Power Academy Course Catalogue

2025/2026

SIEMENS energy

Table of Contents

Power Academy

SIEMENS energy

Power Academy
Strategic Pillars

Train

Develop

Qualify

Global Training Center

- **Excellent customer training**
- Certified trainers with years of professional experience
- Train the trainer program

Next Generation Training

- **Latest learning technologies**
- Develop and maintain effective (digital) learning
- Governance and certification for international Power Academies

Internal Qualification

- **Digitize internal learning**
- Harmonize learning paths
- Keep learning platform up to date

SIEMENS
enerGY

Power Academy
Next Generation Training

What Do We Offer?

- E-learning consultancy
- Predevelopment
- Didactical support
- Training creation
- Rapid development
- Digital libraries

Meeting today's requirements, where learning becomes performance.

SIEMENS ENERGY

Power Academy
Our Learning Experiences

Classroom Training - Visit us at PA venues

Professional trainers facilitate in PA Classroom

Utilizing digital and physical element incl. practical and hands on exercises

Remote Training - Physically separated, still connected

Utilizing remote training rooms for the trainer, connecting the audience remotely

Utilizing remote equipment by PA

On-Site Training - No travel, no problem

Professional trainers facilitate at your Place

Utilizing either remote equipment by PA or the systems on site

Power Academy Courses

Omnivise T3000 System Basics

K-T3BAS-BL neo

Area of Application

This seminar provides an overview of the essential concepts and performance data of the Omnivise T3000 system. The focus is on basic measurements with binary and analog signal transmitters as well as drive controls with actuators. Training will be reinforced with practical exercises.

Participants will implement an automation model in the Omnivise T3000 Workbench with basic measurements for binary and analog signals and drive controls. Participants will put it into operation, eliminate malfunctions and work with functional diagrams, plant displays, trends and alarms for analysis.

Services

WBT (Web based training):
- Introduction to the control system Omnivise T3000
- Hardware and software architecture, servers, bus systems,
- periphery, redundancy, runtime container application host diagnostics

Practice (Classroom):
- Signal identifiers and inheritance
- Operation: Plant displays, navigation, operation in faceplate, trends, XY diagrams and alarms, user-specific plant display
- Engineering: Function diagrams, plant displays, automation
- functions and proxies
- Commissioning: Point view
- Diagnostics: dynamized function diagrams, signal tracing, signal forcing
- Analog and binary measurement, 2oo3
- Drives: motor, actuator, servo
- Online help, project documentation
- Practical exercises with a process simulation:
  - Binary and analog signal acquisition
  - Output of signals
  - Drives: motor, actuator, servo
  - Trends
  - Alarms

Course details

- Requirements: Basic knowledge of I&C technology and PC operations using MS Windows
- Number of participants: max. 10
- Language: English
- Duration: 5 h WBT, 4 days practice
- Location:
  - Power Academy Karlsruhe/Erlangen,
  - Power Academy international Training Centers
  - Virtual Classroom
  - On site on request
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

Power Academy
Siemens Energy Global GmbH & Co. KG
Siemensallee 84, 76187 Karlsruhe, Germany
E-Mail: power-academy.energy@siemens-energy.com

SIEMENS energy

Omnivise T3000 System Basics
K-T3BAS neo

Area of Application

This seminar provides an overview of the essential concepts and performance data of the Omnivise T3000 system. The focus is on basic measurements with binary and analog signal transmitters as well as drive controls with actuators. Training will be reinforced with practical exercises.

Participants will implement an automation model in the Omnivise T3000 Workbench with basic measurements for binary and analog signals and drive controls. Participants will put it into operation, eliminate malfunctions and work with functional diagrams, plant displays, trends, and alarms for analysis.

Services

- Introduction to the control system Omnivise T3000
- Hardware and software architecture, servers, bus systems,
- periphery, redundancy, runtime container
- Signal identifiers and inheritance
- Operation: Plant displays, navigation, operation in faceplate, trends, XY diagrams and alarms, user-specific plant display
- Engineering: Function diagrams, plant displays, automation functions and proxies
- Commissioning: Point view
- Diagnostics: dynamized function diagrams, signal tracing, signal forcing
- Analog and binary measurement, 2oo3
- Drives: motor, actuator, servo
- Online help, project documentation
- Practical exercises with a process simulation:
    - Binary and analog signal acquisition
    - Output of signals
    - Drives: motor, actuator, servo
    - Trends
    - Alarms

Course details

- Requirements: Basic knowledge of I&C technology and PC operations using MS Windows
- Number of participants: max. 10
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Karlsruhe/Erlangen,
    - Power Academy international Training Centers
    - Virtual Classroom
    - On site on request
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise T3000 Advanced course for K-T3BAS neo

K-T3ADE neo

Area of Application

Building on the K-T3BAS neo course, the seminar imparts further system knowledge, engineering, higher-level functions, and operation. Another focus is on Reports in Omnivise T3000.

The participants implement an automation model in the Omnivise T3000 Workbench with higher-level functions. They then put it into operation, eliminating errors and working with function diagrams, plant displays, trends, and alarms for analysis.

