



SIEMENS DIGITAL INDUSTRIES SOFTWARE

# Xcelerator Academy Certification

## Exam Guide



# Xcelerator Academy Certifications

Career



Achieve



Test



Practice



Your path to success begins **here**

Study



# Table of Contents

- Xcelerator Academy..... 1
  - What does Xcelerator Academy offer?..... 1
  - What is Xcelerator Academy Certification? .....2
- How do I prepare? .....2
  - Preparing for the exams .....2
- What should I expect when taking the exams?.....3
  - Certification Exam Environment .....3
  - Exam Violations..... 10
  - Exam Retake Policy ..... 11
  - Passing Score ..... 11
  - Certificate of Achievement ..... 11
  - Accessing Certification Records..... 11
  - Deleting Certification Accounts and Records ..... 12
  - Certification at the Next Level ..... 12
- Frequently Asked Questions ..... 12
- Xcelerator Academy Certification Planning..... 14
- Appendix: Available Certification Exams ..... 16

# Xcelerator Academy

## What does Xcelerator Academy offer?

Xcelerator Academy is the one place where all learners – software users, developers, implementers, customers, partners, and Siemens professionals – go to develop technical understanding of the use and application of software products the Xcelerator portfolio. We have tapped into the world’s largest customer success organization to leverage knowledge and experience while our learning experts create engaging learning to meet various needs of our ever-evolving portfolio. Multiple learning options are available to prepare all learners to be successful with Siemens Digital Industries Software products.

Xcelerator Academy offerings include the following:

- *Learning Events*, which support onboarding your core team, through solutions like instructor-led training (virtual or in-person) and on-demand training
- *Learning Memberships*, which support users’ performance through ongoing software usage
- *Learning Programs*, which support enterprises in identifying training needs, assess target groups and architect the right set of solutions to ramp-up towards an educated workforce and support performance whenever needed
- Certification can be achieved through a *Packaged Certification* offer or by consuming a Learning Event, Learning Membership or Learning Program in combination with certification requirements

Generally, implementers and developers are encouraged to study recommended content in packaged certifications as an accelerated path to certifications. Whereas end users may benefit from studying content mapped out in a Learning Memberships followed by certification exam attempts.

End users utilize CAD, CAE, and analysis tools including, but not limited to:

- NX Design
- Additive Manufacturing
- NX CAM
- Simcenter 3D
- Simcenter STAR-CCM+

The developer roles may include:

- Mendix
- MindSphere

Implementers design and execute the installation and configuration of enterprise backbone systems, including:

- Teamcenter
- Opcenter

## What is Xcelerator Academy Certification?

The Xcelerator Academy Certification is the certification program for most Siemens Digital Industries Software products. Software product coverage includes NX, Teamcenter, Mendix, MindSphere, Simcenter STAR-CCM+, Simcenter 3D, Opcenter, Capital, and others.

Achievement of certification is a clear indication of user proficiency. Therefore, Xcelerator Academy certification exams are designed with the same detail and diligence that product courseware receives. Updates are made frequently in alignment with new software releases and feature enhancement.

To protect the integrity of the program and of your certification achievement, exams are timed and proctored, either in-person or via AI-based proctoring. In addition, there is a system check conducted at the beginning of the exam to ensure the integrity of the testing environment.

Certification can be completed as part of a comprehensive packaged certification or as a stand-alone option. Wherever available, the packaged certification is recommended as the most effective way to certify your knowledge and skills. The stand-alone option, however, may be more suitable for those who already have deep experience and understanding of the software. If choosing this path, retakes are permitted, but each attempt must be purchased.

## How do I prepare?

### Preparing for the exams

Studying and practicing are essential for you to be as successful as possible with your certification exam attempts. Working through the courseware is the best way to do well on the certification exams. Certifications are designed as part of a sequenced curriculum, sometimes packaged into a packaged certification offering or available as a learning map to guide you through the content. However, there is always the option to take the exam as you wish, outside of the suggested curriculum. In that case, we highly encourage you to review the list of major topic areas that are part of the exam and prepare yourself accordingly. Please see the Xcelerator Academy website for available certification exams and courseware.

Your exam should be taken in a quiet and comfortable place free from distractions. Make sure to find a suitable spot in your workplace or home several days or more before you attempt the certification. Plan for 15 minutes of log in time before your certification and two to three hours of examination time, depending on the exam. If you live with others, let them know you are unavailable during this time, except in an emergency.

In the event you are unable to complete the exam for an emergency, submit an appeal request in writing (paper or email) including your name, email, title of the certification, certification registration ID, date attempted, very brief description of emergency, and documented proof. When you login to the certification environment, you will have the opportunity to check your computer system for exam compatibility. This is done before launching your actual certification exam.

To conduct the system check, the following are recommended:

- Do not click on the “GO TO EXAM” button (you’ll do that later).
- Ensure your operating system and web browser are up to date.
- Confirm with your internet service provider that there will not be disruptions of service during the time you will be attempting the certification exam.
- Confirm with your regional power provider that there will be no disruptions of electricity service during the time of the exam attempt.
- Ensure your webcam is fully functional as you will be required to be visible via your webcam during the entire time of the exam attempt.
- Ensure the monitor -only one is permitted- that you will use during your exam attempt is properly displaying from your computer.

The certification environment check will guide you through the steps to determine if your computer system is ready for the actual certification exam. Please see detailed steps in the next section of this document.

## What should I expect when taking the exams?

### Certification Exam Environment

Xcelerator Academy certifications are conducted online via a laptop or desktop computer in a restricted and controlled AI-proctored testing environment. This is done to ensure that the test taker attempts the exam without outside assistance and is the one who receives the certificate when the certification exam attempt is successful.

Operating systems may be Windows 10 and Mac OS X. Supported browsers include Safari, Chrome, Firefox, and Microsoft Edge. For the Chrome web browser, you will need to install a [Mettl Chrome exam extension](#). The Firefox browser will not require an extension. Shortly before your examination attempt make sure to **reboot your computer**. After rebooting, open only the email you received from Siemens and/or Mettl containing the details of your exam and a web browser, preferably Chrome.

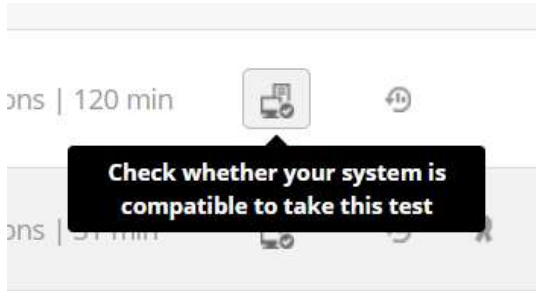
During the exam, the Mettl testing environment will monitor your performance and behavior through your webcam and will record any disruption to the testing environment. Therefore, make sure to **turn off all but one monitor** for the duration of your exam attempt.

In addition to allowing only one monitor, the certification environment will also track disruptions from the test page. One disruption to the test will result in a warning. If this occurs, you will see a red window appear with a warning message. After the second disruption, a message appears stating **“This will be the final warning.”** Any subsequent disruptions to the testing environment will result in the certification exam being closed with the attempt logged as a failure.

