systems and state-of-the-art industrial controls.

Profile
TIA Portal Service 1 teaches the basic S7 system concept, hardware configuration, parameterization, S7 software (SIMATIC TIA Portal) basics, and an overview of programming fundamentals. Human Machine Interface (HMI) and PROFINET IO basics are also included. Numerous hands-on exercises using a Totally Integrated Automation (TIA) plant model to reinforce practical experience and theoretical knowledge. The TIA plant model consists of an S7-1500 automation system, ET200SP distributed I/O, SIMATIC Comfort Panel, and a conveyor model. Students experience and learn TIA Portal concepts and gain an understanding of the relationships between key industrial automation components. Upon completion of the course, students are able to utilize STEP 7 tools and techniques to accurately recognize, diagnose, and remedy control system faults; reducing costly downtimes. Modular in design, this course is fully customizable for those interested in on-site training. Topics are designed for adjustments to meet plant specific needs. Call 1.800.241.4453 for more details. After the course, students seeking extended TIA Portal service skills sets should attend TIA Portal Service 2 course.

Enroll here

TIA Portal Service 2

Course code face-to-face: SCT-PTTIAS2A

Target audience
This course is designed for S7-1500 and S7-1200 PLC users with basic SIMATIC control system knowledge, who install or maintain automation systems and their application programs on the TIA Portal Platform.

Profile
This course consists of instructor led training and hands-on exercises to continue skill development in troubleshooting, diagnostics, and modifying hardware and software components of a SIMATIC control system in TIA Portal. Control System Hardware consists of an S7-1500 rack with ET200SP remote IO, Comfort Panel HMI, G120 Drive, and a moving conveyor system. Participants will use SIMATIC TIA Portal software tools to build new features, diagnostics, and communications into the application project. Program development using organization blocks, system functions, and instruction libraries build software troubleshooting efficiency. Analog signal processing and alarming are included in this application. Configuration and integration of an HMI and Drive system into the student project, gives experience in managing a Totally Integrated Automation (TIA) project. An introduction to Structured Control Language (SCL) and sequence control in SIMATIC S7-GRAPH are included.

Enroll here

Discrete Automation: Maintenance
TIA Portal S7-1200 / S7-1500 (cont'd.)

SIMATIC – Motion Control 1 in the TIA Portal

Course code face-to-face: SCT-PTTIAMC1A
Course code virtual: SCT-PTOILTIAMC1A

Target audience
This virtual course is for Programming and/or Commissioning Engineers who are responsible for maintaining systems with Siemens motion-based control systems.

Profile
In this technology course taught virtually, attendees will program the SIMATIC S7-1500 or S7-1200 controllers in the TIA Portal. They will be able to precisely control the motion of axes with the integrated motion control functions while learning step by step the benefits and use of these functions.

After each learning step, attendees will deepen their knowledge through hands-on programming. After attending the course, they will understand the interaction of the technological functions. Each learner will be able to select and configure appropriate technology objects, such as speed axis, positioning axis and synchronous axis, as well as, integrate them into the program.

During the course, access to fully functional software, virtual tools, and exercises are provided to each participant through a cloud-based application.

SPECIAL NOTE: The motion control function of standard CPUs is seamlessly extended with technology CPUs. In the SCT-PTTIAMC2A course, learners will work with the T-CPU and learn the benefits of functions such as absolute synchronous operation and camming.

Enroll here

SIMATIC – Motion Control 2 in the TIA Portal

Course code face-to-face: SCT-PTTIAMC2A
Course code virtual: SCT-PTOILTIAMC2A

Target audience
This virtual course is for Programming and/or Commissioning Engineers who are responsible for maintaining systems with Siemens motion-based control systems.

Profile
Using the motion control functions of the SIMATIC S7-1500 technology CPU, the learner will be able to extend applications with absolute synchronous axes or camming.

In this technology course taught virtually, attendees learn step by step the benefits and use of these functions. After learning each step, attendees will deepen their knowledge through virtual programming exercises.

During the course, access to fully functional software, virtual tools, and exercises are provided to each participant through a cloud-based application.

After completing the course, the learners understand how camming works and can efficiently assign parameters for technology objects.

Enroll here

Discrete Automation: Maintenance
TIA Portal S7-1200 / S7-1500 (cont'd.)

Siemens TIA Portal Certified Service Technician Level 1 Refresher

Course code face-to-face: SCT-PTSVCR1A

Target audience
This course is intended for experienced TIA Portal programmers seeking a Siemens Certification which is recognized globally. This refresher course will help prepare the participant for the Siemens Certified Programmer, in the TIA Portal, Certification Test.

Profile
This hands-on, instructor led course provides a focused review and skills refresher of topics taught in TIA Portal Programming 1, 2, and 3 courses. This refresher is intended to prepare the student for the Siemens Certified Programmer Test, course code SCT-PTTIAC1A. The certification test is conducted separately from the refresher course and is typically scheduled on the day following the refresher course.

Enroll here

Siemens TIA Portal Certified Service Technician Level 1 Test

Course code face-to-face: SCT-PTTIAC1A

Target audience
This Siemens TIA Portal Programmer Certification Test is intended for experienced TIA Portal programmers who have met the prerequisites below and have applied skills.

Profile
This is a comprehensive performance test designed to assess the skills of a PLC (Programmable Logic Controller) programmer applicant for Siemens PLC systems.

This is a practical, skills-based certification test covering topics taught during TIA Programming 1, 2, and 3. It is recommended that the student attend the "Siemens Certified Programmer Refresher" in preparation for the test (course code SCT-S7TIAR3A). Students will be provided a set of programming tasks and are expected to demonstrate skills and best practices.

Enroll here

TIA Portal Advanced Troubleshooting

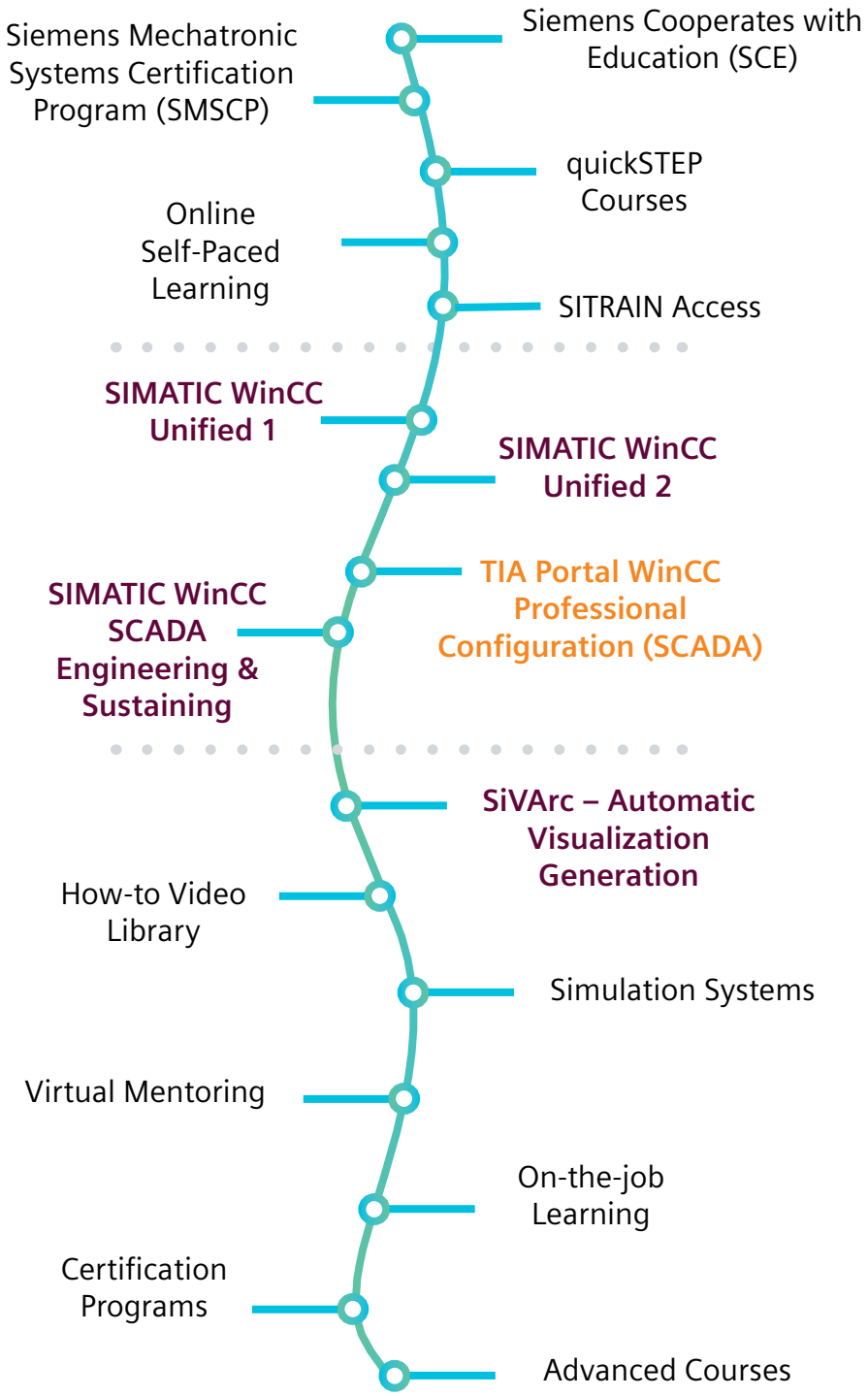
Course code face-to-face: SCT-PTTIATBL

Target audience
This course is for experienced TIA Portal-1200/1500 PLC Maintenance Technicians, Service Technicians, and Service Engineers. Learners will expand their knowledge in diagnostic troubleshooting using Siemens TIA Portal Totally Integrated Automation Software.

Profile
This is an advanced course focused on diagnostic troubleshooting using Siemens TIA Portal Totally Integrated Automation Software. Learners will expand their knowledge on how to troubleshoot, diagnose, and repair programming and hardware configuration issues within Siemens 1200/1500 PLC's. This course includes classroom instruction, demonstration, and considerable hands-on lab work.

Enroll here

Discrete Automation:
SIMATIC HMI with TIA Portal Learning Map



Workforce Development

Formal Learning
Deep dive learning

Advanced Learning
Performance assist tools

- Face-to-Face
- Face-to-Face & Virtual
- Virtual

Discrete Automation:
SIMATIC HMI with TIA Portal (cont'd.)

SIMATIC WinCC Unified 1, System Course

Course code face-to-face: SCT-TIA-UWCC1

Target audience
This course is relevant for personnel who are tasked with creating and/or editing HMI projects. This includes Programmers, Operators, Commissioning Engineers, Configuration Engineers, Maintenance Personnel, Repair Personnel, and Service Personnel.

Profile
SIMATIC WinCC Unified is the new visualization system in the TIA Portal. The system is convincing due to the use of native web technologies, which are introduced to you in this course. You will also learn the high degree of openness through high-performance interfaces. Learn how to use WinCC Unified and the new Unified Comfort Panels and get a personal impression of the performance of new devices. The training is aimed at first-time users of WinCC Unified and Unified Comfort Panels. The elementary basics and configuration steps are taught.

Enroll here

SIMATIC WinCC Unified 2, Advanced

Course code face-to-face: SCT-TIA-UWCC2

Target audience
This course is relevant for personnel who are tasked with creating and/or editing HMI projects. This includes Programmers, Operators, Commissioning Engineers, Configuration Engineers, Maintenance Personnel, Repair Personnel, and Service Personnel who want to learn more about WinCC Unified in the SCADA environment.

Profile
Building on the system course (TIA-UWCC1), course topics are conveyed based on WinCC Unified PC Runtime. Upon completion of the course, you will be able to use WinCC Unified PC Runtime with confidence and create your own HMI / SCADA projects with WinCC Unified Engineering. The course involves creating and/or editing HMI projects for the WinCC Unified PC Runtime. Students will expand on the skills learned in the System Course and will provide students with a great deal of new information so that they can work confidently with WinCC Unified and WinCC Unified PC Runtime.

Enroll here

TIA Portal WinCC Professional Configuration (SCADA)

Course code face-to-face: SCT-PTWCSP1A
Course code virtual: SCT-PTOILWCSP1A

Target audience
This course is for PLC users with engineering or maintenance experience who will be designing and configuring automation systems and their application programs using Siemens TIA Portal Windows Control Center (WinCC) Professional SCADA (Supervisory Control and Data Acquisition).

NOTE: *This TIA Portal course is for configuring WinCC SCADA applications. For Panels and/or Machine mounted HMI applications see Course TIA Portal WinCC Advanced – Code: SCT-PTWCMP1A.*

Profile
Using a model application, this course provides a system overview of WinCC Professional with emphasis on its capabilities and special features. Detailed configuration procedures will be studied in an order compatible with the typical development of an industrial application. Participants will learn the correct development process beginning with creating a project and concluding with reporting and printing. During this course, examples of programs will be written to take advantage of WinCC open architecture. Throughout this course lecture materials are complimented with hands-on exercises which build a working WinCC Professional application.

Enroll here

Discrete Automation:
SIMATIC HMI with TIA Portal (cont'd.)

SIMATIC WinCC SCADA Engineering and Sustaining

Course code face-to-face: SCT-S7WINI2A
Course code virtual: SCT-S7OILWINI2A

Target audience
This course is for PLC users with engineering and/or previous HMI experience who will be creating and sustaining HMI / SCADA applications using Siemens Windows Control Center (WinCC) Classic. This course is not WinCC SCADA in TIA Portal.

Profile
Using a model application, this course provides a system overview of WinCC with emphasis on its capabilities and distinctive features. Detailed configuration procedures will be studied in an order compatible with the typical development of an industrial application. Students will learn the correct development process beginning with creating a project, concluding with reporting, and printing. Examples of programs that can be written to take advantage of WinCC open architecture are discussed. Throughout this course lecture materials are complimented with virtual-based exercises which build a working WinCC application. Access to fully functional software, tools, and exercises are provided to each participant.

Enroll here

SiVArc – Automatic Visualization Generation

Course code face-to-face: SCT-SIVARC-1

Target audience
This course is for automation system design managers, project managers, programmers, configuration and commissioning engineers.

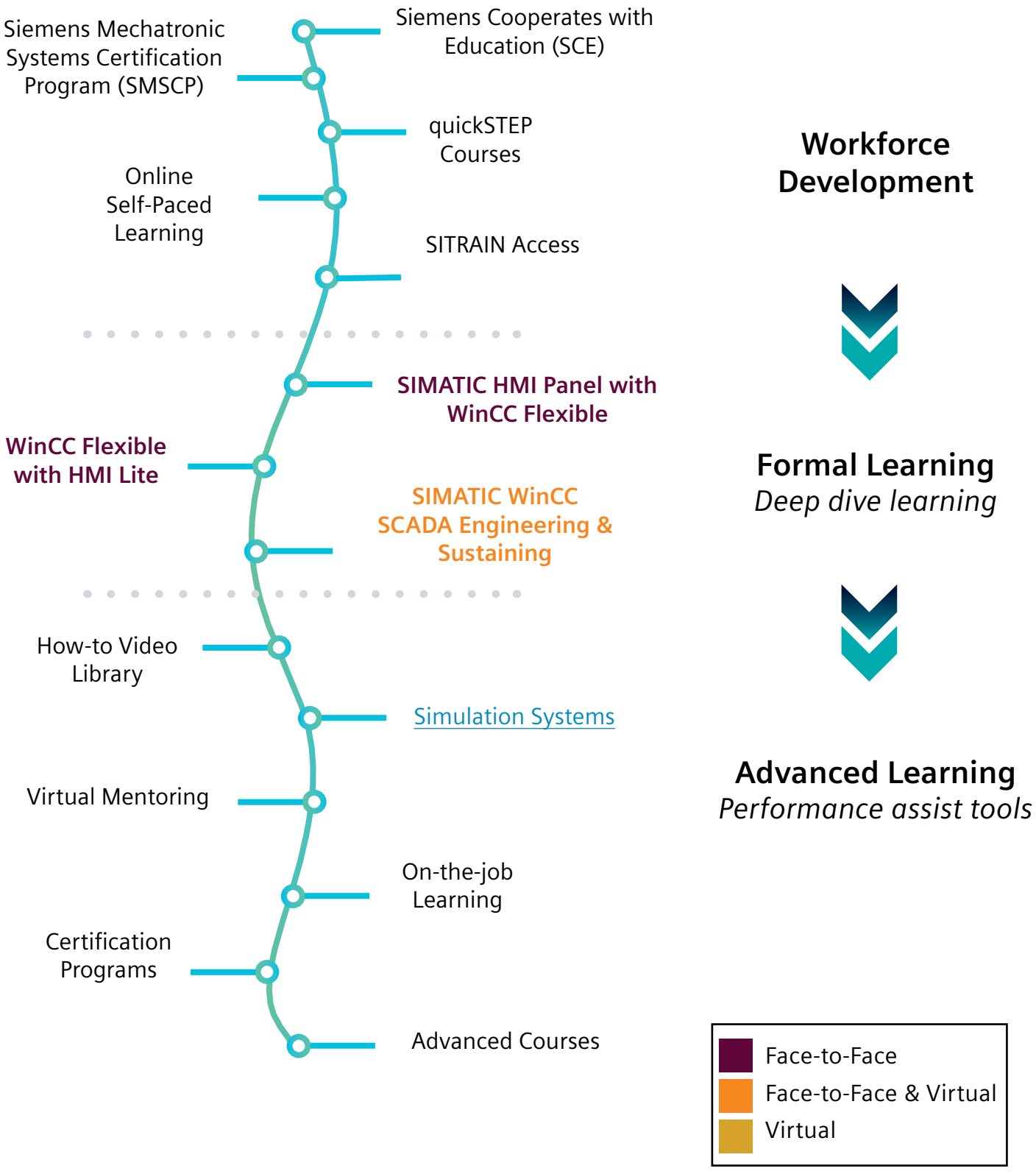
Profile
The objective of this course is to standardize the visualization of user interfaces throughout the plant while reducing engineering overhead. This is accomplished with automatic generation and creation of an operator control and monitoring solution, based on the program code of the controller and corresponding visualization objects as part of the comprehensive library concepts.