Services

- Plant Display Engineering
- Documentation
- Copy & Modify, Import & Export
- Integrated engineering
- Hour & switching counters
- Device Change Over, Group Controller, Subgroup Controller
- KPI and Group Displays
- Advanced Function of Alarm Sequence Display
- Reports
- Access rights
- Spreadsheet engineering
- HW-configuration
- Settings
- ETS, digital twin, macros & Co
- Practical exercises/demos with a process simulation:
  - Pant Display engineering and changing
  - Hour and switching counters
  - Device Change Over
  - Subgroup Controller
  - Alarm sounds, filters, thresholds
  - Status and sequence reports
  - HW-configuration

Course details

- Requirements: T3BAS neo certificate, PC operations using MS Windows
- Number of participants: max. 10
- Language: English
- Duration: 4 days
- Location:
  - Power Academy Karlsruhe/Erlangen,
  - Power Academy international Training Centers
  - Virtual Classroom
  - On site on request
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise T3000 Engineering, Maintenance and Service
K-T3EMS neo

Area of Application

This seminar focuses primarily on the engineering, operation, maintenance, and service of the Omnivise T3000 I&C control-system. It also offers an overview of protection and turbine control. Training will be reinforced with practical exercises.

Participants will implement an automation model in the Omnivise T3000 Workbench with basic measurements for binary and analog signals, drive controls as well as higher-level controls. Participants will commission, troubleshoot and replace defect components by using trends, alarms and reports for analysis and maintenance. Participants will be able to perform maintenance and service on Omnivise T3000 while the system is running as well as stopped.

Services

- Plant Display Engineering
- Documentation
- Copy & Modify, Import & Export
- Integrated engineering
- Hour & switching counters
- Device Change Over, Group Controller, Subgroup Controller
- KPI and Group Displays
- Advanced Function of Alarm Sequence Display
- Reports
- Access rights
- Spreadsheet engineering
- HW-configuration
- Settings
- ETS, digital twin, macros & Co
- Practical exercises/demos with a process simulation:
    - Pant Display engineering and changing
    - Hour and switching counters
    - Device Change Over
    - Subgroup Controller
    - Alarm sounds, filters, thresholds
    - Status and sequence reports
    - HW-configuration

Course details

- Requirements: Basic knowledge of I&C technology and PC operations using MS Windows
- Number of participants: max. 10
- Language: English
- Duration: 15 days
- Location:
    - Power Academy Karlsruhe/Erlangen,
    - Power Academy international Training Centers
    - Virtual Classroom
    - On site on request
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

Power Academy
Siemens Energy Global GmbH & Co. KG
Siemensallee 84, 76187 Karlsruhe, Germany
E-Mail: power-academy.energy@siemens-energy.com

SIEMENS energy

Omnivise T3000 Governor Overview
K-T3GOV

Area of Application

This seminar gives an overview of the Omnivise T3000 governor concepts. The focus is on basic measurements with binary and analog signal transmitters as well as PI controllers. Training will include demonstrations.

Participants will receive an overview of AddFEM POCO+ and ET200 SP-HA Technology module TM hardware and how they are
operated.

Services

- Introduction to governor concept
- GT and ST controller overview
- AddFEM POCO+ hardware & software
- Functional description of AddFEM POCO+ and TM
- HW-Proxies and redundancy
- AddFEM POCO+ module replacement
- ET200 SP-HA TM hardware & software
- TM HW proxies und HW configuration
- Demonstrations:
    - Set AddFEM POCO+ PROFIBUS-DP address
    - AddFEM POCO+ and TM
    - HW proxy, PI controller
    - Reintegration

Course details

- Requirements: T3BAS neo certificate, PC operations using MS Windows
- Number of participants: max. 10
- Language: English
- Duration: 1 day
- Location:
    - Power Academy Karlsruhe/Erlangen,
    - Power Academy international Training Centers
    - Virtual Classroom
    - On site on request
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

Omnivise T3000 Maintenance
K-T3MAF

Area of Application

The seminar provides detailed knowledge of maintenance and service at the automation level and I/O module level for shift and technical personnel. Training will be reinforced with practical exercises.

Participants will commission, troubleshoot and replace defect components by using trends, alarms and reports for analysis and maintenance. Participants will be able to perform maintenance and service on Omnivise T3000 while the system is running as well as stopped.

Services

- Remote Expert Center
- Automation Server S7-400H hardware and assembling
- Diagnostic tools
- HW components diagnoses: S7-400H, ET200SP HA, ET200M, FUM
- S7400H module replacement
- S7-400 Firmware up- and downgrade
- Hour and switching counters
- PROFINET and PROFIBUS diagnostic/repair
- I/O model replacement
- Drives diagnostics
- Practical exercises:
  - S7-400H Commissioning
  - S7-400H module replacement
  - S7-400 up- and downgrade
  - ET200SP HA, ET200M, FUM I/O diagnosis and
  - Replacement
  - Drive diagnostics

Course details

- Requirements: T3BAS neo certificate, PC operations using MS Windows
- Number of participants: max. 8
- Language: German and English
- Duration: 3 days
- Location:
  - Power Academy Karlsruhe/Erlangen,
  - Power Academy international Training Centers
  - Virtual Classroom
  - On site on request
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

Omnivise T3000 Operation, Engineering & Maintenance
K-T3OEM neo

Area of Application

This seminar focuses primarily on the operation, engineering, and maintenance of the Omnivise T3000 I&C control-system. It also offers a short overview of turbine control. Training will be reinforced with practical exercises.

Participants will implement an automation model in the Omnivise T3000 Workbench with basic measurements for binary and analog signals and drive controls.
Participants will commission, troubleshoot and replace defect components by using trends and alarms for analysis and maintenance. Participants will be able to perform maintenance and service on Omnivise T3000 while the system is running as well as stopped.