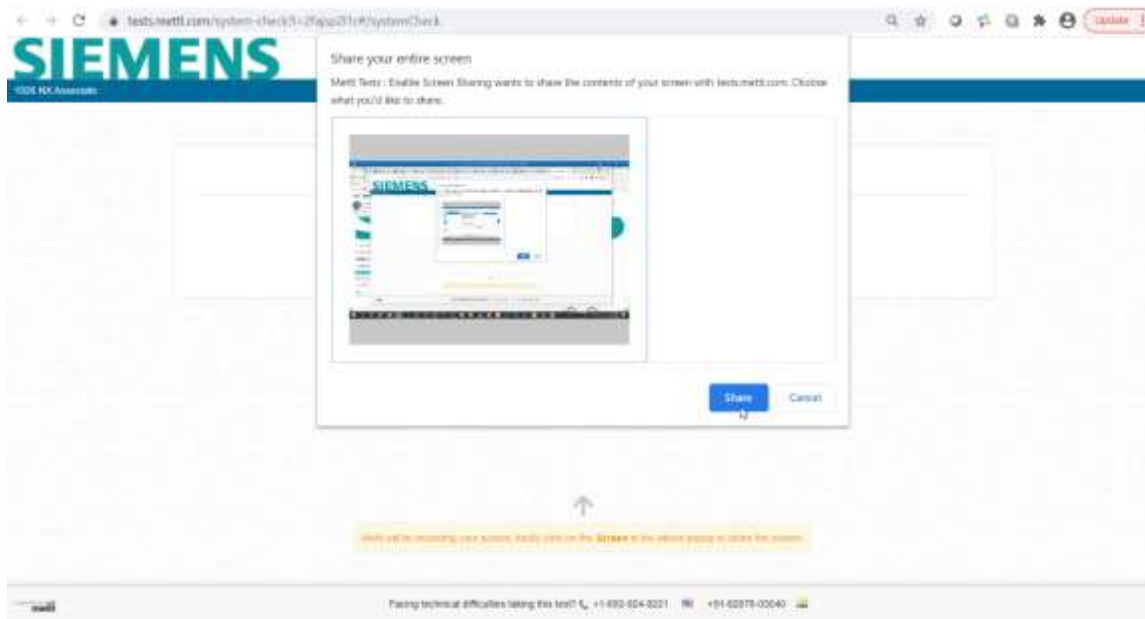
To begin checking for system compatibility with the certification test environment, first check to ensure that your webcam is operational. Microsoft Teams or another web-meeting tool may be used to conduct such a test.



Enter the certification environment and **click "View Test Instructions"**, which opens a popup window. Please read and follow the instructions. When that is done, move over to the computer icon with the check beside it and **hover over**. You will see a message stating: "Check whether your system is compatible to take this test."

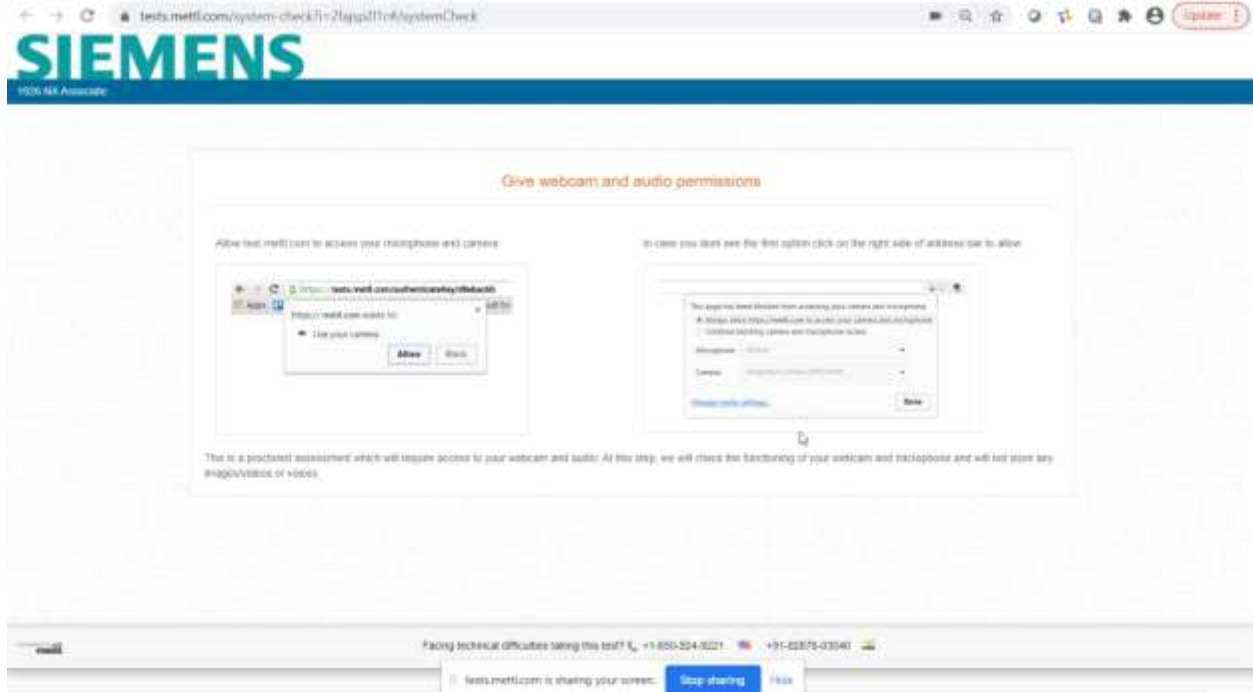


**Click the button and follow the prompts**, some of which may require you to close applications or additional screens, if you haven't already. After you have closed screens, browser windows, and applications, you may be prompted to **click Refresh**. You will then see the following view:

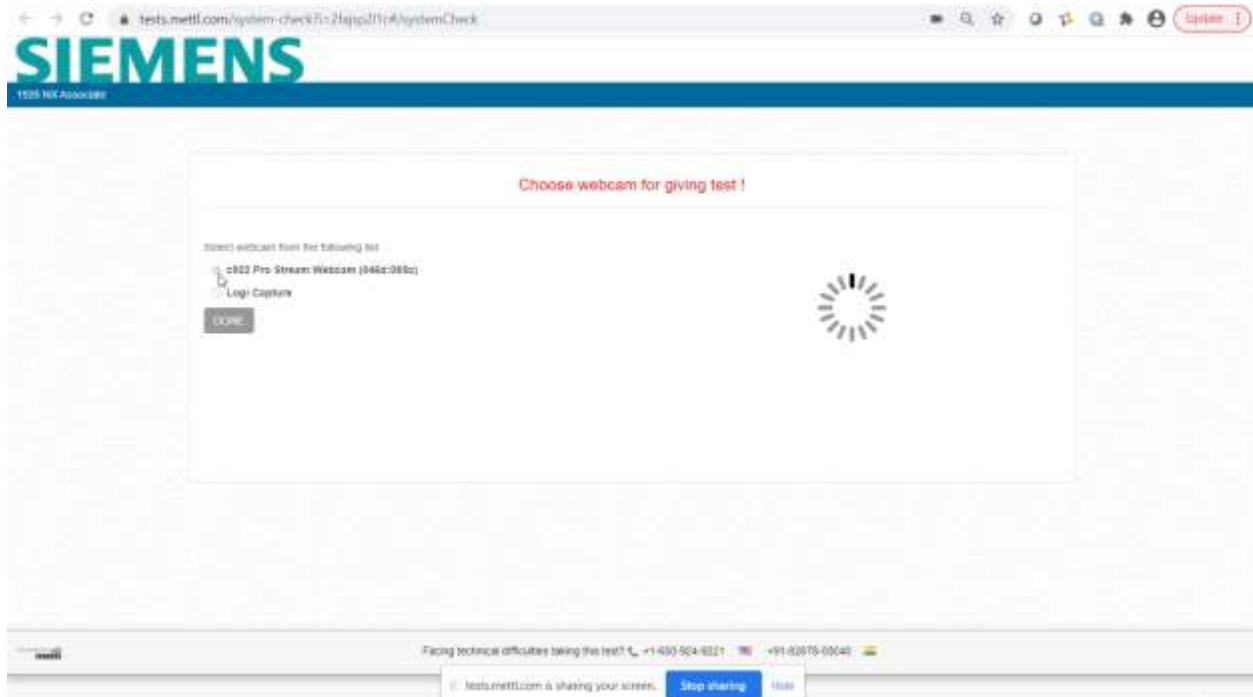


**Click "Share"**.

Next, you will need to allow for webcam permission.