The basics and the various options and concepts offered by SiVArc throughout the course is covered, along with configuration of a visualization generation step-by-step. A standardized PLC project will form the basis for creating the visualization generation.

Theoretical knowledge will be reinforced through practical exercises. A complete visualization generation will be realized by the end of the training.

Enroll here

Discrete Automation:
SIMATIC HMI Learning Map



Discrete Automation:
SIMATIC HMI (cont'd.)

SIMATIC HMI Panel with WinCC Flexible

Course code face-to-face: SCT-S7WFXC1A

Target audience
This course is for automated control engineers or maintenance staff who will be designing, configuring or maintaining a control system application configured with Siemens WinCC Flexible software.

Profile
This course provides a comprehensive review of the features and capabilities of Siemens WinCC Flexible software. Students will perform a complete system configuration including project configuration, graphics design and system integration. Students will also build skills with the user management tools including security, access, alarms and messaging. Advanced functionality such as recipe creation and scripting are briefly introduced through scenario applications. The course concludes with Siemens unique Sm@rt services for plant wide web and system access.

Throughout this course lecture materials are complimented with hands-on exercises which build a working WinCC Flexible application.

Enroll here

WinCC Flexible with HMI Lite

Course code face-to-face: SCT-S7TLWM1A

Target audience
This course is for users who develop, install or maintain automation systems and their application programs when using the Siemens HMI Lite automation concept.

The first three days of this course covers WinCC Flexible for systems using the SIMATIC Operator Panels. The remaining course time covers the HMI Lite automation concept for SINUMERIK systems.

Profile
HMI Lite is a concept, developed by Siemens AG, aimed at the automation of the production and assembly of automobile engines, axles, and transmissions. Though developed for the Automotive Industry, the HMI Lite concept is adaptable to any automation solution. The Siemens' SIMATIC®, SINUMERIK®, and SINAMICS® product lines are the basis of this concept. When HMI Lite is selected as the automation solution, the Siemens staff develops the desired automation solution, including the communications, software, engineering, training, spare parts and service, tailored to the respective production areas and to the specific project requirements.

The course format is a combination of instruction and hands-on exercises. A realistic conveyor model, SINAMICS drive /motor, and associated SINUMERIK hardware are used for demonstrations and student exercises. Exercises allow students to practice tasks such as program modification, testing, debugging and using diagnostic tools.

Enroll here

SIMATIC WinCC SCADA Engineering and Sustaining

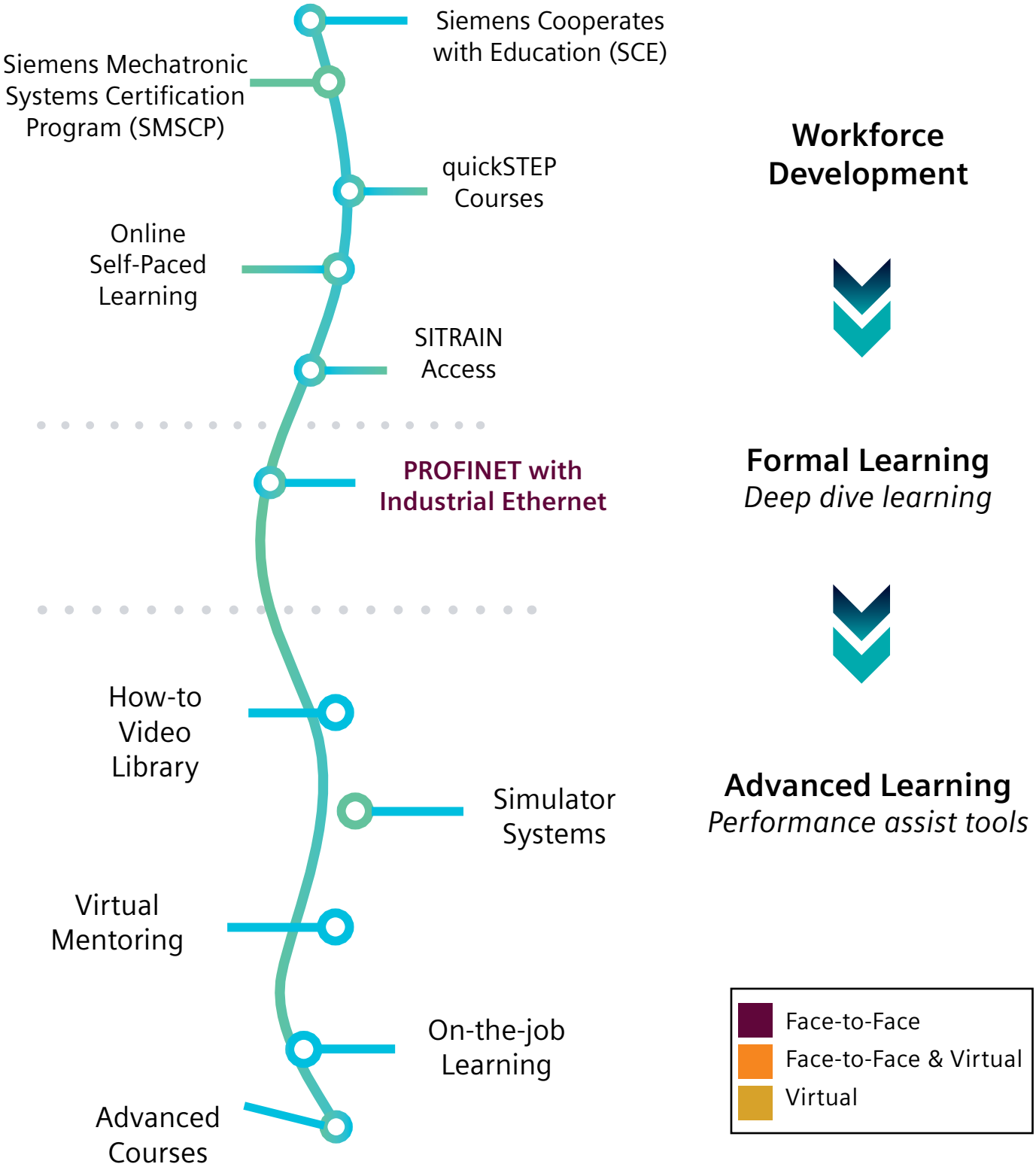
Course code face-to-face: SCT-S7WINI2A
Course code virtual: SCT-S7OILWINI2A

Target audience
This course is for PLC users with engineering and/or previous HMI experience who will be creating and sustaining HMI / SCADA applications using Siemens Windows Control Center (WinCC) Classic. This course is not WinCC SCADA in TIA Portal.

Profile
Using a model application, this course provides a system overview of WinCC with emphasis on its capabilities and distinctive features. Detailed configuration procedures will be studied in an order compatible with the typical development of an industrial application. Students will learn the correct development process beginning with creating a project, concluding with reporting, and printing. Examples of programs that can be written to take advantage of WinCC open architecture are discussed. Throughout this course lecture materials are complimented with virtual-based exercises which build a working WinCC application. Access to fully functional software, tools, and exercises are provided to each participant.

Enroll here

Discrete Automation:
NETWORKING Learning Map



Discrete Automation:
NETWORKING (cont'd.)

PROFINET with Industrial Ethernet

Course code face-to-face: SCT-PTTIAPNA

Target audience
This course is for PLC users with programming, engineering or maintenance experience who will be maintaining automation systems and their PROFINET networks in the TIA Portal.

TIA Portal is the base platform used, however the concepts and practices shown here are transferable to other platforms.

Profile
This course is for PLC users who will be responsible for the maintenance, configuration, planning and/or commissioning of automation Ethernet networks with PROFIBUS.

Siemens, a member of PROFIBUS International (PI), offers you the opportunity to learn about the future oriented PROFINET, the open Industrial Ethernet standard for automation.

Through a deeper understanding of Ethernet and PROFIBUS mechanics along with SIMATIC NET components, you will learn how to parameterize commission and troubleshoot a PROFINET network quickly and effectively.

Numerous practical exercises reinforce the acquired theoretical knowledge.

Enroll here

BRAUMAT / SISTAR

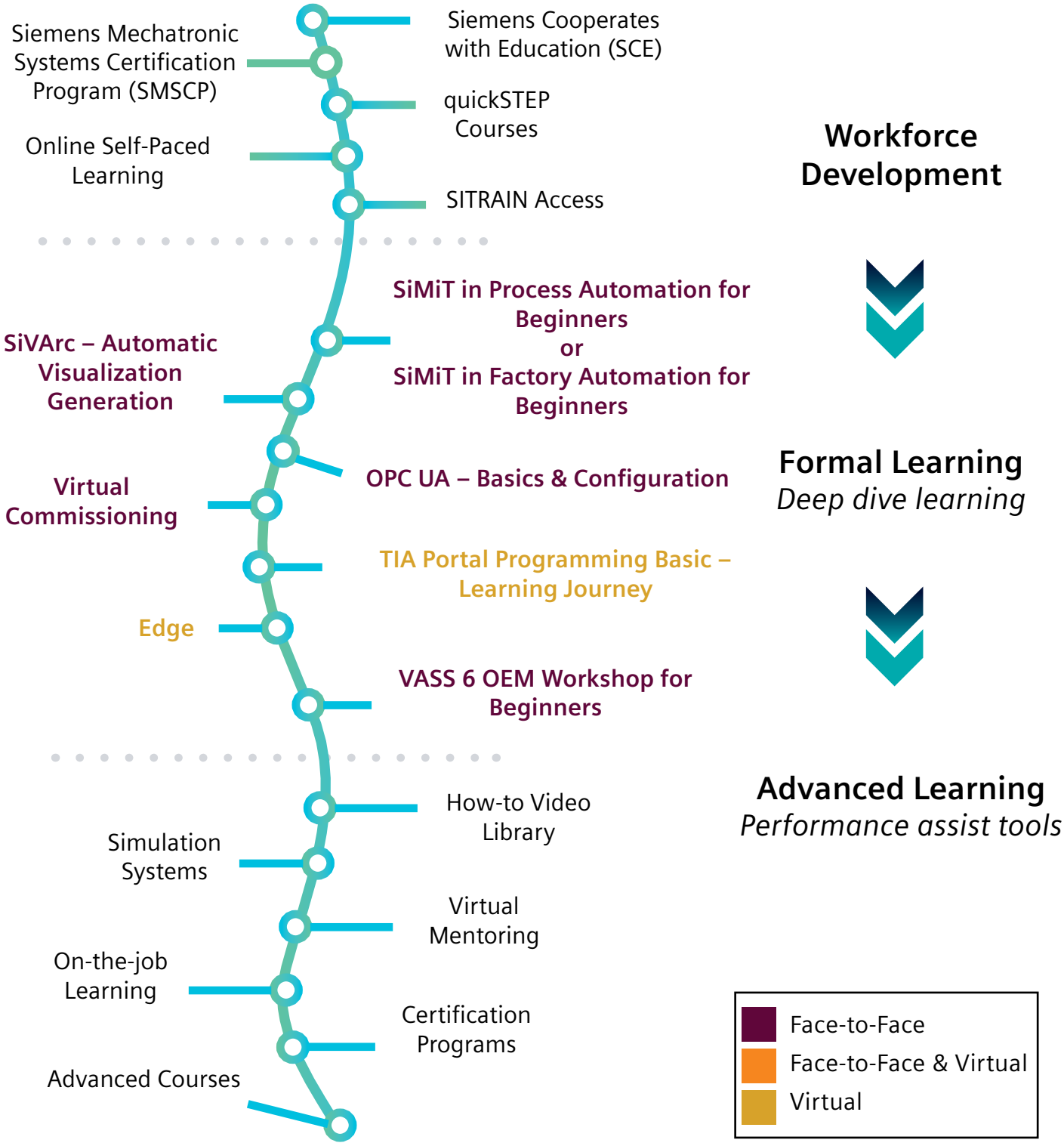
Course code virtual: SCT-TIAOILBRAU

Target audience
This training is a basic training to the BRAUMAT/SISTAR system course (TIA-BRAU). The training is aimed at professionals with knowledge on process control techniques and PLC programming, who oversee engineering and/or maintenance of a BRAUMAT/SISTAR process control system.

Profile
BRAUMAT/SISTAR is training directly from the manufacturer. Can-do is better than know-how. Due to the many practical exercises, you will be able to master BRAUMAT/SISTAR after the course. Form your own impression of its capabilities.

Enroll here

Digital Enterprise Learning Map



Digital Enterprise (cont'd.)

SiMiT in Process Automation for Beginners

Course code face-to-face: SCT-PCSMIT1A

Target audience
Decision makers, sales personnel, Project manager, project staff, configuring engineers, programmer.

Profile
This course provides you a summary of the functions and libraries of the simulation software SiMiT. By practical exercises you will learn about the design of simulations / simulation models for testing the PCS 7 automation software.

The perfect interplay of all components integrated in SiMiT enables you to produce more in the highest quality durably and to establish new products on the market considerably faster.

Enroll here

SiMiT in Factory Automation for Beginners

Course code face-to-face: SCT-PTSMIT1A

Target audience
Project managers, project workers, programmers, configuration engineers.

Profile
This course gives you an overview of the functions and libraries of the SiMiT simulation software. Using practical examples, you will learn step-by-step how to design simulations/models for testing automation software.

SiMiT enables the comprehensive simulation of machine and plant behavior for virtual commissioning. With the help of the components integrated in SiMiT, you can test your PLC code to thereby produce the highest quality and establish your new products on the market much faster.

Enroll here

SiVArc – Automatic Visualization Generation

Course code face-to-face: SCT-SIVARC-1

Target audience
This course is for automation system design managers, project managers, programmers, configuration and commissioning engineers.

Profile
The objective of this course is to standardize the visualization of user interfaces throughout the plant while reducing engineering overhead. This is accomplished with automatic generation and creation of an operator control and monitoring solution, based on the program code of the controller and corresponding visualization objects as part of the comprehensive library concepts.

The basics and the various options and concepts offered by SiVArc throughout the course is covered, along with configuration of a visualization generation step-by-step. A standardized PLC project will form the basis for creating the visualization generation.

Theoretical knowledge will be reinforced through practical exercises. A complete visualization generation will be realized by the end of the training.

Enroll here

Digital Enterprise (cont'd.)

OPC UA – Basics and Configuration

Course code face-to-face: SCT-DI-OPCUA1

Target audience
This course is for SIMATIC S7-1500 and S7-1200 PLC users who want to use the OPC UA features and communication capabilities. PLC users with engineering experience in the design and maintenance of SIMATIC automation systems and their application programs. This includes Programmers, Automation Engineers, and Commissioning Engineers.