Services

- HW and SW architecture, server, bus systems, peripherals
- Analog and binary measurement and drives
- Control systems, displays
- Operation: plant displays, navigation, trends, alarms
- Engineering: function diagrams, plant displays, trends, automation functions
- Diagnostics: alarms, dynamic function diagrams, online help, signal tracing, diagnostic view, management proxy
- Commissioning: information point, online change, signal forcing
- Maintenance: faults in drives and measurements, server, troubleshooting, repair, module replacement
- Server HW and SW architecture, network
- Shutdown and reboot handling
- Basics troubleshooting of the application Server
- Practical exercises/demo with process simulation:
    - Binary and analog signal acquisition
    - Drives, open-loop and closed-loop controller, plant displays
    - S7 & I/O module exchange
    - Faults in drives, switch gear and measurements
    - Alarms, trends

Course details

- Requirements: Basic knowledge of I&C technology and PC operations using MS Windows
- Number of participants: max. 10
- Language: English
- Duration: 10 days
- Location:
    - Power Academy Karlsruhe/Erlangen,
    - Power Academy international Training Centers
    - Virtual Classroom
    - On site on request
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

Power Academy
Siemens Energy Global GmbH & Co. KG
Siemensallee 84, 76187 Karlsruhe, Germany
E-Mail: power-academy.energy@siemens-energy.com

Omnivise T3000 Operator
K-T3OPE neo

Area of Application

The seminar provides basic knowledge on operating a power plant with Omnivise T3000 and is aimed at shift personnel for managing a power plant.

Training will be reinforced with practical exercises. Participants will be able to perform basic operations of a power plant.

Services

- System functions and operating options
- Login, basics of Omnivise T3000
- Plant display hierarchy, plant display selection, navigation
- Operation in the faceplate
- Measurements and limits
- Drives: motor, actuator, servo
- Alarm sequence display and alarms, group alarm indicators
- Trends and XY diagrams
- Reports
- User specific plant displays
- Diagnostics: dynamizes function diagram, signal tracking
- Online help
- Practical exercises with a small process simulation:
    - Binary and analog signal acquisition
    - Drives: motor, actuator, servo
    - Trends
    - Alarm sequence display and group alarm indicators
    - Reports
    - Navigation to a fault

Course details

- Requirements: PC operations using MS Windows
- Number of participants: max. 10
- Language: English
- Duration: 2 days
- Location:
    - Power Academy Karlsruhe/Erlangen,
    - Power Academy international Training Centers
    - Virtual Classroom
    - On site on request
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise T3000 Protection
K-T3PROT neo

Area of Application

This seminar provides an overview of the basic failsafe principles in general and details of the S7-400FH failsafe system used in Omnivise T3000.

The focus is on basic measurements with failsafe signal transmitters, logic and safety outputs, e.g., for emergency valves. Training will include demonstrations/practical exercises.

A protection for an emergency valve will be implemented so the participants will learn all steps from design to commissioning and testing. Alarms are used for analyses and troubleshooting.
Participants will also learn service and replacement of S7 failsafe modules.

Services

- Introduction to failsafe, safety and availability, SIL
- S7 400FH hardware and software architecture in Omnivise T3000
- I/O modules, PROFIsafe, redundancy, runtime container
- HW configuration, HW-proxies and channel driver
- Failsafe function diagrams
- Failsafe automatization functions
- Compile and download, point view
- Passivation and reintegration
- Protection-Acknowledgement
- Diagnostics: dynamized function diagrams, signal tracing
- Signature and certification
- S7 failsafe module exchange
- Lifecycle
- Acceptance
- F-Documentation
- Demo/practical exercises:
    - Signal acquisition and logic
    - Passivation and reintegration
    - Protection-Acknowledgement
    - Solenoid valve
    - S7 module exchange

Course details

- Requirements: T3BAS neo certificate, PC operations using MS Windows
- Number of participants: max. 10
- Language: English
- Duration: 3 days
- Location:
    - Power Academy Karlsruhe/Erlangen,
    - Power Academy international Training Centers
    - Virtual Classroom
    - On site on request
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

Power Academy
Siemens Energy Global GmbH & Co. KG
Siemensallee 84, 76187 Karlsruhe, Germany
E-Mail: power-academy.energy@siemens-energy.com

SIEMENS energy

T3000 Security Host & T3000 Application Host (redundant - R)
Maintenance and Administration

K-T3SEAPS

Area of Application

The target group of this course is customer personnel who are responsible for the maintenance and administration of the T3000 security host and the T3000 application host (redundant - R).

The participant will first learn the basic design of the hosts followed by specific handling procedures under real operating conditions of the plant. Also included are the basics of the Linux operating system, the deployment method of the security host, application host (redundant – R) and T3000 clients, system software patch installation and Windows security patch installation as well as the handling of the password manager, which are the essential parts of this class.

The course participant will also learn diagnostic basics using Foreman and important files and paths. Finally, the necessary steps for backup and restore of a damaged server will be discussed (without exercises).

Services

- Explanation of the host hardware
- Design of software and network architecture
- Shutdown and reboot handling
- Basics Linux commands
- Deployment of Omnivise T3000 components
- Online installation of system software patches and security patches
- Handling of the password manager
- Troubleshooting: tools, Foreman, log files and paths
- Backup and restore security host and application host
- (redundant - R) (Without exercises)
- Overview of T3000 security features
- Practical exercises
    - Shutdown and reboot of security host and application host (redundant - R)
    - Deployment of a T3000 client including system
    - software patch installation and security patch installation
    - Security host and application host diagnostics

Course details

- For release 9.2
- Requirements: T3BAS neo certificate, Windows system basics
- Number of participants: max. 8
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Karlsruhe/Erlangen
    - Power Academy international Training Center
    - Virtual Classroom
    - On site on request
- Date: upon consultation

Export restrictions

AL: N   ECCN: EAR99

Power Academy
Siemens Energy Global GmbH & Co. KG
Siemensallee 84, 76187 Karlsruhe, Germany
E-Mail: power-academy.energy@siemens-energy.com

SIEMENS energy

Workshop T3000 Security Host & T3000 Application Host (redundant - R) Maintenance and Administration

K-T3SEAPSW

Check the course online

Area of Application

The target group of this course is Siemens Energy personnel who are responsible for the maintenance and administration of the T3000 security host and the T3000 application host (redundant - R).