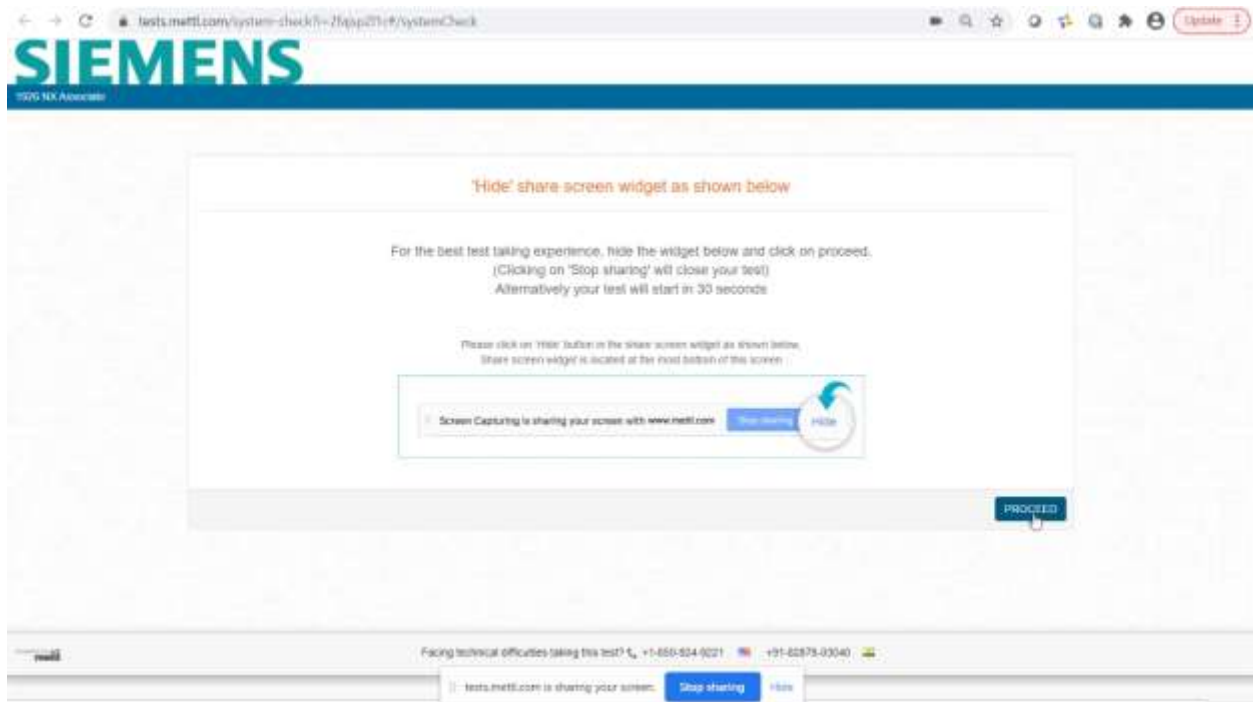
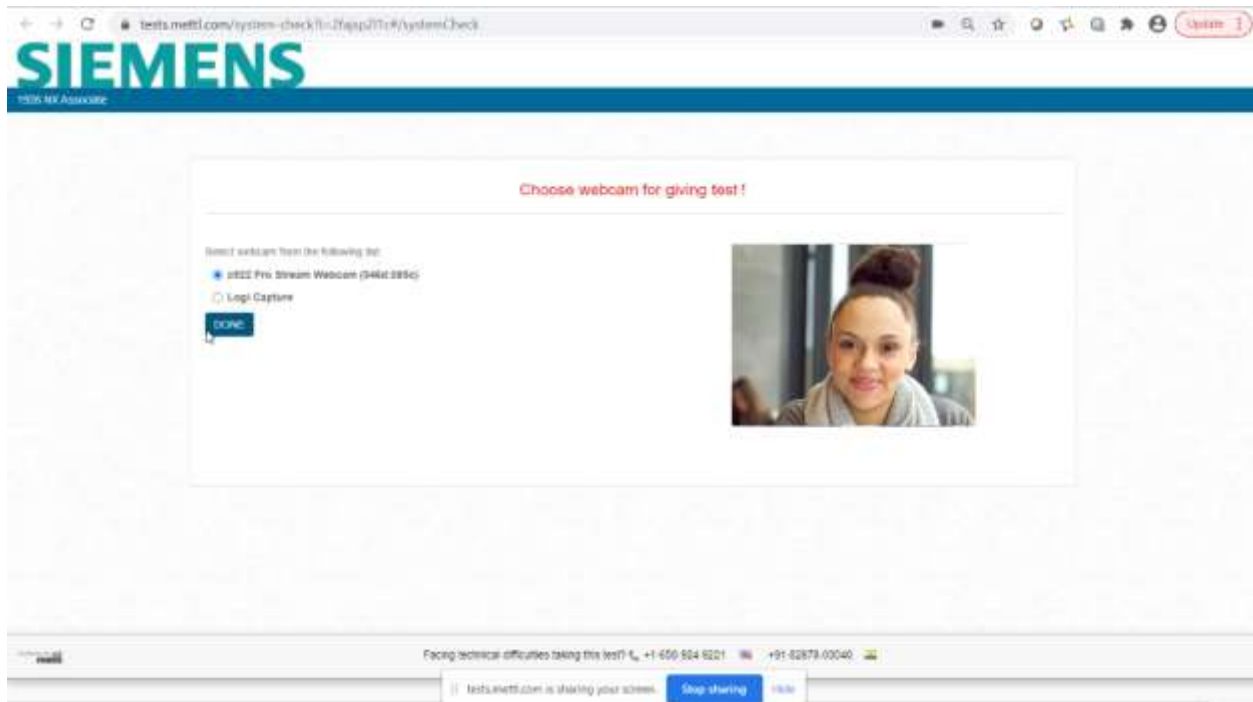


If needed, **select the webcam** you will be using.





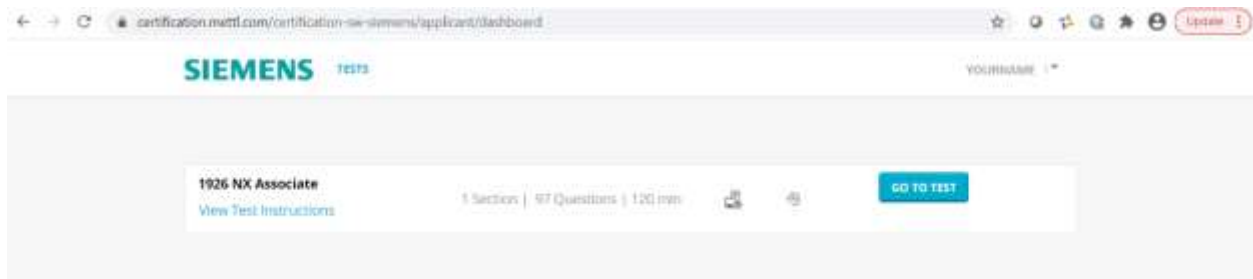
You will then see yourself in the webcam. Click **“DONE”** to proceed.