Profile
This training offers you a detailed introduction into the basic concepts of the OPC UA system and its interfaces. You will learn the terminology behind the abstract model and test your understanding of all OPC UA capable components. You will also learn about the most important OPC UA servers and clients in the SIMATIC product portfolio. A continuous exercise will lead you gradually to a communication model that is solely based on OPC UA communication.

Enroll here

Virtual Commissioning

Course code face-to-face: SCT-DI-VIRTCOM

Target audience
Target groups of this course are Project Engineers, Project Planners and Programmers. Also included are Automation Engineers and Commissioning Engineers.

Profile
Today's technologies are so complex that training on the software and the appropriate training equipment is almost indispensable to keep up to date. This course targets project engineers, project planners and programmers of mid-level and big industries, who deal with the design and virtual commissioning of machines. The documentation and course work provides you with an overview of the interaction among the various software packages such as NX, MCD, TIA Portal, PLCSIM Advanced and SiMiT.

Enroll here

TIA Portal Programming Basic – Learning Journey

Course code virtual: SCT-LJTIAOILB1

Target audience
The Totally Integrated Automation Portal (TIA Portal) forms the working environment for integrated engineering with SIMATIC STEP 7. In this learning journey of the SIMATIC TIA Portal programming training, you will learn TIA Portal, basic knowledge about the structure of the SIMATIC S7 automation system, the configuration and parameterization of the hardware, and the basics of classic PLC programming. You will also learn to connect a PROFINET IO.

Profile
An optimal mix of guided live modules (online) and self-learning modules will provide you with all of the content imperative for your work and sustainable learning success. Various practical tasks in our virtual exercise environment throughout the learning journey help you to prepare for practical application. The learning journey provides curated on-demand content to support you in your own personal practice transfer. You will deepen your theoretical knowledge through numerous practice-oriented exercises in our virtual learning environment on a TIA system model. This consists of a SIMATIC S7-1500 automation system and a virtual conveyor model.

Enroll here

Digital Enterprise (cont'd.)

Edge

Course code virtual: SCT-TIAOILEDGE

Target audience
Commissioning Engineers, Project Planners, IT / OT Professionals

Profile
The goal of this course is to provide experienced users, familiar with Automation system environments, with hands-on knowledge and skills training on the TIA Industrial Edge System.

The course begins with an overview of the TIA Edge architecture and how it can bridge the gap between automation and cloud. Followed by in-depth discussions and hands-on exercises covering ... Installation, Management, Engineering and Deployment of the Industrial Edge Management (IEM) and Industrial Edge Device (IED) components.

The course will cover using a preconfigured TIA Portal Project running in PLCSIM Advanced as the automation system. The key Industrial Edge learning subjects will include the content in the Objectives section.

Enroll here

VASS 6 OEM Workshop for Beginners

Workshop code: SCT-VAOILS6OEE

Target audience
Volkswagen OEM PLC programmers, commissioning engineers or configuration engineers responsible for the maintenance, configuration, commissioning and/or planning of TIA Portal projects using the VASS V06 Standard.

TIA Portal is the base platform used; however, the concepts and practices are transferable to other platforms.

Profile
This virtual, instructor led workshop is for PLC users who will be responsible for the planning, configuration, commissioning and/or maintenance of automation projects and programs using the Volkswagen VASS V06 Standard.

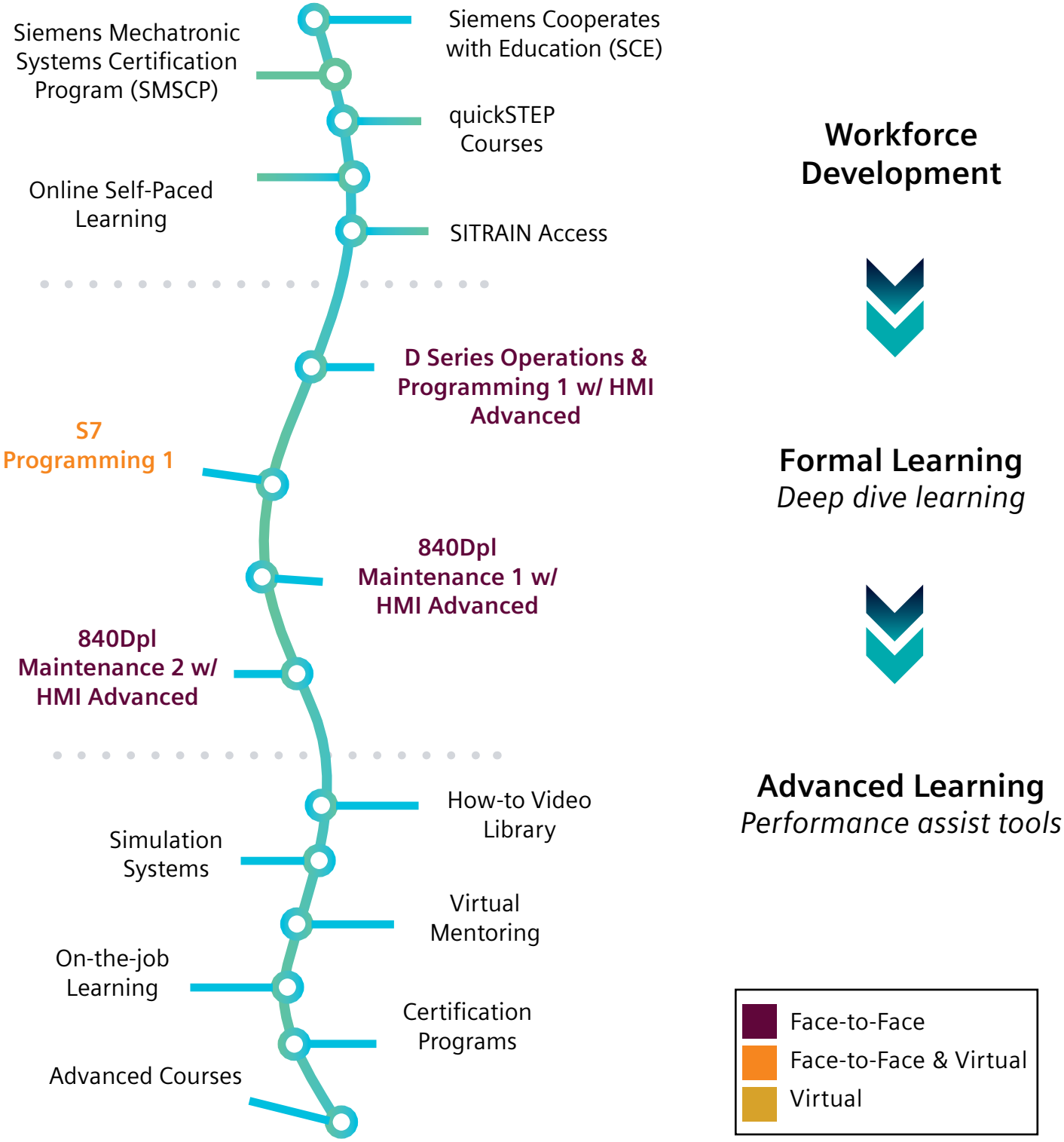
Participants will gain proficiency in the VASS standard with emphasis on the following:

- Installation and configuration of PROFINET and PROFIsafe components
- Gaining familiarity with the PLC program structure for plant control
- Operating the visualization and becoming familiar with the alarm system.

During the virtual sessions, students will learn about building a STEP7 project from the beginning and proper program structure and documenting. Software diagnostic tools will be used for debugging both hardware and code. Various instruction sets, tags, memory areas, program blocks, and libraries will be introduced to provide the student with solid concepts of structured programming.

Enroll here

Machine Tool:
Power Line / HMI Advanced Learning Map



Machine Tool:
Power Line / HMI Advanced (cont'd.)

D Series Operations & Programming 1 w/ HMI Advanced

Course code face-to-face: SCT-SN84DP1B

Target audience
This course is for Operator/Programmers of CNC machines that utilize the SINUMERIK 840D / 810D / 840Di controls, with MMC-103 or PCU-50 Operator Interfaces. Personnel who are using the MMC-100.2 or HT-6 Operator Interfaces are urged to contact Siemens Customer Training prior to enrolling in this class.

Profile
Complete overview of the softkey menus of the SINUMERIK D-series CNC and describes the basic principles of operating the control. Demonstrations are given on how to manage part programs, define offsets, and restore programs and control data.

Class format is predominately hands-on exercises. Students use SINUMERIK 840D CNC simulators to build proficiency in moving through various menus and in managing part programs.

Enroll here

S7 Programming 1

Course code face-to-face: SCT-S7TIAP1C
Course code virtual: SCT-S7OILTIAP1C

Target audience
This course is for SIMATIC S7-300/400 PLC users who are involved with developing or sustaining automation systems and their application programs.

Profile
This highly engaging, virtual course is the first in a three-part series which builds basic programming skills using Siemens STEP7 software. Students will learn S7 project management, program design and application development. This is an aggressively paced curriculum covering S7 programming with Ladder logic. The basics of programming with Function Block Diagram (FBD), and Statement List (STL) languages are also covered. Key software tools and best practices techniques are taught. Participants employ the Totally Integrate Automation concept by integrating an S7300 PLC, HMI, ET200S remote I/O station and a desktop conveyor system connected by PROFIBUS.

Throughout this course participants build and manage a STEP7 project from beginning to end, learning proper program structure and documenting. Software diagnostic tools are used for troubleshooting both hardware and code. Various instruction sets, memory areas, program blocks, and libraries are introduced to provide the student with solid concepts of structured programming.

This course employs the current adult learning techniques featuring brief lectures followed by multiple engaging, task-based skills completed in a virtual environment that begin early Monday morning and continue all week long. Access to fully functional STEP7 programming software, a virtual conveyor, and exercises are provided through a cloud-based application.

Instructors verify student skills and sign off on a task completion list throughout the week. At the end of the week, participants complete an independent project to showcase and reinforce the skills they have learned during the week.

Enroll here

Machine Tool:
Power Line / HMI Advanced (cont'd.)

840Dpl Maintenance 1 w/HMI Advanced

Course code face-to-face: SCT-SN84DM1A

Target audience
This course is for maintenance personnel of CNC machines that utilize the SINUMERIK 840D / 810D controls, using the MMC-103 or PCU-50 Operator Interfaces. Personnel using the MMC-100.2 or HT-6 Operator Interfaces are urged to contact Siemens Customer Training prior to enrolling in this class.

Profile
This course emphasizes the maintenance aspects of the control. A complete overview of the softkey menus of the SINUMERIK D-series control is provided, including the basic principles of operating the control. Demonstrations are given on how to competently manage maintenance functions and how-to backup and restore the PLC program and control data.

Class format is predominately hands-on exercises. SINUMERIK 840D CNC simulators are utilized for the student to build proficiency in moving through various menus and managing data. This course DOES NOT cover the SIMATIC S7 PLC language. Students who must troubleshoot the PLC user program should attend the SIMATIC S7 Programming I course.

Enroll here

840Dpl Maintenance 2 w/HMI Advanced

Course code face-to-face: SCT-SN84DM2A

Target audience
This course is for maintenance personnel of CNC machines that utilize the SINUMERIK 840D / 810D controls, using the MMC-103 or PCU-50 Operator Interfaces. Personnel using the MMC-100.2 or HT-6 Operator Interfaces are urged to contact Siemens Customer Training prior to enrolling in this class.

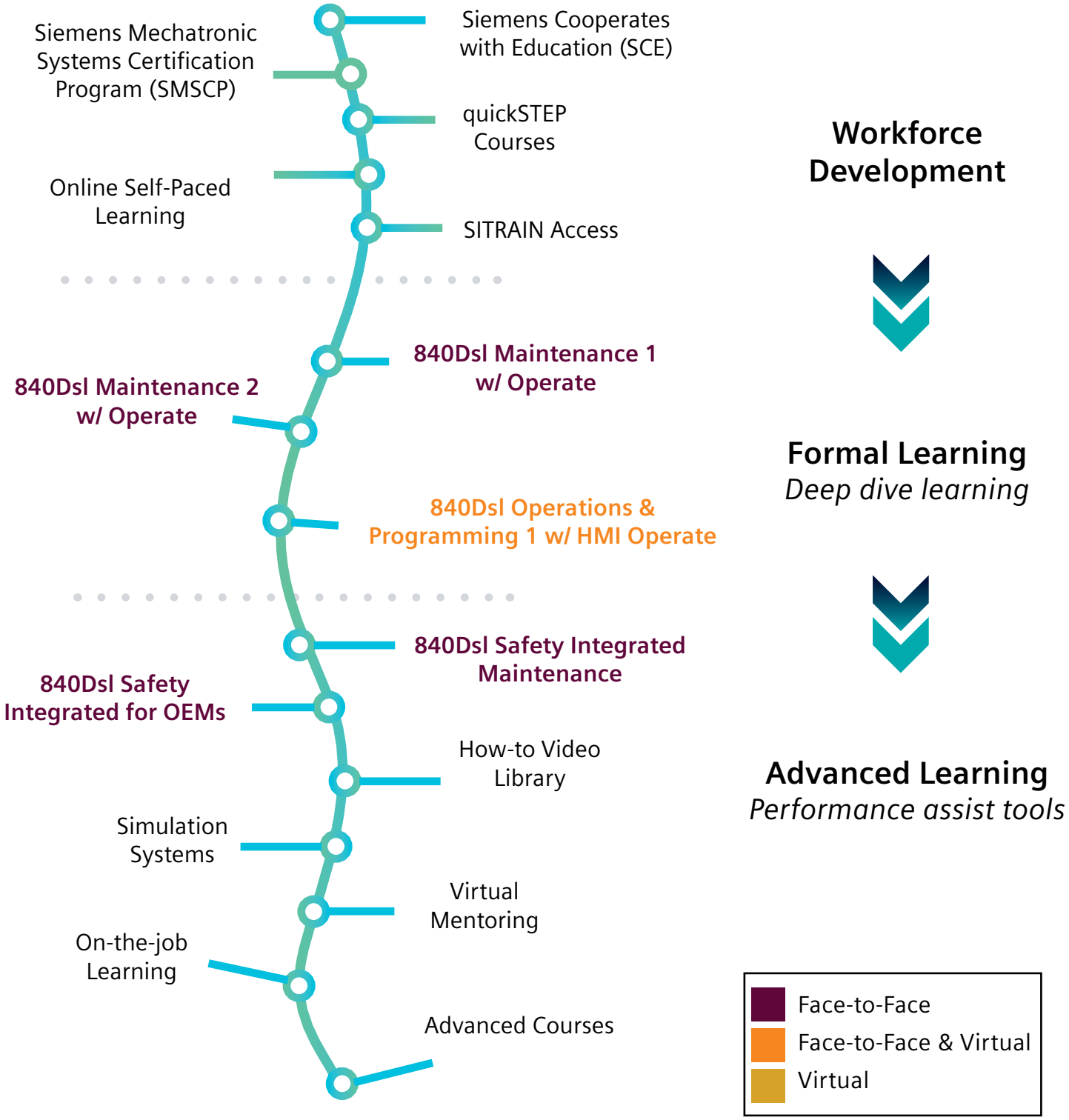
Profile
This course provides a complete overview of the system hardware, software and configuration of the SINUMERIK 840D CNC, and it and apos - s integrated SIMODRIVE 611D Digital Servo drive system. The course includes information regarding the hardware, configuration, and commissioning procedures for utilization of the SIMODRIVE 611D.

Class format is predominately hands-on exercises. Students use SINUMERIK 840D training simulators to build proficiency with the keypad, softkeys, and machine control panels. Students will also be exposed to procedures for complete system backup using Symantec GHOST software.

This course DOES NOT cover the SIMATIC S7 PLC language. Students who must troubleshoot the PLC user program should attend the SIMATIC S7 Maintenance I course.

Enroll here

Machine Tool: Solution Line / HMI Advanced / HMI Operate Learning Map



Machine Tool: Solution Line / HMI Advanced / HMI Operate (cont'd.)

840Dsl Maintenance 1 w/ Operate

Course code face-to-face: SCT-SNSLM1A-OP

Target audience
This course is designed for electrical/electronic end-user maintenance personnel for machine tools using the SINUMERIK 840Dsl (Solution Line) controls. This course presumes the customer is using an HMI with either the PCU 50 or TCU (Thin Client Unit) hardware, and the SINUMERIK Operate software.