The participant will first learn the basic design of the servers followed by specific handling procedures under real operating conditions of the plan. Also included are the basics of the Linux operating system, the deployment method of the security host, application host (redundant – R) and T3000 clients, system software patch installation and Windows security patch installation as well as the handling of the password manager, which are the essential parts of this class.

The course participant will also learn diagnostic basics using Foreman and important files and paths. Finally, the necessary steps for backup and restore of a damaged hosts will be discussed.

Services

Practical part
- Deployment of a T3000 security hosts, T3000
- application hosts (redundant - R) and T3000 client
- Online installation of system software patches and security patches
- Shutdown and reboot of security host and application host (redundant – R)
- Security host and Application host diagnostics

Theoretical part
- Theoretical knowledge transfer based on the training
- manual and Omnivise T3000 documentation on the above topics
- Overview of T3000 security features

Course details

- For release 9.2
- Requirements: T3BAS neo certificate, Windows system basics
- Number of participants: max. 8
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Karlsruhe/Erlangen
- Date: upon consultation

Export restrictions

AL: N   ECCN: EAR99

SIEMENS eneRGY

Omnivise Electrical Solutions -medium voltage switchgear

K-ES-141

Area of Application

The participants learn to operate the medium voltage switchgear with a focus on safety at work and understand their components and interlockings.

Services

- General design: Pressure Relief Duct, withdrawable Circuit Breaker, Introduction
- Switching Device Compartment
- Busbar Compartment & Cable Connection
- Compartment; Low Voltage Compartment
- Operating Tools
- Service Truck
- Operating the Circuit Breaker Panel
- Interlockings, Earthing
- Operation Modes of the Circuit Breaker / Circuit Breaker
- HSE at work: 5 safety regulation, Selection Guide for
- Protective Equipment for Working in Electrical Installations
- Service/ Maintenance

Practical Training
- Racking the withdrawable circuit-breaker / circuit-breaker truck to operational position
- Racking the withdrawable circuit-breaker / circuit-breaker truck to test position
- Taking the withdrawable circuit breaker out of the panel
- Earthing the feeder manually
- Local operation of CB in Test position
- Remote operation of CB in operational position

Course details

- Target group: Operation and Service/ commissioning staff of medium voltage switchgears
- Requirements: Basic knowledge of electrical engineering
- Number of participants: max. 6
- Language: English
- Duration: 2 days
- Location:
  - Power Academy Erlangen,
  - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS enerGY

Omnivise Electrical Solutions -medium voltage switchgear + digital protection devices

K-ES-142

Area of Application

The participants learn to operate the medium voltage switchgear with a focus on safety at work and understand their components and interlockings. Introduction to commissioning of digital motor protection devices.

Services

- General design: Pressure Relief Duct, withdrawable Circuit Breaker, Introduction
- Switching Device Compartment
- Busbar Compartment & Cable Connection Compartment; Low Voltage Compartment
- Operating Tools/Service Truck/Circuit Breaker Panel
- Interlockings, Earthing
- Operation Modes of the Circuit Breaker / Circuit Breaker
- HSE at work: 5 safety regulation, Selection Guide for Protective Equipment for Working in Electrical Installations
- Service/ Maintenance

Practical Training
- Racking the withdrawable circuit-breaker/circuit-breaker truck to operational position
- Racking the withdrawable circuit-breaker / circuit-breaker truck to test position
- Taking the withdrawable circuit breaker out of the panel Earthing the feeder manually/ Local operation of CB in Test position/ Remote operation of CB in operational position
- Digital protection devices from Siemens
- Description and functions of motor protective functions and protection circuits
- Introduction to the operating software for digital protection devices and OMICRON Testuniverse

- Introduction to the commissioning documentation
- Execution of a secondary injection test (OMICRON) with exemplary protective functions under use of the commissioning documentation (instructions, check lists, wiring diagrams, parameter lists)

Course details

- Target group: Operation and Service/ commissioning staff of medium voltage switchgears
- Requirements: Basic knowledge of electrical engineering
- Number of participants: max. 6
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Erlangen
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise Electrical Solutions Electrical Maintenance – Industrial Power Plant

K-EA-104

Area of Application

This course provides an insight into the individual electrical components which are needed for the operation of turbine and generator. The course shall clarify the interaction of the components, and it enables the staff to operate the plant, to recognize and delimit faults independently and to support the service technician of the manufacturer, respectively.

Services

The training contains a theoretical part about the following components. The course materials are adapted system-specifically.

- Generator: structure and function
- Excitation system /voltage control
- Generator protection / synchronization
- Turbine sub-distribution: 400V AC, 110/220V DC, 24V DC
- Battery system
- Miscellaneous components

Course details

- Target group: Service staff of an industrial power plant
- Requirements: Basic knowledge of electrical engineering and practical experience in electrical maintenance
- Number of participants: 2-10
- Language: English
- Duration: 2-3 days
- Location:
    - Power Academy Erlangen
    - On site
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise Electrical Solutions Electrical Maintenance – Large Scale Power Plant

K-EA-105

Area of Application

This course provides an insight into the individual electrical components which are needed for the operation of turbine and generator. The course shall clarify the interaction of the components, and it enables the staff to operate the plant, to recognize and delimit faults independently and to support the service technician of the manufacturer, respectively.