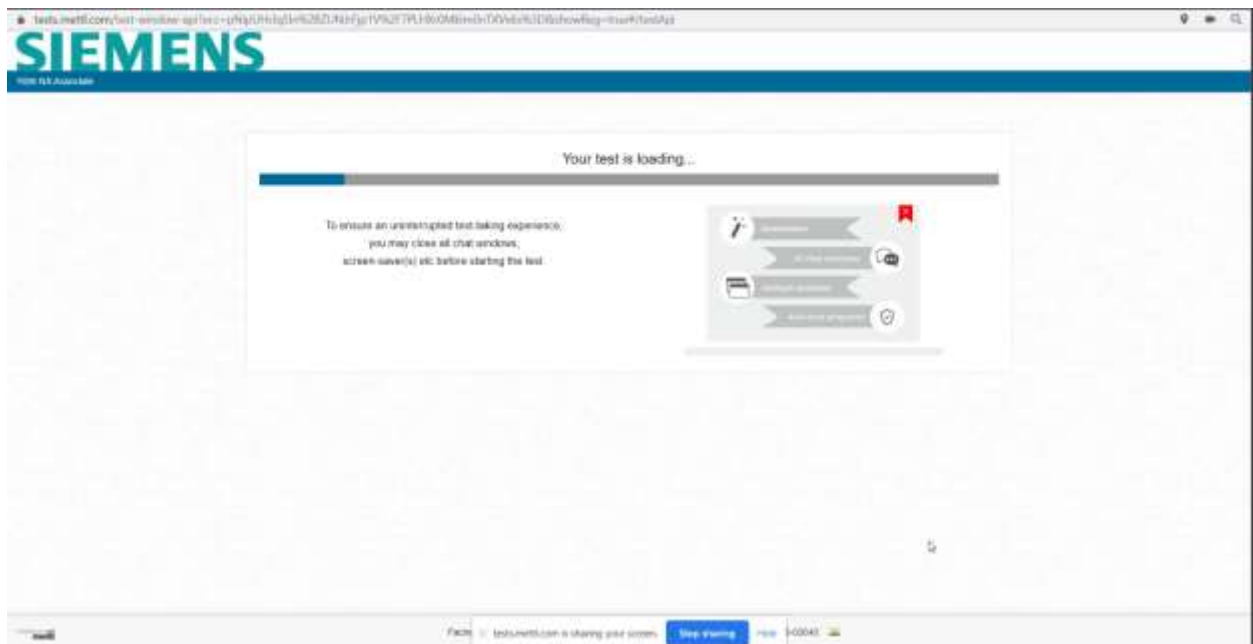
Finally, click **“Stop Sharing”** and close the tab. That completes the system check.

**Before you begin the exam**, it is recommended that you take care of any personal needs like phone calls, emails, bathroom needs, etc. It is also recommended that you have a meal an hour or two before your examination.

Once you are ready to proceed to the exam environment, **click “GO TO TEST”**.



The exam environment will begin to load. You will go through a system check again, but it will be quick since you will have already done this.

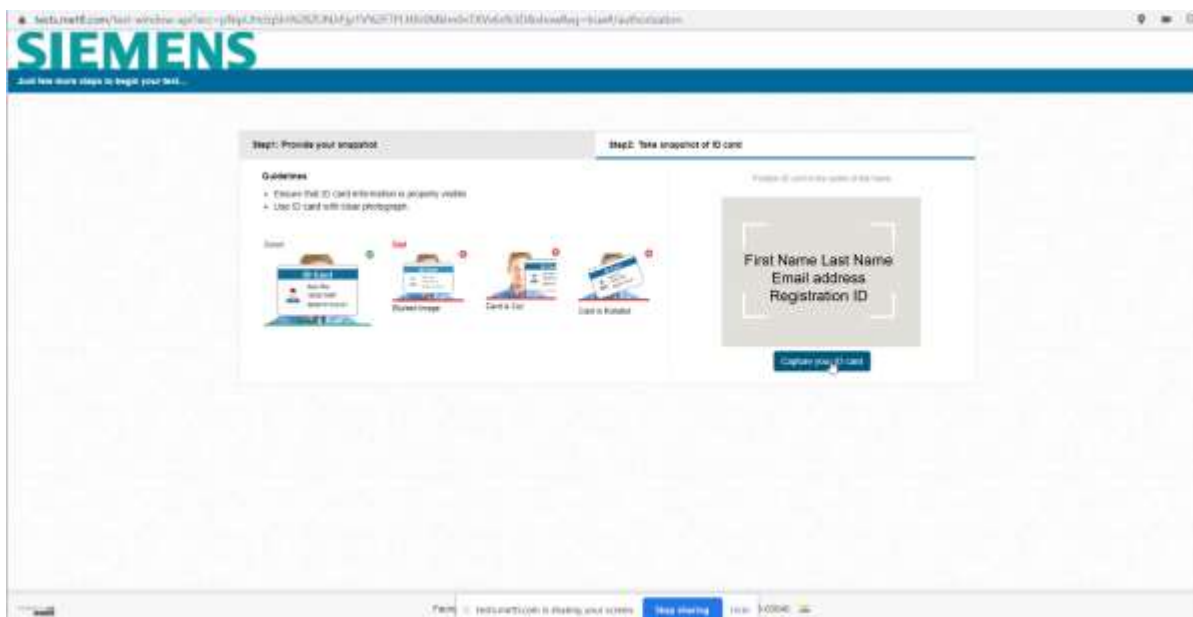


Look into the webcam, position your face in the image capture tool, and **click “Capture your face”**. Make sure you are fully visible in the camera.

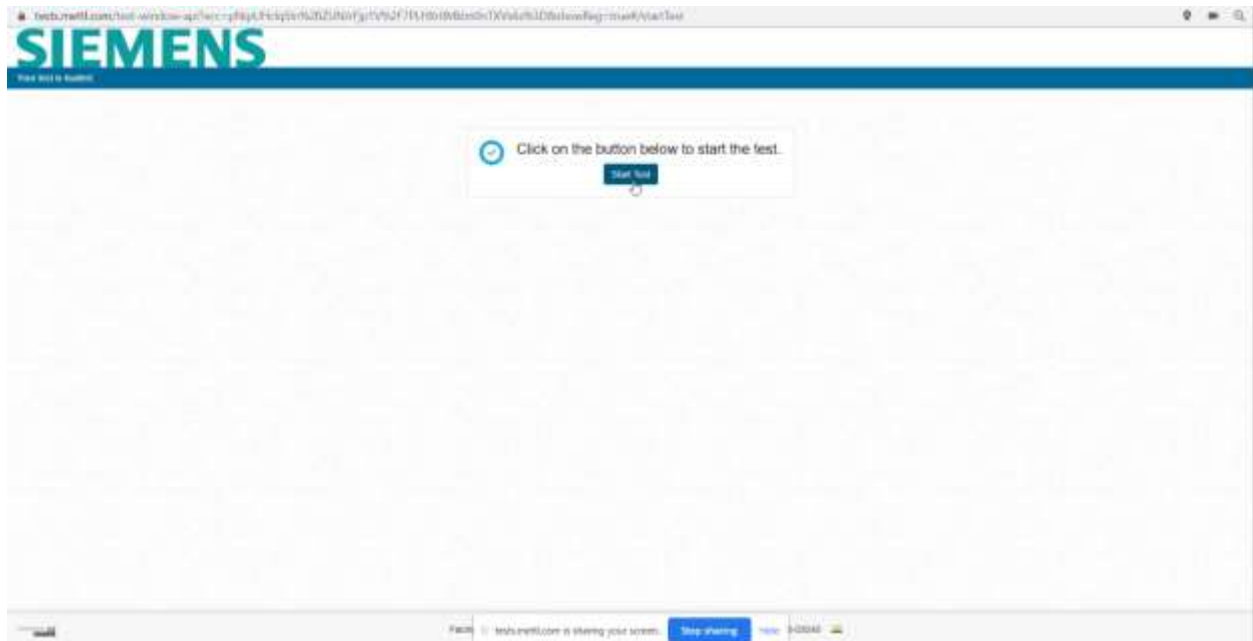


Next, you will need to provide your registration ID. Working professionals can use their organization’s employee ID card, and students can use their university/college/school ID card. You may also **write or print out** your registration details on a sheet of paper – ensure that your name, email address, a recent passport-sized photo, and the order ID are all clearly visible. When prompted during pre-exam validation, hold your ID card/paper up to the webcam and **click “Capture your ID card”**.