Profile
This course emphasizes the maintenance aspects of this version of the SINUMERIK 840D. An overview of the soft key menus of the control is provided, including the basic principles of operating the control. Demonstrations are given on how to competently manage maintenance functions, and for back-up/ restore functions of the NC, PLC and PROFIBUS Drive series start-up archive files. The class format is a mixture of lecture and hands-on exercises. SINUMERIK 840Dsl simulators are utilized to allow the student to build proficiency in control navigation and managing different forms of data. This course does NOT cover the SIMATIC S7 PLC programming language.

Enroll here

840Dsl Maintenance 2 w/ Operate

Course code face-to-face: SCT-SNSLM2A-OP

Target audience
This advanced maintenance course is designed for electrical/ electronic end user maintenance personnel and supporting manufacturing/production engineers who wish to know more about the SINUMERIK 840Dsl (Solution Line) CNC Controls. This course presumes the customer is using an HMI with either the PCU 50 or TCU (Thin Client Unit) hardware, and the SINUMERIK Operated software

Profile
This course includes information regarding system hardware, system software, configuration, and commissioning procedures related to both the 840Dsl and its integrated SINAMICS S-120 drive system. Course format is a mixture of lecture and hands-on exercises. SINUMERIK 840Dsl simulators are utilized to allow the student to build proficiency with the hardware and software systems. A review of the procedures for complete system backup and restoration will also be conducted. This course does NOT cover the SIMATIC S7 PLC programming language.

Enroll here

840Dsl Operations & Programming 1 w/ HMI Operate

Course code face-to-face: SCT-SNSLP1A-OP

Course code virtual: SCT-SNOILSLP1A-OP

Target audience
This virtual course is for Operator/Programmers of CNC machines that utilize the new SINUMERIK 840Dsl (Solution Line) controls. This course presumes the customer is using the PCU 50.3 or an HMI TCU (Thin Client Unit), with the SINUMERIK HMI Operate interface.

Profile
This course provides a complete overview of the soft key menus of the SINUMERIK 840Dsl (Solution Line) controls, describing the basic principles of CNC operation along with the generation of a basic CNC parts programs. Demonstrations are given on how to create and manage part programs, define offsets, save programs, restore programs, and user data. Class format is predominately exercises conducted in a virtual environment. Access to fully functional software and tools are provided through a cloud-based application. Students use SINUMERIK 840Dsl CNC simulators to build proficiency in moving through various menus, creating/managing part programs, setting Work, editing work, tool offsets, and user data.

Enroll here

Machine Tool: Solution Line / HMI Advanced / HMI Operate (cont'd.)

840Dsl Safety Integrated Maintenance

Course code: SCT-SNSLSM1A

Target audience
This advanced course is designed for controls engineers and service specialists who use the SINUMERIK 840Dsl and Safety Integrated (SI) functions in machine tool applications.

Profile
This course provides the knowledge and skills that controls engineers and/or maintenance technicians require for familiarization and the operation of an automated machine tool, equipped with a SINUMERIK 840Dsl CNC which uses the optional Safety Integrated System. The goal of the class is to teach the students to identify the various types of applications associated with the Safety Integrated System, to achieve a working knowledge of the concepts, and to identify and diagnose Safety Integrated related problems.

The course format is a combination of instruction and hands-on exercises. The hands-on exercises provide exposure to a SINUMERIK 840Dsl CNC, its system components, connections, start up, and operation. Students will perform practical exercises related to service and troubleshooting of the system, with emphasis on the Safety Integrated aspects of the 840D.

Enroll here

840Dsl Safety Integrated for OEMs

Course code face-to-face: SCT-SNSLP1A-OP

Target audience
This advanced course is designed for controls engineers and service specialists who configure and commission the SINUMERIK 840D sl Safety Integrated (SI) functions in machine tool applications. The student will receive a certificate after successfully completing the course.

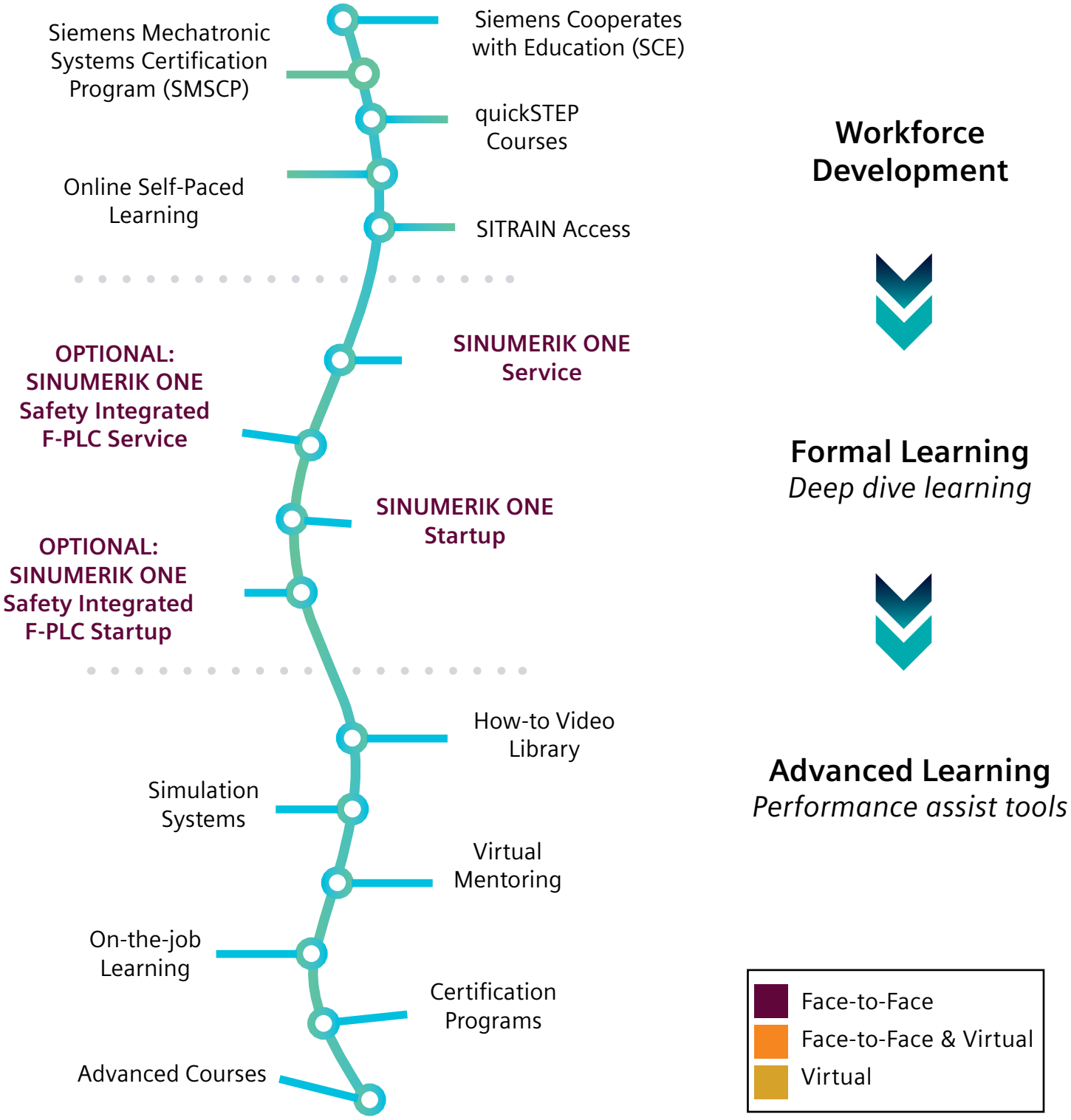
Profile
During this course, the student will learn about configuring and commissioning the function Safety Integrated using the SINUMERIK 840D sl. Practical exercises with Siemens test units concerning configuring, commissioning and servicing will be a major part of this training course.

At the end of the course, the learner will be extremely familiar with the function Safety Integrated using the SINUMERIK 840D sl. The student will learn to independently configure, test and commission specific installation configurations with safety functions. This enables the learner to make full use of the advantages of Safety Integrated on the machine tool.

The course format is a combination of instruction and hands-on exercises. Students will perform practical exercises related to configuring and commissioning the Safety Integrated aspects of the 840D sl.

Enroll here

Machine Tool: SINUMERIK ONE Learning Map



Machine Tool: SINUMERIK ONE (cont'd.)

SINUMERIK ONE Service

Course code face-to-face: SCT-SNONESV1

Target audience
This course is designed for electrical/electronic end-user maintenance personnel for machine tools using the Siemens SINUMERIK ONE CNC control. This course presumes the customer is using an HMI with IPC or ITC hardware, and the SINUMERIK HMI OPERATE software.

Profile
This course emphasizes the maintenance aspects of the SINUMERIK ONE. An overview of the soft key menus of the control is provided, including the basic principles of operating the control. Demonstrations are given on how to competently manage maintenance functions, and for back-up/restore functions of the NC, PLC and PROFIBUS Drive using series start-up archive files .The class format is a mixture of lecture and hands-on exercises. SINUMERIK ONE simulators are utilized to allow the student to build proficiency in control navigation and managing different forms of data. This course does NOT cover the SIMATIC TIA Portal programming language.

Enroll here

SINUMERIK ONE Safety Integrated F-PLC Service

Course code face-to-face: SCT-SNONESVF

Target audience
This advanced course is designed for controls engineers and service specialists who use the SINUMERIK ONE and Safety Integrated F-PLC functions in machine tool applications.

Profile
This course provides the knowledge and skills that controls engineers and/or maintenance technicians require for familiarization and the operation of an automated machine tool, equipped with a SINUMERIK ONE CNC which uses the optional Safety Integrated F-PLC System. The goal of the class is to teach the students to identify the various types of applications associated with the Safety Integrated System, to achieve a working knowledge of the concepts, and to identify and diagnose Safety Integrated related problems. The course format is a combination of instruction and hands-on exercises. The hands-on exercises provide exposure to a SINUMERIK ONE CNC, its system components, connections, start up, and operation. Stu-dents will perform practical exercises related to service and troubleshooting of the system, with emphasis on the Safety Integrated F-PLC aspects.

Enroll here

Machine Tool: SINUMERIK ONE (cont'd.)

SINUMERIK ONE Startup

Course code face-to-face: SCT-SNONESU1

Target audience
This advanced maintenance course is designed for electrical/ electronic end user maintenance personnel and supporting manufacturing/production engineers who wish to know more about configuring the SINUMERIK ONE CNC Control. This course presumes the customer is using an HMI with either the IPC or ITC hardware, with the SINUMERIK Operate HMI software.

Profile
This course includes information regarding system hardware, system software, configuration, and commissioning procedures related to the SINUMERIK ONE, SIMATIC S7-300, and its integrated SINAMICS S120 drive system. The course format is a mixture of lecture and hands-on exercises. SINUMERIK 840Dsl simulators are utilized to allow the student to build proficiency with the hardware and software systems. A review of the procedures for complete system backup and restoration will also be conducted. This course does NOT cover the SIMATIC TIA Portal programming language.

Enroll here

SINUMERIK ONE Safety Integrated F-PLC Startup

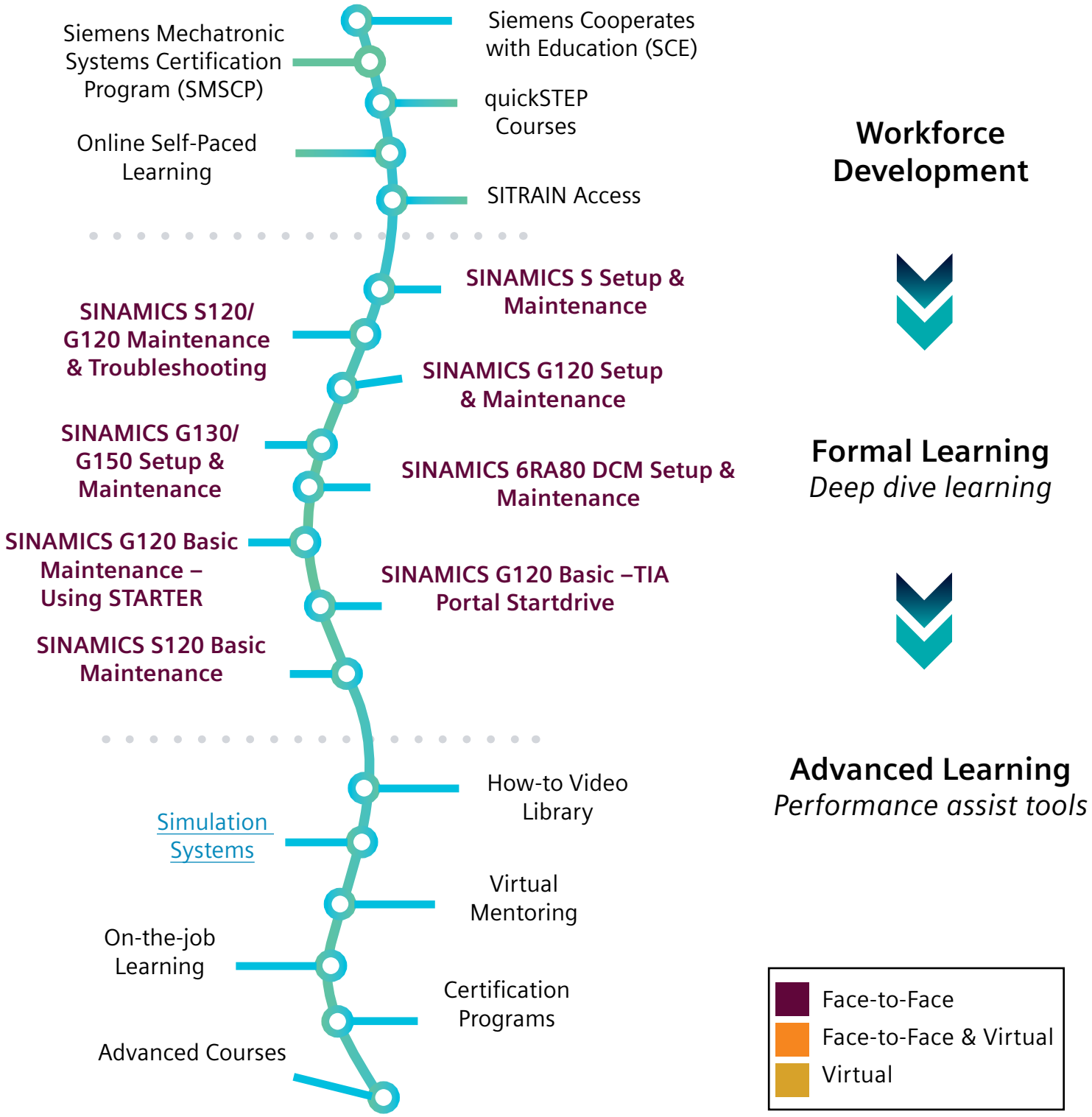
Course code face-to-face: SCT-SNONESUF

Target audience
This advanced course is designed for controls engineers and service specialists who configure and commission the SINUMERIK ONE Safety Integrated F-PLC functions in machine tool applications. The student will receive a certificate after successfully completing the course.

Profile
During this course, the student will learn about configuring and commissioning the function Safety Integrated F-PLC using the SINUMERIK ONE. Practical exercises with Siemens test units concerning configuring, commissioning, and servicing will be a major part of this training course. At the end of the course, the learner will be extremely familiar with Safety Integrated F-PLC using the SINUMERIK ONE. The student will learn to independently configure, test, and commission specific installation configurations with safety functions. This enables the learner to make full use of the advantages of Safety Integrated F-PLC on the machine tool. The course format is a combination of instruction and hands-on exercises. Students will perform practical exercises related to configuring and commissioning the Safety Integrated F-PLC aspects of the SINUMERIK ONE

Enroll here

Drives & Motion: SINAMICS Learning Map



Drives & Motion: SINAMICS (cont'd.)

SINAMICS S Setup and Maintenance

Course code face-to-face: SCT-DVSNAM1A

Target audience
This course is for engineering and maintenance personnel responsible for installing, maintaining and troubleshooting drive systems that use the SINAMICS S (S110, S120, S150) drive systems.

Profile
This course is intended to provide knowledge and skills related to the SINAMICS S drive as it pertains to commissioning, operation, configuration, maintenance, diagnostics, and troubleshooting. It is formatted as a combination of instruction and carefully structured, hands-on exercises aimed at developing job-related knowledge and skills.