Services

The training contains a theoretical part about the following components. The course materials are adapted system-specifically.

- Generator: structure and function
- Excitation system /voltage control
- Transformer
- Generator- / transformer protection / synchronization
- Generator circuit breaker
- IPB (isolated phase bus)
- Medium and low voltage switchgear: 6kV, 690V, 400V,110/220V DC
- UPS: battery system, charging rectifier, converter, inverter
- Miscellaneous components

Course details

- Target group: Service staff of an industrial power plant
- Requirements: Basic knowledge of electrical engineering and practical experience in electrical maintenance
- Number of participants: 2-10
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Erlangen
    - On site
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise Electrical Solutions - Digital Protection for Generator / Transformer and Synchronization

K-ES-121

Area of Application

The participants learn the basics of synchronous generators, to operate the protection devices, functions of the components, basics of different protective functions and testing it with a secondary injection kit (OMICRON) and primary testing (power plant model), as well as handling of the operation software. Introduction to commissioning of digital protection devices.

Services

- Basics of synchronous generators
- Description and functions of protective functions and protection circuits
- Introduction to the operating software of digital protection devices and OMICRON Testuniverse
- Introduction to the commissioning documentation
- Execution of a secondary injection test (OMICRON) with exemplary protective functions under use of the commissioning documentation (instructions, check lists, wiring diagrams, parameter lists) at a generator / transformer protection cubicle.
- Execution of a primary check (generator model) with exemplary protective functions under use of the commissioning documentation (instructions, check lists, wiring diagrams, parameter lists) at a generator / transformer protection cubicle.
- Exercises to hardware customization of digital protection devices
- Exercises to firmware-updates of digital protection devices

Course details

- Target group: commissioning engineer / service staff of a power plant
- Requirements: Basic knowledge of electrical engineering
- Number of participants: 2-4
- Language: English
- Duration: 10 days
- Location:
  - Power Academy Erlangen
  - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

Omnivise Electrical Solutions - Digital Protection for Generator / Transformer and Synchronization Refresher

K-ES-122

Area of Application

The participants learn the basics of synchronous generators, to operate the protection devices, functions of the components, basics of different protective functions and testing it with a secondary injection kit (OMICRON) and primary testing (power plant model), as well as handling of the operation software. Introduction to commissioning of digital protection devices.

Services

- Basics of synchronous generators
- Description and functions of protective functions and protection circuits
- Introduction to the operating software of digital protection devices and OMICRON Testuniverse
- Introduction to the commissioning documentation
- Execution of a secondary injection test (OMICRON) with exemplary protective functions under use of the commissioning documentation (instructions, check lists, wiring diagrams, parameter lists) at a generator / transformer protection cubicle.
- Execution of a primary check (generator model) with exemplary protective functions under use of the commissioning documentation (instructions, check lists, wiring diagrams, parameter lists) at a generator / transformer protection cubicle.
- Exercises to hardware customization of digital protection devices
- Exercises to firmware-updates of digital protection devices

Course details

- Target group: commissioning engineer / service staff of a power plant
- Requirements: Basic knowledge of electrical engineering
- Number of participants: 2-4
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Erlangen
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise Electrical Solutions - Synchronous Condenser - Protection and Synchronization

K-ES-123

Area of Application

The participants learn the basics of synchronous condensers, to operate the protection devices, functions of the components, basics of different protective functions and testing it with a secondary injection kit (OMICRON) and primary testing (generator model), as well as handling of the operation software DIGSI. Introduction to commissioning of digital protection devices.

Services

- Basics of synchronous generators
- Description and functions of protective functions and protection circuits
- Introduction to the operating software for digital protectionbdevices and OMICRON Testuniverse
- Introduction to the commissioning documentation
- Execution of a secondary injection test (OMICRON) with exemplary protective functions under use of the commissioning documentation (instructions, check lists, wiring diagrams, parameter lists) at a generator / transformer protection cubicle.
- Execution of a primary check (generator model) with exemplary protective functions under use of the commissioning documentation (instructions, check lists, wiring diagrams, parameter lists) at a generator / transformer protection cubicle.
- Exercises to hardware customization of digital protection devices
- Exercises to firmware-updates of digital protection devices

Course details

- Target group: commissioning engineer / service staff of a power plant
- Requirements: Basic knowledge of electrical engineering
- Number of participants: 8
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Erlangen
    - On site
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

Omnivise Electrical Solutions -Excitation System RG3-S

K-ES-131

Area of Application

The participants learn to operate the RG3-S and the tasks of the components, to recognize and delimit faults independently and to support the service technician of the manufacturer, respectively. Introduction to the commissioning.

Services

- Basics of synchronous generators
- Introduction of the brushless excitation system with rotating rectifiers
- Digital closed loop system
- Power converter
- Manual Mode: Excitation Current Regulator (ECR)
- Automatic mode: Automatic Voltage Regulator (AVR), cos φ-, Q-regulator, limiter, PSS
- Operation and maintenance
- Dealing with the documentation of the RG3-S
- Introduction to the operation software SIMOTION Scout and Web-browser
- Conducted commissioning of the RG3-S with exercises at the generator model

Course details

- Target group: Service and commissioning staff of excitation systems in a power plant
- Requirements: Basic knowledge of electrical engineering
- Number of participants: 4-6
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Erlangen,
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise Electrical Solutions - Excitation System RG3-DIGUREG1/2

K-ES-132

Area of Application

The participants learn to operate the RG3-DIGUREG1 or RG3-DIGUREG2 and the tasks of the components, to recognize and delimit faults independently and to support the service technician of the manufacturer, respectively. Introduction to the commissioning.