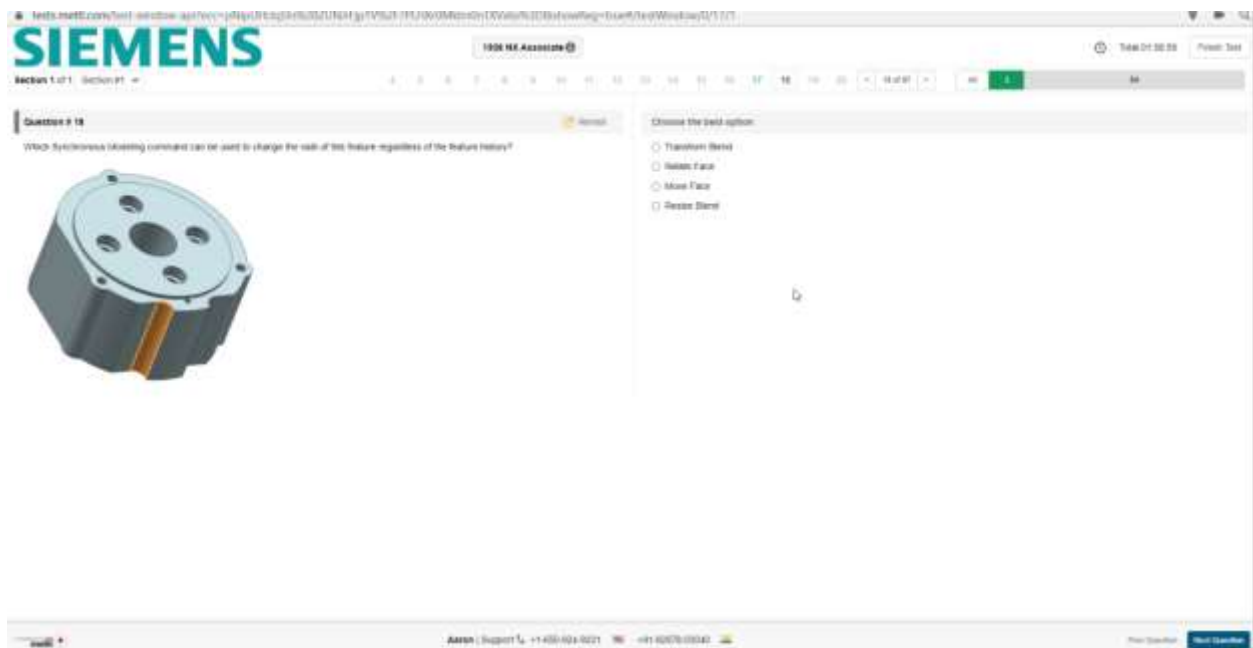
**DO NOT USE** a license, passport, credit card, or any other card with personal details.



Click **“Start Test”**.



Now, you will be in the actual certification exam environment and you can begin your exam.



When you have completed the exam, click **“Finish Test”**.

At the end of the exam, you will be immediately notified of the result. If the attempt was successful, you will get access to your certificate, stating the name of the certification you have achieved and the date you passed the exam. Feel free to share your certification designation with others (including on social media), in its exact form to celebrate your success. No modifications of any kind are permitted to the certificate. Violation of this requirement will result in instant revocation of the certification designation with no recourse for refund.

## Exam Violations

The following circumstances are considered violations of certification examination rules and result in termination of the exam, your registration being suspended or canceled, and any exam fees paid forfeited.

1. Cheating defined as a deliberate or involuntary act to improve your exam conditions to obtain an inappropriate assessment result, including:
  - i. Any sort of oral or electronic communication with a person or third parties within testing environment
  - ii. Any use of unauthorized material like books or notepad, mobile phones, exam dump or brain dump publications in any form
  - iii. Any doubtful movement during the period of your exam like reading questions aloud, placing any object over webcam, or moving out of webcam view etc.
  - iv. Use of headphones / earbuds, or any other type of hearing equipment, aside from required hearing aids
  - v. Use of any software or optical character recognition (OCR) tools, or having more than one display monitor
2. Any content viewed or accessed is Siemens intellectual property – reproducing, communicating, or transmitting certification exam content in any form for any purpose is strictly prohibited and a serious violation of terms & conditions, including:
  - i. Copying or pasting content using any software or OCR tools
  - ii. Trying to recall test questions or test answers from the proctored exam
  - iii. Sharing or discussing any or all test questions or test answers with anyone
  - iv. Taking picture using mobile phones or any other device
3. Candidates trying to register and retake exam under a different name / testing ID, or any other means will be termed as cheating. This is a direct violation of our retake policy and exam rules and will result in a denied or revoked certification.

## Exam Retake Policy

If a candidate is unsuccessful in achieving a passing score on the first attempt of an exam, the candidate will be eligible to repurchase and attempt up to three exams within a 6-month period. The next attempt must be scheduled after a cooling period of 21 days from the last attempt date.

Attempt 2	Attempt 3	Attempt 4
21 days after attempt 1	21 days after attempt 2	21 days after attempt 3

Retakes will not be permitted to those wanting to improve their score on an already successful passing attempt.

If a candidate experiences any of the below errors, the candidate can write to Siemens for an exception:

- a. Major failure due to internet connectivity issue
- b. Major failure due to computer hardware failure
- c. Working labs not functioning appropriately or crashed

## Passing Score

The intention of certification is to provide qualified individuals with the ability to demonstrate their knowledge. Therefore, Xcelerator Academy certifications are designed with easy, medium, and difficult questions based on the goal of measuring fundamental technical knowledge about the use of the software product. Each question in the exam is weighted equally with all others and there is only one correct answer for each question.

Since the Associate-level certification is a closed exam, test takers must be well-prepared for their attempt and be able to recall a large amount of information during the exam period. Test takers who provide correct answers for 68.00% or more of the questions have passed the exam and will receive the certificate. Exam scores below 68.00% do not result in certification.

## Certificate of Achievement

Successful certification exam attempts will result in immediate delivery of the certificate associated with the exam. Once the test taker has successfully completed the certification exam, the certification designation is available to be shared to inform others of their achievement. This certification designation comes in the form of text and an icon on a PDF. Certificates MAY NOT be modified in any way.

## Accessing Certification Records

Certification exam results are kept for a minimum of three years in the certification platform, unless otherwise specified by the account owner, i.e., the test taker, who may elect to request



record and/or account deletion at any time. Test results will be available to the test taker in their learning and/or certification platform accounts during the time in which their account is active.

## Deleting Certification Accounts and Records

If you wish for your account and/or certification records to be deleted, place your request in the Support or Contact area of the Xcelerator Academy web page. Include your name, your email address, and the certification exam(s) you have taken. Requests will be addressed as quickly as possible but may take up to eight (8) weeks to fully process.

## Certification at the Next Level

After achieving certification at one level, to keep your knowledge and skill as current as possible, it is recommended that you study and practice for the next level. Please visit the [Xcelerator Academy](#) website for information about certifications at the Associate, Professional, and Expert levels.

# Frequently Asked Questions

## Why should I get a certification?

A company's most valued resource is their workforce. Investing in workforce capability, your capability, is as critical to business and organizational success as investing in technology and infrastructure. Using designed learning and certification programs is the best way to ensure that you and your colleagues are fully prepared to utilize all the features of Siemens software to make your products more competitive and more profitable.

Certifications allow confirmation of achieved knowledge & skill, which is clear evidence of user proficiency. Further, fully-enabled and proficient software users require less time to accomplish tasks and do so more accurately, thus reducing costs and increasing the bottom line.