Enroll here

SINAMICS S120/G120 Maintenance and Troubleshooting

Course code face-to-face: SCT-AUSNSM1A

Target audience
This course is for personnel responsible for the long-term maintenance and diagnostics of the SINAMICS S120 and G120 drive systems.

Profile
This course provides maintenance level training on Siemens SINAMICS S120 and G120 drive systems. The course includes an overview of AC Drive power structures, system hardware, basic commissioning steps, and basic steps for configuring and troubleshooting. A heavy emphasis is placed on troubleshooting using various methods and test equipment. The use of the Siemens diagnostic and engineering software tool (STARTER) is demonstrated and practiced extensively throughout the week.

Although commissioning and configuration of the system is not the primary focus of the course, the student will perform basic lab-guided commissioning using various wizard tools to create a simple system. The student will learn to maintain the system settings by creating various backups, followed by actual restoration of the system. Interpretation of Fault and Alarm codes and LEDs and proper troubleshooting steps is a primary goal, as well as necessary steps for component replacement in the event of a hardware failure. Actual component replacement steps will be discussed, but not performed as the training units are not designed for easy access to hardware. The course format is a combination of instruction and hands-on exercises aimed at developing job-related knowledge and skills.

Enroll here

Drives & Motion: SINAMICS (cont'd.)

SINAMICS G120 – Setup and Maintenance

Course code face-to-face: SCT-DV120M1A

Target audience
This course is for maintenance and engineering personnel responsible for installing, maintaining, and troubleshooting the SINAMICS G120 series AC drives SINAMICS G120, Siemens PG and PLC will be used for hands-on exercises

Profile
This course is intended to provide knowledge and skills related to the SINAMICS G120 as it pertains to hardware identification, commissioning, operation, configuration, maintenance, diagnostics, and troubleshooting. Interconnections with the G120 – Computer – PLC will be utilized in the session. It is formatted as a combination of instruction and carefully structured, hands-on exercises aimed at developing job-related knowledge and skills.

Enroll here

SINAMICS G130/G150 Setup and Maintenance

Course code face-to-face: SCT-DVSNGM1A

Target audience
This course is for engineering and maintenance personnel responsible for installing, maintaining, and troubleshooting drive systems that utilize the SINAMICS G130/G150 Drive.

Profile
This course is intended to provide knowledge and skills related to the SINAMICS G130/G150 drive as it pertains to commissioning, operation, configuration, maintenance, diagnostics, and troubleshooting. It is formatted as a combination of instruction and carefully structured, hands-on exercises aimed at developing job related knowledge and skills.

Enroll here

SINAMICS 6RA80 DCM Setup and Maintenance

Course code face-to-face: SCT-DVDCMM1A

Target audience
This course is for engineering and maintenance personnel responsible for installing, maintaining, and troubleshooting drive systems that utilize the 6RA80 SINAMICS DC MASTER or DCM Control Module.

Profile
This course is intended to provide knowledge and skills related to the 6RA80 SINAMICS DC MASTER or DCM Control Module as it pertains to commissioning, operation, configuration, maintenance, diagnostics, and troubleshooting. It is formatted as a combination of instruction and carefully structured, hands-on exercises aimed at developing job-related knowledge and skills.

Enroll here

SINAMICS G120 Basic Maintenance – Using STARTER

Course code face-to-face: SCT-DVG12M1A

Target audience
This course is intended for Personnel responsible for the long-term maintenance and diagnostics of the Siemens Drive.

Profile
This course is intended to introduce the SINAMICS G120 drive using STARTER as it pertains to safety, hardware identification, repair, maintenance, diagnostics and troubleshooting. Interconnections with the G120 – Computer – PLC will be utilized in the session. It is formatted as a combination of instruction and carefully structured, hands-on exercises aimed at developing job-related knowledge and skills.

Enroll here

Drives & Motion: SINAMICS (cont'd.)

SINAMICS G120 Basic – TIA Portal Startdrive

Course code face-to-face: SCT-DVGPTM1A

Target audience
This course is intended for Personnel responsible for the long-term maintenance and diagnostics of the Siemens Drive.

Profile

This course is intended to introduce the SINAMICS G120 drive using TIA Portal Startdrive as it pertains to safety, hardware identification, repair, maintenance, diagnostics and troubleshooting.

Interconnections with the G120 – Computer – PLC will be utilized in the session. It is formatted as a combination of instruction and carefully structured, hands-on exercises aimed at developing job-related knowledge and skills.

Enroll here

SINAMICS S120 Basic Maintenance

Course code face-to-face: SCT-DVS12M1A

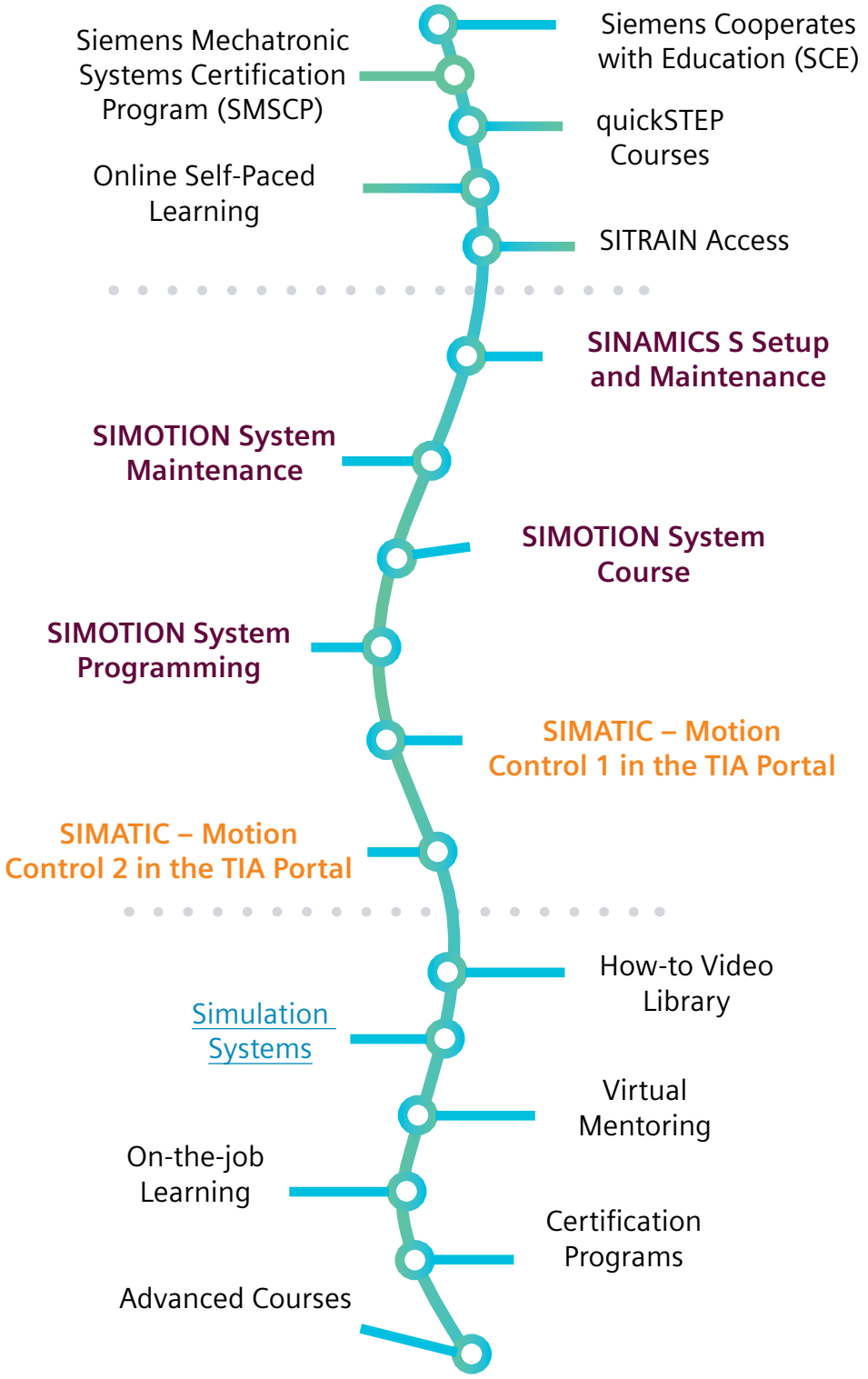
Target audience
This course is intended for Personnel responsible for the long term maintenance and diagnostics of the Siemens Drive.

Profile

This course is intended to provide knowledge and skills related to the SINAMICS S drive as it pertains to operation, maintenance, diagnostics, and troubleshooting. It is formatted as a combination of instruction and carefully structured, hands-on exercises aimed at developing job-related knowledge and skills.

Enroll here

Drives & Motion: SINAMICS / SIMOTION / SIMATIC Motion Learning Map



Workforce Development

Formal Learning
Deep dive learning

Advanced Learning
Performance assist tools

- Face-to-Face
- Face-to-Face & Virtual
- Virtual

Drives & Motion:
SINAMICS / SIMOTION / SIMATIC (cont'd.)

SINAMICS S Setup and Maintenance

Course code face-to-face: SCT-DVSNAM1A

Target audience
This course is for engineering and maintenance personnel responsible for installing, maintaining and troubleshooting drive systems that use the SINAMICS S (S110, S120, S150) drive systems.

Profile
This course is intended to provide knowledge and skills related to the SINAMICS S drive as it pertains to commissioning, operation, configuration, maintenance, diagnostics, and troubleshooting. It is formatted as a combination of instruction and carefully structured, hands-on exercises aimed at developing job-related knowledge and skills.

Enroll here

SIMOTION System Maintenance

Course code face-to-face: SCT-DVMSYM1A

Target audience
This course is for Maintenance Technicians and Site Engineers who are responsible for maintaining systems with Siemens motion-based control systems including SIMOTION and SINAMICS S.

Profile
This course is intended for sustainers of Siemens motion-based systems. The goal of this course is to build foundation skills for quick diagnostics, troubleshooting and repair of the motion system controls.

Students will learn the system hardware, basic software tools and communications to a level necessary to troubleshoot common problems and support system commissioning and operation.

This course provides an introduction to the Scout programming and diagnostic environment, and basics of system configuration and programming, tuning, project backup and restoration, diagnostic tools, and other project engineering and maintenance topics.

The first 2 days (approximately) are spent on Sinamics and Scout topics, and the latter 2 ½ days are spent on SIMOTION topics.

This course is 60%+ hands-on exercises which are targeted at developing skills and building experience with Siemens motion system components.

Enroll here

SIMOTION System Course

Course code face-to-face: SCT-DVSMOM1A

Target audience
This course is for SIMOTION system developers and users who are responsible for creating, commissioning, or maintaining SIMOTION based motion control systems.

Profile
This course is intended to provide knowledge and skills related to SIMOTION systems as it pertains to commissioning, operation, configuration, maintenance, diagnostics, and troubleshooting. It is formatted as a combination of instruction and carefully structured, hands-on exercises. This course will utilize the D425-2 DP/PN motion control module and the SINAMICS servo drive controller for all exercises. The skills acquired will be portable to SIMOTION C-based and P-based controllers

Enroll here

SIMOTION System Programming

Course code face-to-face: SCT-DVSMOP1A

Target audience
This course is for SIMOTION system developers and users who are responsible for creating, commissioning, or maintaining SIMOTION based motion control systems.

Profile
This course enables the participant to structure, generate and put in operation complex SIMOTION control program using MCC-charts and Structured Text.

Examples of different applications user programs will be generated, and ways of structuring programs will be shown. The focus lies on programming with Structured Text, Ladder and MCC.

Enroll here

Drives & Motion:
SINAMICS / SIMOTION / SIMATIC (cont'd.)

SIMATIC – Motion Control 1 in the TIA Portal

Course code face-to-face: SCT-PTTIAMC1A
Course code virtual: SCT-PTOILTIAMC1A

Target audience
This virtual course is for Programming and/or Commissioning Engineers who are responsible for maintaining systems with Siemens motion-based control systems.

Profile
In this technology course taught virtually, attendees will program the SIMATIC S7-1500 or S7-1200 controllers in the TIA Portal. They will be able to precisely control the motion of axes with the integrated motion control functions while learning step by step the benefits and use of these functions.

After each learning step, attendees will deepen their knowledge through hands-on programming. After attending the course, they will understand the interaction of the technological functions. Each learner will be able to select and configure appropriate technology objects, such as speed axis, positioning axis and synchronous axis, as well as, integrate them into the program.

During the course, access to fully functional software, virtual tools, and exercises are provided to each participant through a cloud-based application.

SPECIAL NOTE: The motion control function of standard CPUs is seamlessly extended with technology CPUs. In the SCT-PTTIAMC2A course, learners will work with the T-CPU and learn the benefits of functions such as absolute synchronous operation and camming.

Enroll here

SIMATIC – Motion Control 2 in the TIA Portal

Course code face-to-face: SCT-PTOILTIAMC2A
Course code virtual: SCT-PTTIAMC2A

Target audience
This virtual course is for Programming and/or Commissioning Engineers who are responsible for maintaining systems with Siemens motion-based control systems.

Profile
Using the motion control functions of the SIMATIC S7-1500 technology CPU, the learner will be able to extend applications with absolute synchronous axes or camming.

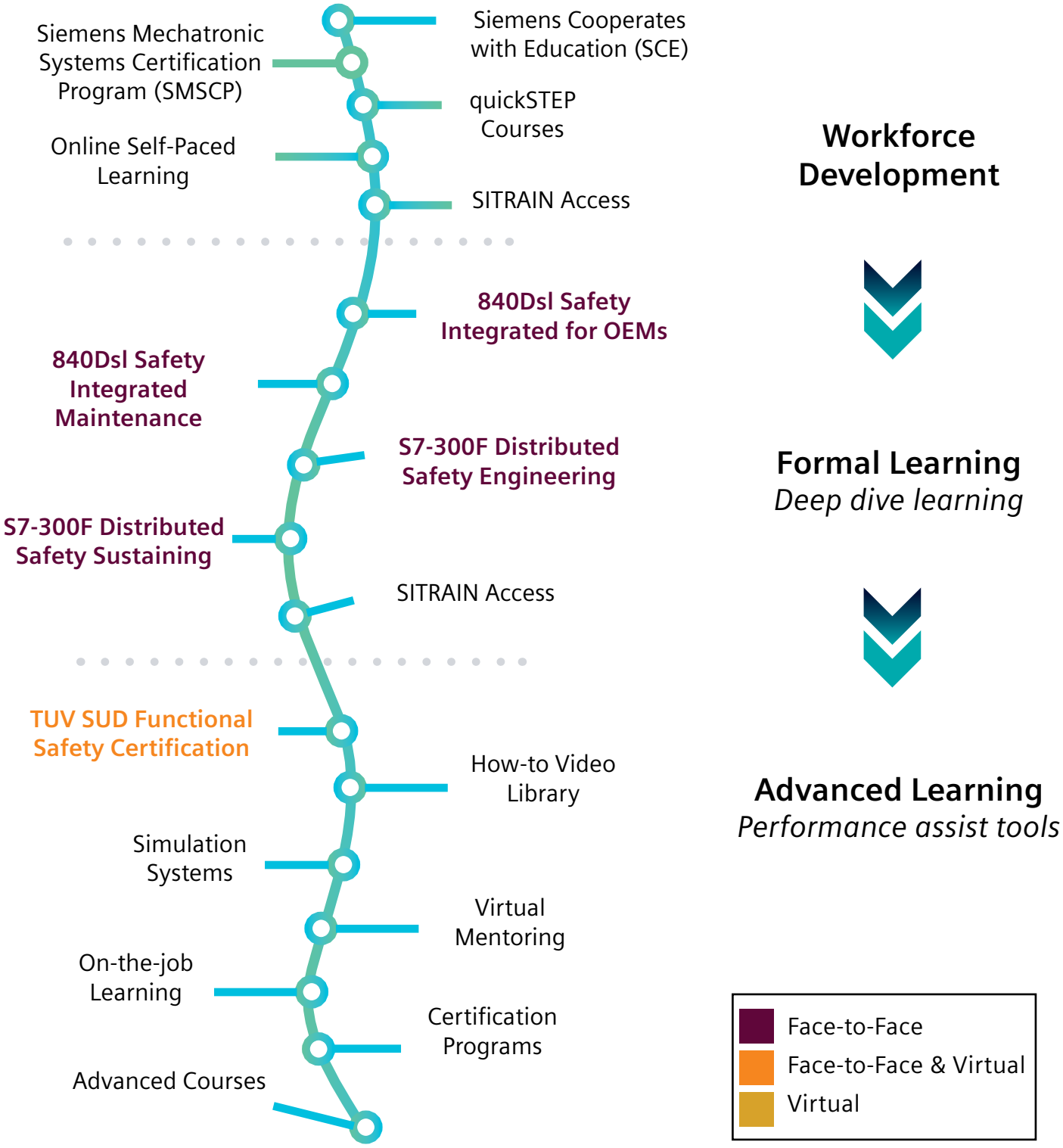
In this technology course taught virtually, attendees learn step by step the benefits and use of these functions. After learning each step, attendees will deepen their knowledge through virtual programming exercises.