Services

- Basics of synchronous generators
- Introduction of the brushless excitation system with rotating rectifiers
- Digital closed loop system
- Power converter
- Manual Mode: Excitation Current Regulator (ECR)
- Automatic mode: Automatic Voltage Regulator (AVR), cos φ-, Q-regulator, limiter, PSS
- Operation and maintenance
- Dealing with the documentation of the RG3-DUR
- Introduction to the operation software PC-Tool
- Conducted commissioning of the RG3-DUR with exercises at the power plant model

Course details

- Target group: Service and commissioning staff of excitation systems in a power plant
- Requirements: Basic knowledge of electrical engineering
- Number of participants: 3-4
- Language: English
- Duration: 5 days
- Location:
  - Power Academy Erlangen,
  - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise Electrical Solutions -Excitation System RG3-T4

K-ES-133

Area of Application

The participants learn to operate the RG3-T4 and the tasks of the components, to recognize and delimit faults independently and to support the service technician of the manufacturer, respectively. Introduction to the commissioning.

Services

- Basics of synchronous generators
- Introduction of the brushless excitation system with rotating rectifiers
- Digital closed loop system
- Power converter
- Manual Mode: Excitation Current Regulator (ECR)
- Automatic mode: Automatic Voltage Regulator (AVR), cos φ-, Q-regulator, limiter, PSS
- Operation and maintenance
- Dealing with the documentation of the RG3-T4
- Introduction to the operation software Simatic Manager, CFC and DriveMonitor
- Conducted commissioning of the RG3-T4 with exercises at the power plant model

Course details

- Target group: Service and commissioning staff of excitation systems in a power plant
- Requirements: Basic knowledge of electrical engineering
- Number of participants: 3-4
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Erlangen,
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

Omnivise Electrical Solutions -Excitation System Thyripol (T400 or SIMOTION)

K-ES-135

Area of Application

The participants learn to operate the Thyripol and the tasks of the components, to recognize and delimit faults independently and to support the service technician of the manufacturer, respectively. Introduction to the commissioning.

Services

- Basics of synchronous generators
- Introduction of the static excitation system
- Digital closed loop system
- Power converter
- Manual Mode: Excitation Current Regulator (ECR)
- Automatic mode: Automatic Voltage Regulator (AVR), cos φ-, Q-regulator, limiter, PSS
- Operation and maintenance
- Dealing with the documentation of the Thyripol
- Introduction to the operation software Simatic Manager, CFC and DriveMonitor or dedicated webbrowser and SIMOTION Scout
- Conducted commissioning of the Thyripol, using the example of RG3-T4 with exercises at the power plant model, or RG3-S, respectively.

Course details

- Target group: Service and commissioning staff of excitation systems in a power plant
- Requirements: Basic knowledge of electrical engineering
- Number of participants: 3-4
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Erlangen
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise Electrical Solutions -Excitation System Thyripart (T400 or SIMOTION)

K-ES-136

Area of Application

The participants learn to operate the Thyripart and the tasks of the components, to recognize and delimit faults independently and to support the service technician of the manufacturer, respectively. Introduction to the commissioning.

Services

- Basics of synchronous generators
- Introduction of the brushless excitation system with rotating rectifiers
- Hardware components: load transformer and Harz-circuit
- Digital closed loop system
- Power converter
- Manual Mode: Excitation Current Regulator (ECR)
- Automatic mode: Automatic Voltage Regulator (AVR), cos φ-, Q-regulator, limiter, PSS
- Operation and maintenance
- Dealing with the documentation of the Thyripart
- Introduction to the operation software Simatic Manager, CFC and DriveMonitor or dedicated webbrowser and SIMOTION Scout
- Conducted commissioning of the Thyripart, using the example of RG3-T4 with exercises at the power plant model, or RG3-S, respectively (the load transformer and Harz-circuit is not available).

Course details

- Target group: Service and commissioning staff of excitation systems in a power plant
- Requirements: Basic knowledge of electrical engineering
- Number of participants: 3-4
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Erlangen
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise Electrical Solutions -Excitation System THYRIPOL (6RV80)

K-ES-137

Area of Application

The participants learn to operate the THYRIPOL and the tasks of the components, to recognize and delimit faults independently and to support the service technician of the manufacturer, respectively. Introduction to the commissioning and troubleshooting.

Services

- Basics of synchronous generators
- Introduction of the static excitation system
- SEE hardware overview: THYRIPOL -Control module, Power-Converter, AVR, 3WL circuit breaker, S7-300 series controller Open loop Controller
- SICROWBAR deexcitation/ Overvoltage protection
- AVR closed Loop Controller
- Manual mode: Excitation Current Regulator (ECR)
- Automatic mode: Automatic Voltage Regulator (AVR), cos φ-, Q-Regulator, limiter, PSS
- Familiarize themselves with the available screens in the Touch Panel
- Operation, maintenance and troubleshooting
- Dealing with the documentation of the THYRIPOL
- Conducted commissioning of the THYRIPOL, with exercises at the power plant model.

Course details

- Target group: Service, maintenance and commissioning staff of excitation systems
- Requirements: Basic knowledge of electrical engineering
- Number of participants: 6
- Language: English
- Duration: 3-5 days
- Location:
    - Power Academy Erlangen,
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

Omnivise Electrical Solutions - Operation and Maintenance Compact Unit - SEE-SFC THYRIPOL 6RV80, SINAMICS GL150

K-ES-138

Area of Application

The participants learn to operate the THYRIPOL and the tasks of the components, to recognize and delimit faults independently and to support the service technician of the manufacturer, respectively. Introduction to the trouble shooting.