Certification provides credibility, enhances trust, and serves as a reference point for all who successfully achieve certificate levels.

## What certifications are available?

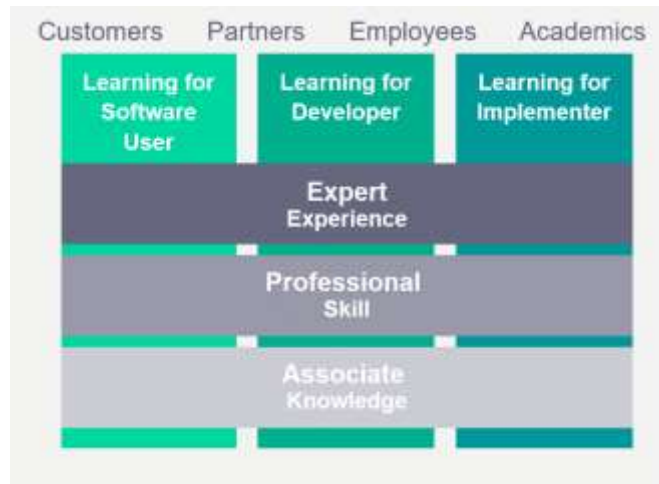
The Xcelerator Academy team in Siemens Digital Industries Software designs and develops courseware for the robust and evolving Xcelerator (TM) product portfolio, with each product area containing many different levels and application areas.

Certifications are currently available for Mendix, MindSphere, NX, Teamcenter, and Simcenter. Certifications are in development for many additional products within the Xcelerator (TM) product portfolio. Please see the comprehensive information about certifications on the [Xcelerator Academy](#) website.

## What are the certification levels?

The certification program enables role-based certifications to validate knowledge, skills, and expertise in the use of Siemens software products at the **Associate**, **Professional**, and **Expert** levels.

**Note:** Certification exams for Professional and Expert levels are in development.



## How are certification exams conducted?

Certification exams for Associate and Professional levels are conducted in a secure, AI-proctored online platform. Please see the **Certification Exam Environment** section in this document for a detailed description. Evaluations for Expert level certification are conducted through an application process involving review by subject matter experts in the appropriate role and field.

## What should I study and practice before attempting a certification exam?

Certification exams are based on curricula designed and developed by Siemens for software users, developers, and implementers to be successful in their roles. Therefore, certification exams are always tied directly to a set of courseware. Thus, studying the courseware associated with the certification exam is the most-successful way to prepare. Please see the [Xcelerator Academy](#) website for information on courseware architecture.

## How long is the certification valid?

Certifications from successfully completed certification exams do not expire. However, you are encouraged to achieve the highest levels of certifications available to you and to continue studying and practicing as each new versions of the software products are released.

## How do I buy certification attempts?

Certification offerings are available in combination with courseware as well as stand-alone. Please contact your learning services engagement manager or visit the [Xcelerator Academy](#) website for more information.

## What learning maps are available for certification?

Please see the [Xcelerator Academy](#) website for information on courseware architecture and available Packaged Certifications.

# Xcelerator Academy Certification Planning

More than six months before comprehensive certification exam:

- Select courseware aligned with role/usage of the SW features
- Create study plan based on the recommended courseware for the certification exam of interest
- Begin studying or prepare to begin on a specific date

Three to six months before comprehensive certification exam:

- Courseware for the targeted role is selected by the learner and made available through Xcelerator Academy memberships and/or instructor led training
- Study plan, including anticipated dates for the practice and certification exams, is finalized and ready to follow
- Courseware study begins

One month before comprehensive certification exam:

- Most of the courseware study is complete
- Practice exam was already attempted or will be taken within the next week
- Results from practice exam were (or will be) used to focus on chapters/topics for which additional study is needed

One week before comprehensive certification exam:

- All courseware study is complete
- Practice exam was taken, and its outcome was used to ensure knowledge was achieved for the content on the practice exam
- Candidate logged into their certification exam account and reviewed the system requirements

Up to a week before the comprehensive certification exam:

- Location where exam will be attempted (office or quiet place with no distractions) has been selected and is prepared accordingly. Others in building, home, office, dorm, etc. are informed that during the exam you may not be interrupted except for an emergency

One hour to immediately before comprehensive certification exam:

- Check system requirements
- Use the bathroom
- Have only a bottle of water present
- Remove all distractions, including turning off your personal mobile device(s) and closing out all applications
- Ensure any others around understand that you may not be interrupted except in an emergency

Six months after successful completion of certification exam:

- Prepare for the next level of certification by following these steps in order from the beginning

## Appendix: Available Certification Exams (As of 2022-06-08)

<i>Product</i>	<i>Version</i>	<i>Level</i>	<i>Page</i>
<i>Additive Manufacturing</i>	1953	Associate	17
<i>Capital Logic</i>	2021.1	Associate	17
<i>MindSphere</i>	2022.2	Associate	17
<i>NX CAM</i>	1953	Associate	18
<i>NX Design</i>	1980	Associate	18
<i>Opcenter Execution Core</i>	8.0	Associate	19
<i>Plant Simulation</i>	16	Associate	20
<i>Polarion</i>	21.1	Associate	20
<i>Process Simulate Standalone</i>	16	Associate	21
<i>Process Simulate on Teamcenter</i>	16	Associate	22
<i>Simcenter 3D</i>	2021.2	Associate	23
<i>Simcenter FloEFD</i>	2021.2	Associate	23
<i>Simcenter FLOTHERM</i>	2021.2	Associate	23
<i>Simcenter FLOTHERM XT</i>	2021.2	Associate	24
<i>Simcenter STAR-CCM+</i>	2021.1	Associate	24
<i>Teamcenter Quality</i>	5.1	Associate	24
<i>Teamcenter/ Teamcenter X</i>	13.1/5.1	Associate	25

### Additive Manufacturing Associate Certification

Section Name	Topics
Section 1: Introduction to Additive Manufacturing	Introduction to Additive Manufacturing Processes Additive Manufacturing in NX Additive Manufacturing and the Product Development Lifecycle Additive Manufacturing Tradeoffs and Strategy
Section 2: Component Design for Additive Manufacturing	Useful Modeling Techniques for AM Designing with Lattices Using Scanned Geometry Generative Design and Topology Optimization
Section 3: Polygon Modeling and Reverse Engineering	Introduction to Polygon Modeling Polygon Modeling Task Environment Polygon Modeling Ribbon Bar Reverse Engineering

### Capital Logic Associate Certification

Section Name	Topics
Section 1: Capital Logic – Getting Started	Getting Started Basics Creating Multiple Device Connectors Pin Management Diagram Editing
Section 2: Capital Logic – Advanced	Complexity Advanced Wiring Library Parts Main Lab Concurrency

### MindSphere Associate Certification

Section Name	Topics
Section 1: Getting Started with MindSphere	Discovering the Industrial Internet of Things Exploring the MindSphere Ecosystem Introducing the MindSphere Portfolio Revealing the Potential of MindSphere
Section 2: Exploring Essentials of MindSphere	Exploring MindSphere Fundamentals Exploring MindAccess Plans Creating the IoT Data Model for MindSphere Managing a MindSphere Tenant
Section 3: Overview of MindConnect Elements	Overview of MindConnect Elements
Section 3: Inspecting MindSphere Security	Introduction to MindSphere Security MindConnect Security MindSphere System Security MindSphere App Security
Section 3: Developing MindSphere Applications	Exploring Cloud Foundry Developing Applications for MindSphere Using the Asset Management Service Using Time Series, Aggregate and Event Management APIs
Section 3: Creating Custom Agents with MindConnect API	Introducing MindConnect API Getting Ready for MindConnect API Creating a Custom Agent with MindConnect API Exchanging Data with MindConnect API Using the Diagnostic Service