During the course, access to fully functional software, virtual tools, and exercises are provided to each participant through a cloud-based application.

After completing the course, the learners understand how camming works and can efficiently assign parameters for technology objects.

Enroll here

Electrical Maintenance and Safety Learning Map



Electrical Maintenance and Safety (cont'd.)

840Dsl Safety Integrated for OEMs

Course code face-to-face: SCT-SNDSLI1A

Target audience
This advanced course is designed for controls engineers and service specialists who configure and commission the SINUMERIK 840D sl Safety Integrated (SI) functions in machine tool applications. The student will receive a certificate after successfully completing the course.

Profile
During this course, the student will learn about configuring and commissioning the function Safety Integrated using the SINUMERIK 840D sl. Practical exercises with Siemens test units concerning configuring, commissioning and servicing will be a major part of this training course.

At the end of the course, the learner will be extremely familiar with the function Safety Integrated using the SINUMERIK 840D sl. The student will learn to independently configure, test and commission specific installation configurations with safety functions. This enables the learner to make full use of the advantages of Safety Integrated on the machine tool.

The course format is a combination of instruction and hands-on exercises. Students will perform practical exercises related to configuring and commissioning the Safety Integrated aspects of the 840D sl.

Enroll here

840Dsl Safety Integrated Maintenance

Course code face-to-face: SCT-SNSLSM1A

Target audience
This advanced course is designed for controls engineers and service specialists who use the SINUMERIK 840Dsl and Safety Integrated (SI) functions in machine tool applications.

Profile
This course provides the knowledge and skills that controls engineers and/or maintenance technicians require for familiarization and the operation of an automated machine tool, equipped with a SINUMERIK 840Dsl CNC which uses the optional Safety Integrated System. The goal of the class is to teach the students to identify the various types of applications associated with the Safety Integrated System, to achieve a working knowledge of the concepts, and to identify and diagnose Safety Integrated related problems.

The course format is a combination of instruction and hands-on exercises. The hands-on exercises provide exposure to a SINUMERIK 840Dsl CNC, its system components, connections, start up, and operation. Students will perform practical exercises related to service and troubleshooting of the system, with emphasis on the Safety Integrated aspects of the 840D.

Enroll here

S7-300F Distributed Safety Engineering

Course code face-to-face: SCT-S7SFTE1A

Target audience
This course is for engineers and personnel responsible for implementing SIMATIC Distributed Safety systems.

Profile
This course introduces the student to a Siemens Distributed Safety PLC application. Participants receive knowledge on applying the system per relevant standards, Failsafe Hardware Module details and parameterization, Safety Program structure and implementation, Safety Communications, System Diagnostics, and introduction to Drive Safety.

The course format is a combination of instruction and hands-on exercises. A realistic model is used for demonstrations and student exercises. Exercises allow students to practice tasks such as configuration, programming, and code debugging . The student take-away from this course is a USB containing all course content. The USB is used throughout the course delivery.

Enroll here

Electrical Maintenance and Safety (cont'd.)

S7-300F Distributed Safety Sustaining

Course code face-to-face: SCT-S7SFTS1A

Target audience
This course is for SIMATIC S7 300F PLC users who install or maintain automation safety systems and their application programs.

Profile
This course introduces the student to a Siemens Distributed Safety PLC application. Participants will build skills on commissioning, troubleshooting and upgrading an automation safety system. Failsafe Hardware Module details and parameterization, Safety Program structure and implementation, and System Diagnostics are covered.

The course format is a combination of instruction and hands-on exercises. A realistic model is used for demonstrations and student exercises. Exercises allow students to practice tasks such as testing, debugging and using diagnostic tools.

Enroll here

TUV SUD Functional Safety Certification

Course code face-to-face: SCT-TUVFSE1A
Course code virtual: SCT-TUVOILS1

Target audience

- Application engineers and system integrators with some experience in Functional Safety
- Project and safety managers
- Designers and safety specialists working in machinery applications

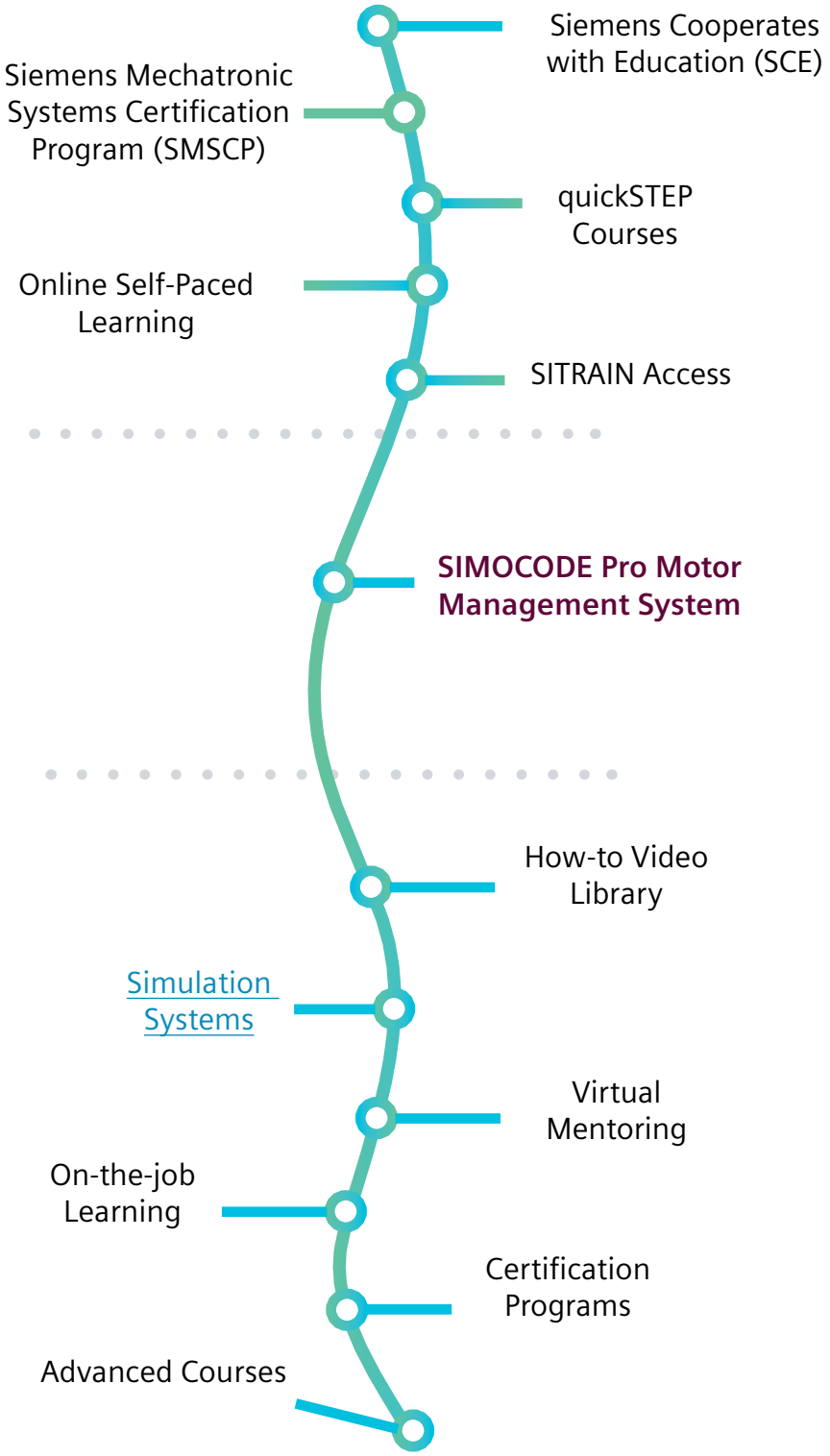
Profile
The objective of this course is to relate the safety concept of IEC 61508 and cover the main principles for Functional Safety. ISO 13849 and IEC 62061 are covered by demonstrating safety principles according to these standards and how they relate to IEC 61508.

Software development of safety related control systems is covered in day three followed by a fourth day question and answer session with resulting final exam.

The exam is closed book containing 60 multiple choice and 25 open questions. Certification requires a 75% passing grade.

Enroll here

Power Systems, Switchgear, & SIMOCODE
Learning Map



Workforce Development

Formal Learning
Deep dive learning

Advanced Learning
Performance assist tools

- Face-to-Face
- Face-to-Face & Virtual
- Virtual

Power Systems, Switchgear, & SIMOCODE (cont'd.)

SIMOCODE Pro Motor Management System

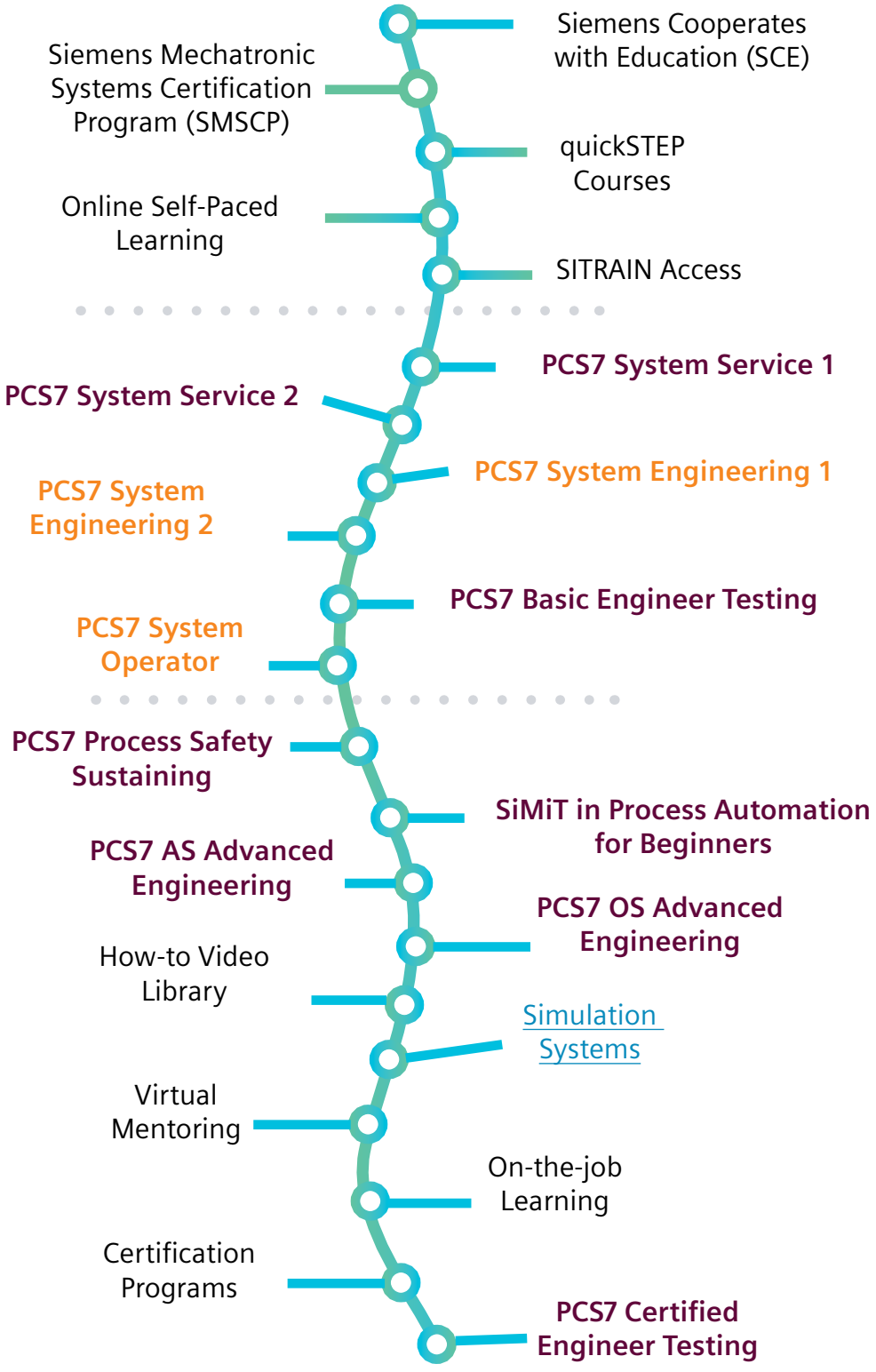
Course code face-to-face: SCT-SCSIMG1A

Target audience
This course is intended for SIMOCODE Pro Motor Management System users who are involved with implementation, start-up, operation or maintenance of systems containing the SIMOCODE Pro.

Profile
This course introduces the SIMOCODE Pro Motor Management System and its components. Using representative hardware, the student will configure and operate the system. Unit controls allow the student to experience the reaction of the SIMOCODE Pro to overcurrent, undervoltage or over temperature. SIMOCODE ES software is used to configure the system for operation of a reversing motor and modification of the controls to adapt to user and apos - s requirements.

Enroll here

Process Automation:
PCS7 Technician / Maintenance & Operator Learning Map



Workforce Development

Formal Learning
Deep dive learning

Advanced Learning
Performance assist tools

- Face-to-Face
- Face-to-Face & Virtual
- Virtual

Process Automation: PCS7 Technician / Maintenance & Operator (cont'd.)

PCS7 System Service 1

Course code face-to-face: SCT-PCSVCS1B

Target audience
Plant Engineers, Technicians and Users responsible for operating, optimizing and troubleshooting a PCS7 system should attend this course.

Profile
This course is designed for individuals receiving an engineered PCS7 system and responsible for system sustaining and service. The goals of this course are to help the student learn to efficiently use, optimize and troubleshoot their process through the PCS7 system. This course begins with the students learning the key system architecture and operational functions. The course then builds a solid foundation of system fault analysis of software configuration, important basic project settings including physical components, software configuration, basic module parameterization and system networks. Students will then learn how to analyze errors/faults using the system tools and determine the cause and corrective action of these errors/faults. This hands-on course builds experience with system use, optimization, common troubleshooting and basic service engineering tasks.

Enroll here

PCS7 System Service 2

Course code face-to-face: SCT-PCSVCS2B

Target audience
Plant Engineers, Technicians and Users responsible for operating, optimizing and troubleshooting a PCS7 system should attend this course.

Profile
This course is designed for individuals receiving an engineered PCS7 system and are responsible for system sustaining, service and basic modification. The goals of this course are to help the student learn to efficiently use, optimize and troubleshoot their process as well as replacements and additions to it. This course begins with the students learning the key system architecture and operational functions. The course then builds a solid foundation of system fault analysis of software configuration, important basic project settings including physical components, software configuration, basic module parameterization and system networks. Students will then learn how to analyze errors/faults and repair/replace faulty components. Students will also learn how to perform basic expansions and modifications to their system. This hands-on course builds experience with system use, optimization, common troubleshooting and basic service engineering tasks.

Enroll here

PCS7 System Engineering 1

Course code face-to-face: SCT-PCSYSE1D
Course code virtual: SCT-PCOILSYSE1D

Target audience
Controls engineers using PCS7 to develop a process system solution.

Profile
This course is designed for controls engineers who are responsible for project design, development and commissioning a PCS7 system. The goals of this course are to aggressively help the student learn a basic system configuration and project design using standard system tools and libraries. This course begins with the definition of a typical project and planning the system architecture. The students will then actively build, test and debug a simple PCS7 process system exploring the Automation Station, Engineering Station and Operator Station engineering environments. Hands-on lab exercises are used to build experience with system engineering, process optimization and common troubleshooting.

Enroll here

PCS7 System Engineering 2

Course code face-to-face: SCT-PCSYSE2D
Course code virtual: SCT-PCOILSYSE2D

Target audience
This course is intended for controls engineers using PCS7 to develop a process system solution and need an advanced level system configuration and integration skills.