Services

- Basics of synchronous generators
- Introduction of the static excitation system and the start-up frequency converter
- SEE hardware overview: THYRIPOL -Control module, Power-Converter, AVR, 3WL circuit breaker, S7-300 series controller Open loop
- Controller
- SICROWBAR deexcitation/ Overvoltage protection
- AVR closed Loop Controller
- Manual mode: Excitation Current Regulator (ECR)
- Automatic mode: Automatic Voltage Regulator (AVR), cos φ-, Q-Regulator, limiter, PSS
- Familiarize themselves with the available screens in the Touch Panel
- Operation, maintenance and trouble shooting
- Introduction of AC converter basics
- SFC hardware overview: CU320-2PN, PSA, VSM, AVT, Converter/ Inverter Bridges
- Dealing with the documentation of the THYRIPOL and the SINAMICS GL150
- Conducted trouble shooting of the THYRIPOL, with exercises at the power plant model.

Course details

- Target group: Service, maintenance and staff of excitation systems in a power plant
- Requirements: Basic knowledge of electrical engineering
- Number of participants: max. 6
- Language: English
- Duration: 3 days
- Location:
    - Power Academy Erlangen
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise Electrical Solutions – Commissioning Compact Unit - SEE-SFC THYRIPOL 6RV80, SINAMICS GL150

K-ES-139

Area of Application

The participants learn to operate the THYRIPOL and the tasks of the components, to recognize and delimit faults independently and to support the service technician of the manufacturer, respectively. Introduction to the commissioning and trouble shooting.

Services

- Basics of synchronous generators
- Introduction of the static excitation system and the start-up frequency converter
- SEE hardware overview: THYRIPOL -Control module, Power-Converter, AVR, 3WL circuit breaker, S7-300 series controller Open loop Controller
- SICROWBAR deexcitation/ Overvoltage protection
- AVR closed Loop Controller
- Manual mode: Excitation Current Regulator (ECR)
- Automatic mode: Automatic Voltage Regulator (AVR), cos φ-, Q-Regulator, limiter, PSS
- Familiarize themselves with the available screens in the Touch Panel
- Operation, maintenance and trouble shooting
- Introduction of AC converter basics
- SFC hardware overview: CU320-2PN, PSA, VSM, AVT, Converter/ Inverter Bridges
- Dealing with the documentation of the THYRIPOL and the SINAMICS GL150
- Conducted commissioning of the THYRIPOL, with exercises at the power plant model.

Course details

- Target group: Service, maintenance and staff of excitation systems in a power plant
- Requirements: Basic knowledge of electrical engineering
- Number of participants: max. 4
- Language: English
- Duration: 5 days
- Location:
    - Power Academy Erlangen
    - Virtual Classroom
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise T3000 Cybersecurity

K-T3CYSEC

Area of Application

The target group of this course is customer personnel who are responsible and interested in security feature maintenance and administration within Omnivise T3000.

Participants will learn why cybersecurity is so important.

They will learn network topology, cybersecurity design as well as administration and maintenance of security features within Omnivise T3000 such as security event and configuration change monitoring as well as application whitelisting functionality and handling.

Services

- General cybersecurity awareness
- Cybersecurity threats and attack vectors
- Discussion regarding insider threats within the security cell
- Cybersecurity standard overview
- Cybersecurity network topology and security concept
- System hardening component security in Omnivise T3000
- Security event monitoring, structural design and
- Functionality
- Configuration-change monitoring, structural design and functionality
- Application whitelisting, structural design and functionality
- Network-intrusion detection system maintenance
- Security elements within T3000 workbench
- Live demos and exercises:
- Creating and showing correct and incorrect events
- Implementing further components into SEM
- Application whitelisting maintenance
- Network-intrusion detection system behavior
- Implemented access scenarios and functions of the cybersecurity packet based on the most important norms and standards
- Handling of cybersecurity workbench alarms

Course details

- For release 8.2 service pack 3
- Requirements: T3BAS neo and T3SEAPS certificate, knowledge of information security and basic network technology
- Number of participants: max. 10
- Language: English
- Duration: 2 days
- Location:
    - Power Academy Karlsruhe/Erlangen
    - Power Academy International Training Center
    - Virtual classroom
    - Onsite on request
- Date: upon consultation

Export restrictions

AL: N   ECCN: EAR99

Power Academy
Siemens Energy Global GmbH & Co. KG
Siemensallee 84, 76187 Karlsruhe, Germany
E-Mail: power-academy.energy@siemens-energy.com

SIEMENS energy

SPPA-T2000 Basic Course Engineering AS 620 B

K-T2N-EAS

Area of Application

SPPA-T2000 process control system users engaged in AS 620 B automation system engineering.

The participant will learn the principle of operation of SPPA-T2000 and the design, generation and loading of basic applications of the AS 620 B.

The participant will practice using the standard documentation to solve the exercise tasks. Additionally, the course will pass on the special knowledge and abilities required for initial commissioning and error diagnosis on the AS 620 B.