## NX CAM Associate Certification

Section Name	Topics
Section 1: Basic Design in NX	Add Finishing Details Analyze existing assemblies Basic part edits using synchronous Bottom-up assembly building Create a basic part Create a basic part drawing Create cylindrical parts using sketches NX User Interface Organize and display part models Simple changes and part interrogation
Section 2: Managing NC Programming Data	Cavity Milling Create and structure NC program documents Create and structure an NC program Examine a manufacturing part Study Manufacturing process and create manufacturing setup
Section 3: Machining a Prismatic Part	Fixed Axis Contouring Planar Milling
Section 4: Fixed and Multi-Axis Milling	Fixed-axis contouring Plunge milling and z-level milling 4 and 5-axis machining and 5-axis Z-level Profiling walls with a variable axis Variable axis contour milling
Section 5: Turbomachinery and other Multi-Axis Options	Associative Machining Geometry Hole Machining In process Workpiece transfer Probing and Generic Motion Sequential Milling and Non-cutting Moves Turbomachinery Milling

## NX Design Associate Certification

Section Name	Topics
Section 1: NX Basic Design	NX User Interface Create a basic part Organize and display part models Create cylindrical parts using sketches Add Finishing Details Simple changes and part interrogation Basic part edits using synchronous Analyze existing assemblies Bottom-up assembly building Create a basic part drawing
Section 2: Product Design Fundamentals	Establish design intent Analyze the design and make changes Create parts with constant wall thickness Sweep Geometry Building parts with duplicated geometry Create symmetric models
Section 3: Molded and Cast Part Design	Create molded parts Build basic parts using surfaces Build robust models Data translators Edit non-parametric models

Section 4: Loading and Working with Assemblies	Manage Assemblies Configure an Assembly Create Reusable Components View component interaction using sequencing
Section 5: Design in Context of an Assembly	Top-down modeling Link geometry between related parts Create expression links between parts Revise assemblies

### Opcenter Execution Core Associate Certification

Section Name	Topics
Section 1: Introduction to Opcenter Execution Core	Navigating the Portal Interface Controlling Login and Security Exploring Portal Studio Developer
Section 2: Configuring the Factory Model	Creating the Factory Model Configuring WIP Tracking Products and Containers Modeling the Workflow Executing Shop Floor Transactions Accessing information within Opcenter Execution Core
Section 3: Utilizing Features	Controlling Material Issue in Opcenter Configuring and Executing Electronic Procedures Managing Documents within Opcenter Core Performing Data Collection Creating a Bill of Process Using Process Time Enforcement
Section 4: Managing Resources	Introduction to Resource Management Configuring Resource Management
Section 5: Installation Core	Administration Connect MOM Configuration Data Migration Licensing Security Administration Software Updates System Architecture and Flow Troubleshooting

## Plant Simulation Associate Certification

Section Name	Topics
Section 1: Introduction to Simulation Studies	Overview of Plant Simulation Explore the Plant Simulation graphical user interface
Section 2: Basic Simulation Study	Define a target analyze a simple system and acquire data Create a simple model Validate the throughput of a simple model Prepare to create a new model from the previous model Prepare to create a new model from the previous model Create a more detailed model to produce a better result Implement basic objects to analyze results Create a hierarchical model
Section 3: Include modular components	Identify inherited objects and attributes Navigate and change 3D viewer visualization Simulate machine processing time and failures with distributions Material flow objects with a capacity greater than one
Section 4: Include Conveyors and workers	Model length-oriented objects Setup time assembly and dismantle objects Create user-defined attributes and data tables Use basic workers and work shifts
Section 5: Include presentation collateral	Create experiments and custom reports Gather time cost and power consumption statistics Add extruded plates point clouds and backgrounds
Section 6: Include custom logic	Use the Method Debugger and anonymous identifiers Run a method during a simulation Set attribute values with methods Access data in tables lists and global variables Use distribution functions use operators and convert data Create conditional methods and access the contents of an object Model transport systems and setup time Save and load data into a Plant Simulation table
Section 7: Setup 3D objects	Setup and use cameras Import and create a library of 3D objects Create MU animation and animatable objects Customize 3D objects with methods Use advanced worker techniques

## Polarion Associate Certification

Section 1: Polarion Fundamentals	Analyzing your data with Live Reports How to use projects to organize your data Managing your LiveDocs Managing your Work Items Navigating the Polarion user interface Planning and tracking your development activities Support parallel development activities with Collections Tracking test case execution via Test Runs
Section 2: Polarion Requirements Management	Managing System Requirements Specifications V-Model Concepts Managing Software Requirements Managing Risks Managing Changes Building Software Managing Variants
Section 3: Polarion Test Management	Test Management Concepts Test Planning Test Analysis and Design Test Execution Defect Management

## Process Simulate Standalone Associate Certification

<p>Section 1: Identify Process Simulate basics</p>	<p>Identify basic concepts for PS on eMS Standalone Identify Process Simulate basics Identify basic tools in Process Simulate environment Identify the placement commands Use kinematics to create operations Detect collisions</p>
<p>Section 2: Develop and simulate robotic paths</p>	<p>Define part-in-tool robot spot welding paths Adjust welds in spot welding paths Define part-on-robot spot welding paths Search for spot weld guns and use servo guns Define robotic drilling and riveting paths Define robotic material handling paths Define robotic arc welding continuous feature paths Define robotic paint continuous feature paths Define other robotic continuous feature paths Test robot reach and set basic robotic path attributes Add via locations to avoid collisions Identify other path modification and creation tools Identify location attributes for multiple robot interlocking Create swept volumes interference zones and events Examine other robotic path modification tools and techniques</p>
<p>Section 3: Develop object flow simulations</p>	<p>Create object flow simulative operations Create locations in object flow simulative operations Modify locations in object flow simulative operations Create sequences of object flow simulative operations Use presentation mode event creation and movie manager Simulate hand tools and virtual reality</p>
<p>Section 4: Develop human simulations</p>	<p>Identify the human model and human simulation options Create basic human operations Create human operations using Task Simulation Builder Create human operations using other automatic posture tools Create and view ergonomic reports Assign a duration to human operations Examine features related to body and hand motion capture Use traditional techniques to create human simulations Create snapshots markups notes and pictures Create sections and define cables Import component geometry Model geometry in Process Simulate Define basic kinematics in Process Simulate Define basic kinematic cranks and robotic tools Define basic robot kinematics Define advanced kinematics rails gantries and positioners</p>
<p>Section 5: Define study, data, geometry</p>	<p>Create snapshots markups notes and pictures Create sections and define cables Import component geometry Model geometry in Process Simulate Define basic kinematics in Process Simulate Define basic kinematic cranks and robotic tools Define basic robot kinematics Define advanced kinematics rails gantries and positioners</p>