Profile
This is an advanced process control course for engineers. The goals of this virtual course are to help the student learn advanced level system configuration and project engineering. This course begins with the project configured in the System Engineering-1 course and elevates the functionality through advanced Engineering Station programming, Operator Station graphics development and Automation Station hardware integration. Students use “best practice” project design and management techniques to configure a process application. Bulk engineering tools and advanced editing skills are introduced. Custom graphics and library blocks using Structured Control Language (SCL) will be introduced providing skills to customize a system to meet customer specific requirements. Advanced level system administrative tasks are explored providing an opportunity for a comprehensive experience in engineering, troubleshooting and system integration. Access to fully functional software, virtual tools, and exercises are provided through a cloud-based application.

Enroll here

Process Automation: PCS7 Technician / Maintenance & Operator (cont'd.)

PCS7 Basic Engineer Testing

Course code face-to-face: SCT-PCS7CT1A

Target audience
This Siemens PCS7 Basic Engineer Exam is intended for PCS7 engineers who have met the prerequisites below.

- PCS7 System Engineering 2 or
- PCS7 System Engineering 2 - Virtual

Profile
This is a multiple-choice written performance exam designed to assess the basic skills of a PCS7 Engineer. This is a skills-based certification test covering topics taught during PCS7 Engineering 2.

Enroll here

PCS7 System Operator

Course code face-to-face: SCT-PCPCSU1C
Course code virtual: SCT-PCOILPCSU1C

Target audience
This course targets PCS7 system operators, production supervisors, and administrative staff who require a working knowledge of the system. Additionally, anyone in need of building a basic, operational understanding of the PCS7 process control system. The Day 2 option is targeted for operators with basic technical diagnostic responsibilities and backgrounds.

Profile
This course provides the student with a working exposure to the PCS7 OS control system. This is a flexible agenda with a 1-day core agenda, plus a ``Day 2 option`` with advanced system diagnostics. Using a prebuilt Siemens demo project, the students will learn PCS7 system operational functions and procedures in a safe and controlled environment. All core operational tasks and system tools are discussed and practiced by the students. Typical operator system inputs, acknowledgments, controls, and monitoring tasks are included. The Day 2 option is targeted for those operators with additional system diagnostics responsibilities. This section includes basic hardware, networking, and system troubleshooting. This course is a hands-on curriculum working with a typical simulated production process.

Enroll here

PCS7 Process Safety Sustaining

Course code face-to-face: SCT-PCSFTS1A

Target audience
This course is for site engineers and maintenance staff responsible for sustaining and operation of a Siemens PCS7 based Safety Instrumented System (SIS).

Profile
This course builds skills for sustaining and operating a Siemens PCS7 Process Safety System. The course begins with an introduction to process safety system concepts, with insight on typical process control architectures. The course then builds skills in hardware components, basic SIMATIC project management, and system troubleshooting. Attendees will review system program elements and tools to learn support systems level troubleshooting. The Safety Matrix, a tool available for safety cause and effect configuration is also covered. The class will use a functioning safety demo project with minimal system programming.

Enroll here

SiMiT in Process Automation for Beginners

Course code face-to-face: SCT-PCSMIT1A

Target audience
Decision makers, sales personnel, Project manager, project staff, configuring engineers, programmer.

Profile
This course provides you a summary of the functions and libraries of the simulation software SiMiT. By practical exercises you will learn about the design of simulations / simulation models for testing the PCS 7 automation software.

The perfect interplay of all components integrated in SiMiT enables you to produce more in the highest quality durably and to establish new products on the market considerably faster.

Enroll here

Process Automation: PCS7 Technician / Maintenance & Operator (cont'd.)

PCS 7 AS Advanced Engineering

Course code face-to-face: SCT-PCSASE1B

Target audience
This course is intended for PCS 7 users already proficient at engineering PCS 7 AS/OS projects.

Profile
This is an advanced AS engineering course designed for experienced PCS 7 users, engineers and Solution Partners. The goals of this course are to enhance the student's skill-set by exploring advanced AS configuration topics and solutions to common application problems. This course begins with the programming/specifying of the hardware components based on memory and cycle time requirements. Project handling will include archiving, Multiproject / multi-user engineering, project comparison, access protection and license management. AS hardware configuration topics will include important settings, Profinet / field device integration, high precision time stamping and redundant automation systems. APL v8 innovations and CPU overload reactions will also be discuss as efficient engineering topics. Bulk engineering with Advanced ES will be presented with a highlight on Control module types vs. Process tag types as well as the importing of control modules/process tags using excel. Some advanced SFC and advanced alarm engineering/management topics will be reviewed including Advanced Process Control (APC) options.

Enroll here

PCS 7 OS Advanced Engineering

Course code face-to-face: SCT-PCOSCP2B

Target audience
This course is intended for PCS 7 users already proficient at engineering PCS 7 AS/OS projects.

Profile
This is an advanced OS engineering course designed for experienced PCS 7 users, engineers and Solution Partners. The goals of this course are to enhance the student's skill-set by exploring advanced OS configuration topics and solutions to common application problems. This course begins with an existing AS project and a brief but thorough introduction to it. Using this "base" project and advanced programming techniques, various OS architectures will be added. OS graphic development will include "best practice" methods as well as advanced topics such as C-script, VB script, Faceplate functionality and custom solutions. Students will use recommended project design and management techniques to build a typical OS solution. In addition students will employ advanced Multi-project and Multi-engineering techniques. Advanced OS architectures such as OS redundancy, Web Server/Client and PH will be examined in a clear concise manor. Advanced AS integration will also be addressed throughout this course to provide solutions to common interface challenges. Archive strategy, configuration and implementation will be thoroughly explored. Various diagnostic aids and troubleshooting methods will be employed throughout the presentation of this course.

Enroll here

PCS7 Certified Engineer Testing

Course code face-to-face: SCT-PCS7CT2A

Target audience
This Siemens Programmer PCS7 Certification Test is intended for experienced PCS7 engineers who have met the prerequisites below.

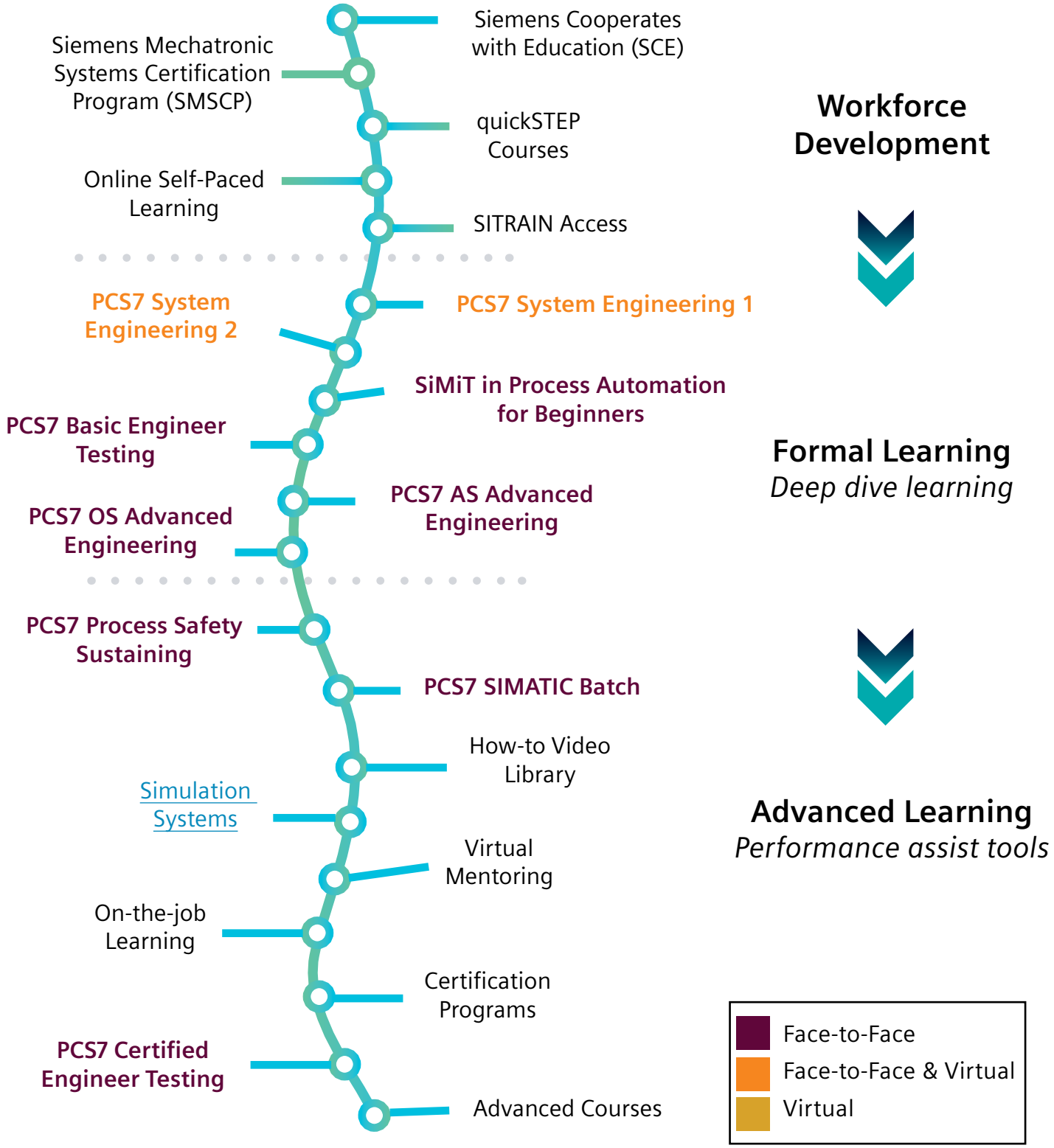
Prerequisites

- PCS7 System Engineering 1 or
  PCS7 System Engineering 1 - Virtual.
- PCS7 System Engineering 2
  or PCS7 System Engineering 2 - Virtual.
- Pass PCS7 Basic Engineer Test (SCT-PCS7CT1A).
- PCS7 OS Advanced Engineering (SCT-PCOSCP2B) .
- PCS7 AS Advanced Engineering (SCT-PCSASE1B).

Profile
This is a comprehensive performance exam designed to assess the skills of a Certified PCS7 Engineer. The examinee will be required to create and configure a proper PCS 7 Multiproject based on a set of instructions and requirements. This is a practical, skills-based certification test covering topics taught during PCS7 Engineering 1, Engineering 2, OS Advanced and AS Advanced courses.

Enroll here

Process Automation:
PCS7 Engineering Learning Map



Process Automation: PCS7 Engineering (cont'd.)

PCS7 System Engineering 1

Course code face-to-face: SCT-PCSYSE1D
Course code virtual: SCT-PCOILSYSE1D

Target audience
Controls engineers using PCS7 to develop a process system solution.

Profile
This course is designed for controls engineers who are responsible for project design, development and commissioning a PCS7 system. The goals of this course are to aggressively help the student learn a basic system configuration and project design using standard system tools and libraries. This course begins with the definition of a typical project and planning the system architecture. The students will then actively build, test and debug a simple PCS7 process system exploring the Automation Station, Engineering Station and Operator Station engineering environments. Hands-on lab exercises are used to build experience with system engineering, process optimization and common troubleshooting.

Enroll here

PCS7 System Engineering 2

Course code face-to-face: SCT-PCSYSE2D
Course code virtual: SCT-PCOILSYSE2D

Target audience
This course is intended for controls engineers using PCS7 to develop a process system solution and need an advanced level system configuration and integration skills.

Profile
This is an advanced process control course for engineers. The goals of this virtual course are to help the student learn advanced level system configuration and project engineering. This course begins with the project configured in the System Engineering-1 course and elevates the functionality through advanced Engineering Station programming, Operator Station graphics development and Automation Station hardware integration. Students use “best practice” project design and management techniques to configure a process application. Bulk engineering tools and advanced editing skills are introduced. Custom graphics and library blocks using Structured Control Language (SCL) will be introduced providing skills to customize a system to meet customer specific requirements. Advanced level system administrative tasks are explored providing an opportunity for a comprehensive experience in engineering, troubleshooting and system integration. Access to fully functional software, virtual tools, and exercises are provided through a cloud-based application.

Enroll here

SiMiT in Process Automation for Beginners

Course code face-to-face: SCT-PCSMIT1A

Target audience
Decision makers, sales personnel, Project manager, project staff, configuring engineers, programmer.

Profile
This course provides you a summary of the functions and libraries of the simulation software SiMiT. By practical exercises you will learn about the design of simulations / simulation models for testing the PCS 7 automation software.

The perfect interplay of all components integrated in SiMiT enables you to produce more in the highest quality durably and to establish new products on the market considerably faster.

Enroll here

PCS7 Basic Engineer Testing

Course code face-to-face: SCT-PCS7CT1A

Target audience
This Siemens PCS7 Basic Engineer Exam is intended for PCS7 engineers who have met the prerequisites below.

- PCS7 System Engineering 2 or
- PCS7 System Engineering 2 - Virtual

Profile
This is a multiple-choice written performance exam designed to assess the basic skills of a PCS7 Engineer. This is a skills-based certification test covering topics taught during PCS7 Engineering 2.

Enroll here

Process Automation: PCS7 Engineering (cont'd.)

PCS 7 AS Advanced Engineering

Course code face-to-face: SCT-PCSASE1B

Target audience
This course is intended for PCS 7 users already proficient at engineering PCS 7 AS/OS projects.

Profile
This is an advanced AS engineering course designed for experienced PCS 7 users, engineers and Solution Partners. The goals of this course are to enhance the student's skill-set by exploring advanced AS configuration topics and solutions to common application problems. This course begins with the programming/specifying of the hardware components based on memory and cycle time requirements. Project handling will include archiving, Multiproject / multi-user engineering, project comparison, access protection and license management. AS hardware configuration topics will include important settings, Profinet / field device integration, high precision time stamping and redundant automation systems. APL v8 innovations and CPU overload reactions will also be discuss as efficient engineering topics. Bulk engineering with Advanced ES will be presented with a highlight on Control module types vs. Process tag types as well as the importing of control modules/process tags using excel. Some advanced SFC and advanced alarm engineering/management topics will be reviewed including Advanced Process Control (APC) options.

Enroll here

PCS 7 OS Advanced Engineering

Course code face-to-face: SCT-PCOSCP2B

Target audience
This course is intended for PCS 7 users already proficient at engineering PCS 7 AS/OS projects.

Profile
This is an advanced OS engineering course designed for experienced PCS 7 users, engineers and Solution Partners. The goals of this course are to enhance the student's skill-set by exploring advanced OS configuration topics and solutions to common application problems. This course begins with an existing AS project and a brief but thorough introduction to it. Using this "base" project and advanced programming techniques, various OS architectures will be added. OS graphic development will include "best practice" methods as well as advanced topics such as C-script, VB script, Faceplate functionality and custom solutions. Students will use recommended project design and management techniques to build a typical OS solution. In addition students will employ advanced Multi-project and Multi-engineering techniques. Advanced OS architectures such as OS redundancy, Web Server/Client and PH will be examined in a clear concise manor. Advanced AS integration will also be addressed throughout this course to provide solutions to common interface challenges. Archive strategy, configuration and implementation will be thoroughly explored. Various diagnostic aids and troubleshooting methods will be employed throughout the presentation of this course.

Enroll here

PCS7 Process Safety Sustaining

Course code face-to-face: SCT-PCSFTS1A

Target audience
This course is for site engineers and maintenance staff responsible for sustaining and operation of a Siemens PCS7 based Safety Instrumented System (SIS).

Profile
This course builds skills for sustaining and operating a Siemens PCS7 Process Safety System. The course begins with an introduction to process safety system concepts, with insight on typical process control architectures. The course then builds skills in hardware components, basic SIMATIC project management, and system troubleshooting. Attendees will review system program elements and tools to learn support systems level troubleshooting. The Safety Matrix, a tool available for safety cause and effect configuration is also covered. The class will use a functioning safety demo project with minimal system programming.

Enroll here

PCS7 SIMATIC Batch

Course code face-to-face: SCT-PCBATP1B

Target audience
This course is for PCS7 system design engineers, configuration engineers, programmers, commissioning personnel, and OEMs working with the SIMATIC Batch option.

Profile
This course is an introduction to Siemens SIMATIC Batch processing. Using the same project created during the prerequisite PCS 7 System Engineering training courses, students will review a typical batch process model to understand process elements and terminology.

Students will then use the same sample batch process to learn batch tools, management and control skills. Security, system administration and batch control techniques topics are included. Recipe generation and planning considerations are also discussed.