Services

- System summary SPPA-T2000
- Basic knowledge and engineering of the AS 620B
- Engineering system ES 680:
    - FUP - Editor to design diagrams (topology, disposition)
    - Code generation of diagrams
    - Code-transfer (via ES-S7-server) to the AS 620 (offline and online)
    - Dynamization of diagrams, fast parameter change
- Design of diagrams with tec4function-Editor
- Generation and transfer of tec4function
- diagrams to the target system ES 680
- Configuration of typical applications:
    - Motor, actuator and control drive
    - Analog and binary sensor processing
- Practical exercises on configuring tool including verification of generated code on an AS 620 B

Course details

Preconditions:
- Experience in the handling of automation structures and typical identification systems for power plants. Basics of the TEC4Function editor
- Number of participants: max. 10
- Language: English or German
- Course duration: 5 days
- Course location: Karlsruhe

Export restrictions

AL: N   ECCN: N

SIEMENS energy

SPPA-T2000 Maintenance for AS 620 B
K-T2-SAS

Area of Application

Users of the process control system SPPA-T2000, active in service and maintenance of the automation system AS 620 B.

The participant will learn all necessary activities to maintain the automation system AS 620 B in the running power plant. They will be able to familiarize themselves with the functioning of SPPA-T2000 and the extensive applications of the function diagram editor.

Services

- Setup and commissioning AS 620 B from single components
- Offline and online loading of application programs
- Tracing of signal paths using dynamic function diagrams
- Simulation of binary and analog signals
- Fault analysis using the OM 650 and DS 670 display features
- Replacement of faulty central controller modules without non-intentional influencing of power plant operation
- Replacement of faulty I/O modules without non-intentional influencing of power plant operation

Course details

- Preconditions: Participation course K-T2N-EAS
- Number of participants: max. 8
- Language: English or German
- Course duration: 2 days
- Course location: Karlsruhe
- Dates: usually sequentially to T2N-EAS courses

Export restrictions

AL: N   ECCN: N

Technology Editor
K-TEC4FUNCTION

Area of Application

Usage of the Technology Editor tec4function as link between process engineering and I&C engineering.
For users engaged in engineering of SPPA-T2000 AS 620 B.

The participant will learn the basic handling of engineering SPPA-T2000 AS 620 B with tec4function and will practice implementation of the basic applications.

Services

- Overview
- Project manager, Work environment
    - Create and administrate projects
- Diagram Editor
    - Plan size and title block
    - Free graphics, add, connect and parameterize blocks
    - Connect plans, create events
    - Create an example plan
- Extended functions of the project manager
    - Copy/Modify, documentation, title block
    - AP-Assignment, plan generation, import and
    - delta-comparison
    - Dynamic plans
    - Spreadsheet engineering, tracking changes
- IO-engineering
    - Import data, edit measurements, tabular interface
    - Workflow, interface tec4function/tec4fde
- Transferring data to AS620 B via installed ES680 System with a simple simulated process and operation of the plant will be practiced online.

Course details

- Preconditions:
- Experience in the handling of automation structures and typical identification systems for power plants
- Number of participants: max. 10
- Language: English or German
- Course duration: 3 days
- Course location: Karlsruhe

Export restrictions

AL: N   ECCN: N

SIEMENS energy

Omnivise T3000 Gasturbine Controller Maintenance and Technology
K-R3MTC

Area of Application

Building on the K-T3BAS neo course, this seminar is about the functions of the GT controller for maintenance and service in the automation level and I/O level for shift and technical personnel. Training will be reinforced with practical exercises.

Participants will commission, troubleshoot and replace defective components by using trends, alarms and reports for analysis and maintenance. Participants will be able to perform maintenance and service on the Omnivise T3000 while the system is running as well as stopped.

Services

- Turbine controller concepts
- Network architecture
- Turbine controller alarm sequence display, trends, reports ⏺ GT controller cabinet arrangement and power supply
- Hardware components
- Diagnostics and troubleshooting
- AddFEM POCO+ function
- Function of the ET200SP-HA Technology Module
- Redundancy concept with the AddFEM PoCo+ and TM
- GT controller function and operation
- Position controller for GT control valves and IGV/VGV
- Program operation
- Practical exercises/demonstrations with a GT simulator:
    - Alarms, troubleshooting, HW & function diagrams
    - Module exchange
    - Profibus address setting
    - Finding parameters for setting up control valves

Course details

- Preconditions: T3BAS neo certificate, PC operations using MS Windows
- Number of participants: max. 10
- Language: English
- Course duration: 5 days
- Course location:
    - Power Academy Erlangen,
    - Virtual classroom
    - On site by request
- Date: upon consultation

Export restrictions

AL: N   ECCN: N

Power Academy Business Learning

Customer Focus Training

This training program focuses on enhancing customer satisfaction through improved communication, service delivery, and problem-solving skills. Participants will learn to understand customer needs, leverage digitization, handle critical situations, and recommend additional services. The sessions include practical applications, simulations, real customer case studies, and collaboration exercises, aiming to equip participants with tools and techniques to build stronger customer relationships and deliver value in daily work.

Contract & Claim Management

This training program provides a comprehensive understanding of claim management within project management processes for CD NUC. It covers foundational concepts, contract analysis, and the identification of claim potentials during project phases. Participants will explore strategies for handling claims, including documentation, negotiation, and conflict resolution. Through team exercises, workshops, and practical applications in real business contexts, the training equips attendees with the skills to effectively manage incoming and outgoing claims, optimize strategies, and improve outcomes in complex contractual environments.

Functional Safety Management

This workshop is designed to enhance customer satisfaction in field service through effective communication, service optimization, and problem-solving skills. Participants will explore customer needs, learn strategies for successful interactions, and understand how digitization adds value. The program includes practical exercises, case studies with real customer scenarios, and techniques for handling critical situations and challenging reactions. It also covers identifying service opportunities, recommending solutions, and fostering intercultural cooperation, ensuring participants can confidently transfer these skills into daily work. Additionally, this training includes a certification upon successful completion, validating the skills and knowledge gained during the workshop.