## Process Simulate on Teamcenter Associate Certification

Section 1: Getting started with Process Simulate	Identify Process Simulate basics PS on TC Identify basics for Process Simulate on Teamcenter users TC Manufacturing Process Planner
Section 2: Process Simulate on Teamcenter	Create and use collaboration context objects Introduction to MPP and MBM Manage and validate studies Use the basic Teamcenter environment
Section 3: Identify Process Simulate Basics	Detect collisions Identify Process Simulate basics Identify basic concepts for PS on eMS Standalone Identify basic tools in Process Simulate environment Use kinematics to create operations
Section 4: Develop and simulate robotic paths	Adjust welds in spot welding paths Define part-in-tool robot spot welding paths Define part-on-robot spot welding paths Define robotic drilling and riveting paths Define robotic material handling paths Search for spot weld guns and use servo guns Define robotic arc welding continuous feature paths Define robotic paint continuous feature paths Test robot reach and set basic robotic path attributes Add via locations to avoid collisions Identify other path modification and creation tools Identify location attributes for multiple robot interlocking Create swept volumes interference zones and events Examine other robotic path modification tools and techniques
Section 5: Develop object flow simulations	Create object flow simulative operations Create locations in object flow simulative operations Modify locations in object flow simulative operations Create sequences of object flow simulative operations Use presentation mode event creation and movie manager
Section 6: Develop human simulations	Identify the human model and human simulation options Create basic human operations Create human operations using Task Simulation Builder Create human operations using other automatic posture tools Create and view ergonomic reports Assign a duration to human operations Identify other Process Simulate human tools Use traditional techniques to create human simulations
Section 7: Define study, data, geometry	Create snapshots markups notes and pictures Create sections and define cables Import component geometry Model geometry in Process Simulate Define basic kinematics in Process Simulate Define basic kinematic cranks and robotic tools Define basic robot kinematics Define advanced kinematics rails gantries and positioners

### Simcenter 3D Associate Certification

Section 1: Fundamentals of Using Pre/Post	Analyzing Models Managing Analysis Data Using Pre Post Features
Section 2: Preparing the Model for Analysis	Preparing Geometry for Meshing Meshing the Model Modeling Connections Modeling Assemblies Applying Boundary Conditions Defining Variable Conditions and Properties Modeling Symmetry Checking the Model and Resolving Problems
Section 3: Solving the Model	Setting Up and Running a Structural Analysis Introduction to Structural Analysis Workflows Introduction to Nonlinear Analysis Workflows
Section 4: Reviewing Analysis Results	Displaying Results in Post Views Manipulating Results Data Graphing Results Saving and Restoring Views Generating Reports
Section 5: Processes and Solutions	Adaptive Meshing Super elements Geometry Optimization Simcenter Nastran Design Optimization Simcenter Nastran Topology Optimization Introduction to Thermal Analysis

### Simcenter FloEFD Associate Certification

Section 1: FloEFD for Solid Edge/NX/Creo/Standalone/CATIA	Introduction to CFD Boundary Conditions and Intro to Goals Meshing Post Processing Parametric Study Thermal Component Models Using EDA Data Package Creator Cooling Systems and Calibration
--	---

### Simcenter FLOTHERM Associate Certification

Section 1: FLOTHERM Introduction	Introduction to FLOTHERM Basics of FLOTHERM Studies Gridding and Convergence FloEDA Bridge Post Processing FloMCAD Bridge SmartParts Command Center Thermal Radiation Component Modeling and T3Ster
-------------------------------------	--



### Simcenter FLOTHERM XT Associate Certification

Section 1: FLOTHERM XT Introduction	Introduction to FLOTHERM XT FLOTHERM XT Projects SmartParts and Geometry Handling FLOTHERM PACK and TCMs PCB Modeling and Creation Importing EDA Data Meshing Post Processing Radiation Parametric Study
--	---

### Simcenter STAR-CCM+ Associate Certification

Section 1: Fundamentals of Simcenter STAR-CCM+	Advanced analysis Analyzing data Considering the mesh setup Effective planning Moving with reference frames Preparing imported geometry Reaching a solution Refining the mesh Setting up the physics Stepping into the Workflow Workflow details
Section 2: Data Analysis in Simcenter STAR-CCM+	Accessing solution data Color and light effects Fundamental plotting Playing screens Volume rendering
Section 3: Efficient Workflows in Simcenter STAR-CCM+	Geometry preparation Meshing setup Physics and values Reporting Simulation operations Templates
Section 4: Heat Transfer in Simcenter STAR-CCM+	Advanced heat transfer Heat transfer Heat transfer coefficients Solar radiation Thermal radiation Workflow heat transfer

### Teamcenter Quality Associate Certification

Section 1: Introduction to Active Workspace	Find content using search Introduction to Active Workspace Viewing your data files Working with data and relations
Section 2: Manage your product structure	Analyze product structures Classify product data including eClass TcQ 5.1 AW Create and edit product structures Open and view product structures Search for classified objects
Section 3: Manage your release process	Approve and Release Data Initiate a Workflow Managing Workflow Task Assignment
Section 4: Teamcenter Quality	AWC Teamcenter Quality Fundamentals Authoring TCQ

Applications	TCQ Reporting
Section 5: Quality Issue Management	Closure D8 and Creation of an 8D report Introduction and monitoring of improvement actions within Problem Solving D5 D6 D7 Introduction to Problem Solving Perform a root cause analysis within the Problem Solving D4 Quality Issue Management
Section 6: Failure Modes and Effects Analysis	FMEA Failure analysis FMEA Functional analysis FMEA result documentation FMEA risk analysis and optimization Introduction to FMEA and FMEA Structure analysis
Section 7: APQ and QAM	APQP Check-list APQP Quality Action Management Introduction to APQP
Section 8: Control and Inspection Plan	Create a Control Plan Introduction to Control and Inspection Plan Manage a Control and Inspection Plan - Advanced use cases

### Teamcenter / Teamcenter X Associate Certification

Section 1: Identify starting tasks for a consumer	Identify basic tasks for a consumer
Section 2: Identify starting tasks for a manager / checker	Identify basic tasks for a manager / checker Approve and release data for a manager / checker Initiate a Workflow for a manager / checker
Section 3: Identify starting tasks for an author / designer	Identify basic tasks for an author / designer Work with data and relations Import Excel and Word files Get started with BOMs Approve and release data for an author / designer Initiate a workflow for an author / designer Develop and release product designs
Section 4: Work smarter in Active Workspace	Identify additional basic abilities in Active Workspace Identify additional search techniques to find content
Section 5: Manage your product structure	Open and view product structures Create and edit product structures Analyze product structures
Section 6: Visualize your product model	View visualization data
Section 7: Manage your release process	Manage workflow task assignments Preconfigured workflows
Section 8: Install using Deployment Center	Identify & install Deployment Center Manage the Deployment Center Repository Manage Teamcenter environments with Deployment Center Deploy software with Deployment Center
Section 9: Identify Teamcenter install fundamentals	Getting started with Teamcenter Installation Install Teamcenter databases Teamcenter preinstallation tasks Installing the corporate server Install and configure a J2EE 4-tier architecture Install and configure a .NET 4-Tier architecture
Section 10:	Install the Business Modeler IDE (BMIDE)

Add-on to a Teamcenter install	<p>Configure the File Management System (FMS)</p> <p>Install Dispatcher</p> <p>Perform a silent installation</p> <p>Install Teamcenter patches</p>
Section 11: Install Active Workspace	<p>Identify basic aspects of an Active Workspace installation</p> <p>Install microservices</p> <p>Install Active Workspace server extensions</p> <p>Install the Active Workspace client components</p> <p>Install the indexing components</p> <p>Install the visualization components</p>
Section 12: Identify Teamcenter data model (BMIDE)	<p>Identify Business Modeler IDE (BMIDE) fundamentals</p> <p>Extend the data model</p> <p>Create and manage business objects</p> <p>Manage business object properties</p>
Section 13: Perform advanced Teamcenter data model (BMIDE) tasks	<p>Administer lists of values (LOVs)</p> <p>Administer rule extensions</p> <p>Run BMIDE reports</p> <p>Deploy packages and updates</p>
Section 14: Perform Active Workspace client admin 1	<p>Identify Teamcenter administration tasks that apply to you</p> <p>Configure tiles in Active Workspace</p> <p>Manage groups, roles, and users in Active Workspace</p> <p>Configure table columns in Active Workspace</p>
Section 15: Perform Active Workspace client admin 2	<p>Manage style sheets with the XRT Editor</p> <p>Manage preferences in Active Workspace</p> <p>Add BMIDE constraints for Active Workspace</p>

**SIEMENS**