Enroll here

Process Automation: PCS7 Engineering (cont'd.)

PCS7 Certified Engineer Testing

Course code face-to-face: SCT-PCS7CT2A

Target audience
This Siemens Programmer PCS7 Certification Test is intended for experienced PCS7 engineers who have met the prerequisites below.

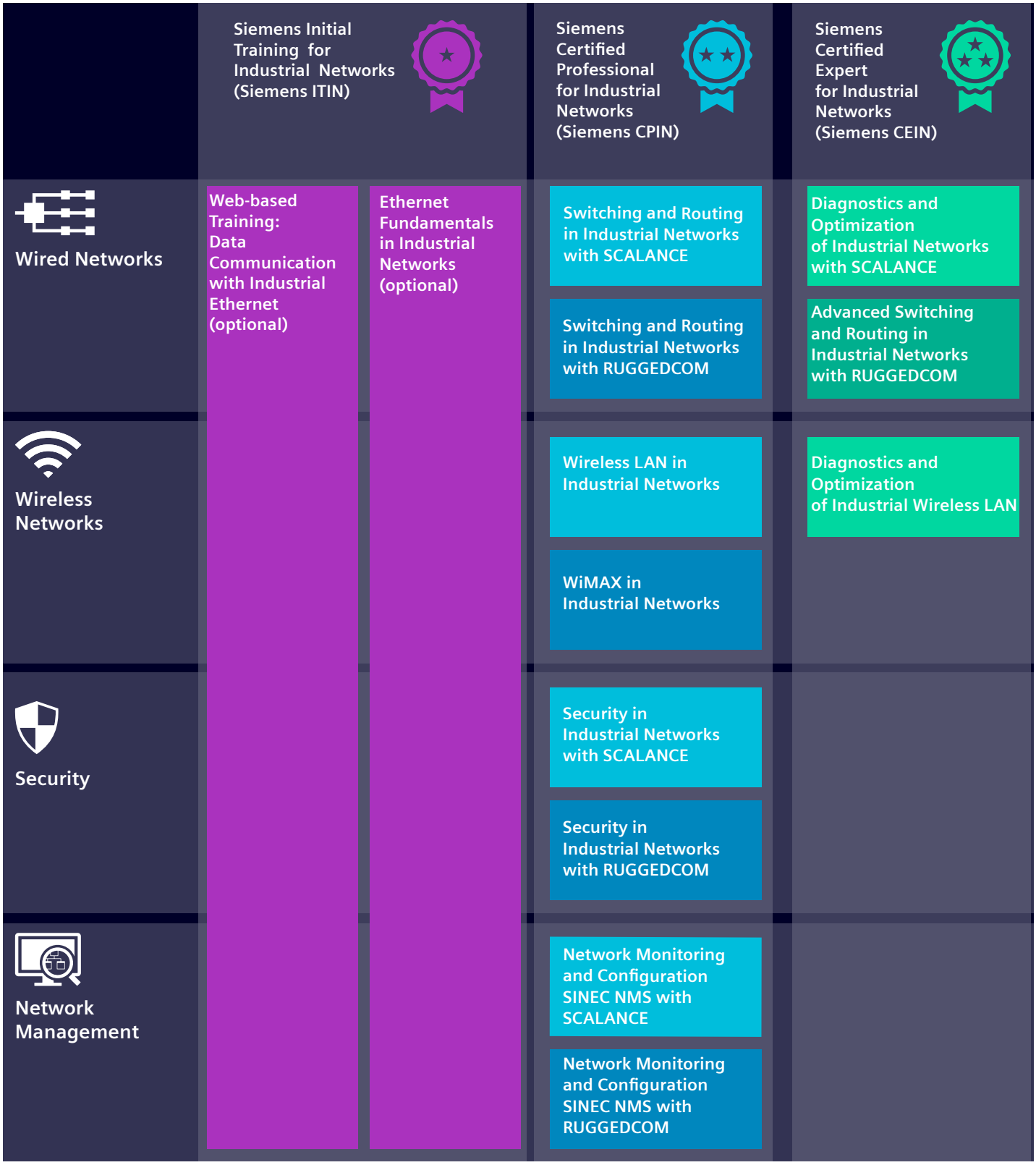
Prerequisites

- PCS7 System Engineering 1 or
  PCS7 System Engineering 1 - Virtual.
- PCS7 System Engineering 2
  or PCS7 System Engineering 2 - Virtual.
- Pass PCS7 Basic Engineer Test (SCT-PCS7CT1A).
- PCS7 OS Advanced Engineering (SCT-PCOSCP2B) .
- PCS7 AS Advanced Engineering (SCT-PCSASE1B).

Profile
This is a comprehensive performance exam designed to assess the skills of a Certified PCS7 Engineer. The examinee will be required to create and configure a proper PCS 7 Multiproject based on a set of instructions and requirements. This is a practical, skills-based certification test covering topics taught during PCS7 Engineering 1, Engineering 2, OS Advanced and AS Advanced courses.

Enroll here

Industrial Networking and Identification



Industrial Networking and Identification (cont'd.)

Data Communication with Industrial Ethernet

Course code face-to-face: IEN-WT-IEOSI
Target audience
This course is for anyone interested in learning about the topic of Industrial Ethernet, either as an introduction or as a refresher, regardless of the industry, as the content is about the technology. Participants range from Sales Engineers wanting to get a better understanding of the topic to Plant Engineers or Substation Engineers wanting to freshen up before taking one of our certification courses. Other ideal candidates could include, but is not limited to the following:

- Application Engineers
- Automation Engineers
- Commission Engineers
- Communication Engineers
- Control Engineers
- Facility Managers
- Operations or IT Network Engineers
- Plant Engineers
- Project Engineers
- Sales Engineers
- Substation Engineers
- System Engineers

Profile
The web-based training is designed to get familiar with the topic of Industrial Ethernet.

The training consists of five content-relevant chapters and one non-mandatory final test. It describes the functional principle of data communication with Industrial Ethernet in relation with the ISO/OSI data communication model using a parcel shipment analogy.

Enroll here

Fundamentals of Industrial Networking

Course code face-to-face: IEN-NETFUND1A
Course code virtual: IEN-NETOILFUND

Target audience
This virtual course is for anyone interested in learning about the fundamentals of networking, either as an introduction or as a refresher, regardless of the industry, as the content is about the technology.

Participants range from Sales Engineers wanting to get a better understanding of the topic to Plant Engineers or Substation Engineers wanting to freshen up before taking one of our certification courses.

- Application Engineers
- Automation Engineers
- Commission Engineers
- Communication Engineers
- Control Engineers
- Facility Managers
- Operations or IT Network Engineers
- Plant Engineers
- Project Engineers
- Sales Engineers
- Substation Engineers
- System Engineers

Profile
This virtual course is an introductory course to networking technology and mechanisms – the foundation of today's digital communication. Designed as a recommended prerequisite for our suite of Certification courses, it will take you on a tour through the seven networking layers.

At the end of the course, students will have a broad understanding of networking terminology, as well as a deeper knowledge of the principles of building Ethernet networks.

The class in online via MS Teams.

Enroll here

Industrial Networking and Identification (cont'd.)

Switching and Routing in Industrial Networks

Course code face-to-face: IEN-IKSWROU1A

Target audience
This course is for users who are involved with developing or sustaining automation networks in an industrial environment. This includes, but is not limited to the following:

- Plant Engineers
- Control Engineers
- System Engineers
- Commission Engineers
- Application Engineers
- Operations or IT Network Engineers
- Facility Managers
- Project Engineers

Profile
This course is one of three certification courses offered under the Siemens Certified Engineer for Industrial Networks (CEIN) program. The curriculum covers Network solutions and how they connect to real-time systems in theory and in practice. It also addresses the requirements and fundamental principles of industrial routing solutions.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a hands-on model for realistic demonstrations.

At the end of the course, students are equipped with the knowledge to plan, configure, operate and provide support for industrial networks.

Enroll here

Switching & Routing in Industrial Networks with RUGGEDCOM

Course code face-to-face: IEN-RLMSWROU
Course code virtual: IEN-RCOILMSWROU

Target audience
This virtual course is for users who are involved with developing or sustaining networks in rugged environments – such as Electric Power, Transportation, Rail, and Defense markets, where RUGGEDCOM equipment is required. This includes, but is not limited to the following:

- Application Engineers
- Automation Engineers
- Communication Engineers
- Control Engineers
- Facility Managers
- Operations or IT Network Engineers
- Project Engineers
- Substation Engineers
- System Engineers

Profile
This online, instructor-led course is one of three certification courses offered under the Siemens Certified Professional for Industrial Networks (CPIN) program, which incorporate RUGGEDCOM products into the curriculum, ensuring students learn and test using products they use on a regular basis. The curriculum covers Network solutions and how they connect to real-time systems in theory and in practice.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a virtual model and examples for realistic demonstrations.

At the end of the course, students are equipped with the knowledge to plan, configure, operate and provide support for networks in their specific market.

Enroll here

Industrial Networking and Identification (cont'd.)

Wireless LAN in Industrial Networks

Course code face-to-face: IEN-IKWLAN1A

Target audience
This course is for users who are involved with developing or sustaining automation networks in an industrial environment. This includes, but is not limited to the following:

- Plant Engineers
- Control Engineers
- System Engineers
- Commission Engineers
- Application Engineers
- Operations or IT Network Engineers
- Facility Managers
- Project Engineers

Profile
This course is one of three certification courses offered under the Siemens Certified Engineer for Industrial Networks (CEIN) program. The curriculum covers the basic physics of WLAN, and the various wireless standards and access methods. Throughout the course, students will learn how to plan, configure and operate wireless solutions in industrial applications, in interaction with real-time systems.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a hands-on model for realistic demonstrations.

Enroll here

WiMAX with RUGGEDCOM

Course code face-to-face: IEN-RCMWIMAX

Target audience
This course is for users who are involved with developing or sustaining networks in rugged environments – Electric Power, Transportation, Rail, and Defense markets, where RUGGEDCOM equipment is required. This includes, but is not limited to the following:

- Application Engineers
- Automation Engineers
- Communication Engineers
- Control Engineers
- Operations or IT Network Engineers
- Project Engineers
- Substation Engineers
- System Engineers

Profile
This course is one of three networking certification courses which incorporate RUGGEDCOM products into the curriculum, ensuring students learn and test using products they use on a regular basis. The curriculum covers network solutions and how they connect to realtime systems in theory and in practice.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a hands-on model for realistic demonstrations.

At the end of the course, students are equipped with the knowledge to plan, configure, operate and provide support for networks in their specific market.

Enroll here

Industrial Networking and Identification (cont'd.)

Security in Industrial Networks

Course code face-to-face: IEN-SECINS1A
Course code virtual: IEN-SEOILCINS1A

Target audience
This course is for users who are involved with developing or sustaining automation networks in an industrial environment. This includes, but is not limited to the following:

- Plant Engineers
- Control Engineers
- System Engineers
- Commission Engineers
- Application Engineers
- Operations or IT Network Engineers
- Facility Managers
- Project Engineers

Profile
This course is one of three certification courses offered under the Siemens Certified Engineer for Industrial Networks (CEIN) program. The curriculum includes an introduction of the potential threats and risks associated with industrial networks, as well as a deep dive into defense in depth strategies. Students will be shown numerous ways to implement access control measures to protect and mitigate security incidents.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a hands-on model for realistic demonstrations.

At the end of the course, students are equipped with the knowledge to plan, configure, implement and provide support for industrial security measures in automation networks.

Enroll here

Security in Industrial Networks with RUGGEDCOM

Course code face-to-face: IEN-RCMSECROX
Course code virtual: IEN-RCOILMSECROX

Target audience
This virtual course is for users who are involved with developing or sustaining networks in rugged environments – such as Electric Power, Transportation, Rail, and Defense markets, where RUGGEDCOM equipment is required. This includes, but is not limited to the following:

- Application Engineers
- Automation Engineers
- Communication Engineers
- Control Engineers
- Operations or IT Network Engineers
- Project Engineers
- Substation Engineers
- System Engineers

Profile
This online, instructor-led course is one of three certification courses offered under the Siemens Certified Professional for Industrial Networks (CPIN) program, which incorporate RUGGEDCOM products into the curriculum, ensuring students learn and test using products they use on a regular basis. The curriculum covers network solutions and how they connect to real-time systems in theory and in practice.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a virtual model and examples for realistic demonstrations.

At the end of the course, students are equipped with the knowledge to plan, configure, operate and provide support for networks in their specific market.

Enroll here

Industrial Networking and Identification (cont'd.)

Network Monitoring and Configuration SINEC NMS with SCALANCE

Course code face-to-face: IEN-IKMONCS

Target audience
This course is for users who are involved with developing or sustaining automation networks in an industrial environment. This includes, but is not limited to the following:

- Plant Engineers
- Control Engineers
- System Engineers
- Commission Engineers
- Application Engineers
- Operations or IT Network Engineers
- Facility Managers
- Project Engineers

Profile
This course is one of Siemens Industrial Networks Education Courses, available for engineers looking to obtain this Certified Professional for Industrial Networks (CPIN) designation.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a hands-on model for realistic demonstrations.

Enroll here

Monitoring and Configuration with SINEC NMS for RUGGEDCOM

Course code virtual: IEN-IKOILMONCR

Target audience
This course is for users who are involved with developing or sustaining networks in rugged environments – such as Electric Power, Transportation, Rail, and Defense markets, where RUGGEDCOM equipment is required. This includes, but is not limited to the following:

- Application Engineers
- Automation Engineers
- Communication Engineers
- Control Engineers
- Operations or IT Network Engineers
- Project Engineers
- Substation Engineers
- System Engineers

Profile
This course is one of Siemens Industrial Networks Education Courses, available for engineers looking to obtain this Certified Professional for Industrial Networks (CPIN) designation.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting.

The course uses a hands-on model for realistic demonstrations.

Enroll here

Industrial Networking and Identification (cont'd.)

Diagnostics and Optimization of Industrial Networks with SCALANCE

Course code face-to-face: IEN-IKDIAOPTS

Target audience
This course is for users who are involved with developing or sustaining automation networks in an industrial environment. This includes, but is not limited to the following:

- Plant Engineers
- Control Engineers
- System Engineers
- Commission Engineers
- Application Engineers
- Operations or IT Network Engineers
- Facility Managers
- Project Engineers

Profile
This course is one of four advanced level courses, available for engineers wanting to obtain the Expert Level designation of Siemens Certified Expert for Industrial Networks (CEIN).

The curriculum covers diagnosis of typical errors in industrial networks and determine how to prevent them or minimize their impact on operations through enhanced device functionality.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a hands-on model for realistic demonstrations.

Enroll here

Advanced Switching & Routing in Industrial Networks with RUGGEDCOM

Course code virtual: IEN-RCOILADVSR

Target audience
This course is for users who are involved with developing or sustaining networks in rugged environments – such as Electric Power, Transportation, Rail, and Defense markets, where RUGGEDCOM equipment is required. This includes, but is not limited to the following:

- Application Engineers
- Automation Engineers
- Communication Engineers
- Control Engineers
- Operations or IT Network Engineers
- Project Engineers
- Substation Engineers
- System Engineers

Profile
This course prepares for the certification “Siemens Certified Expert for Industrial Networks – Switching & Routing”. A voluntary certification examination which consists of two sections will take place at the end of the training.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a hands-on model for realistic demonstrations.

At the end of the course, students are equipped with the knowledge to plan, implement and provide support for Layer 3 networks in an industrial or industry-specific environment.

Enroll here

Industrial Networking and Identification (cont'd.)

Diagnostics & Optimization of Industrial Wireless LAN

Course code face-to-face: IEN-IKWLANADV

Target audience
This course is for users who are involved with developing or sustaining automation networks in an industrial environment. This includes, but is not limited to the following:

- Plant Engineers
- Control Engineers
- System Engineers
- Commission Engineers
- Application Engineers
- Operations or IT Network Engineers
- Facility Managers
- Project Engineers

Profile
This course is one of four advanced level courses, available for engineers wanting to obtain the Expert Level designation of Siemens Certified Expert for Industrial Networks (CEIN).

This course covers techniques and methods for diagnosing industrial wireless networks, as well as eliminating interference and error sources.

Throughout the course, students will have ample time for practical exercises, diagnostics, and troubleshooting. The course uses a hands-on model for realistic demonstrations.

Enroll here

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Notes

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