GRID SOFTWARE UNIVERSITY

Spectrum Power™ 5

Course Catalogue

Dokument: GSW-U-SP5

SIEMENS

Contents

Spectrum Power™ Training

Introduction

Employee development is a key factor in mastering the energy transformation and digitalization challenge. Siemens understands the importance of having adequately trained personnel for reliable and safe network management and operation.

Siemens has developed a broad set of courses specifically to train our customer on the Spectrum Power™ System, as well as operational and situational aspects related to control centers. Our training programs utilize a hands-on approach integrating a role-based methodology throughout the curricula.

Training Program

Spectrum Power™ Training Courses are arranged into the following categories based on common roles and responsibilities of the typical electrical power utility business. This structure is offered as a guideline to assist customers in developing the best training plan with the support of Siemens for their employees, thereby providing a value added approach.

Spectrum Power™ Overview – Provide a high level overview of the system, software architecture and hardware of the Spectrum Power™ system; It is primarily for Project Managers, Senior Management, and administrative support personnel who require a comprehensive high-level overview or introduction of the Spectrum Power™ system.

Operation & Dispatching – Operator/Dispatcher training typically planned in coordination with the project teams for those who need to learn to operate the system.

Database and Display – Technical classes that teach how to enter, edit and maintain a Spectrum Power™ database and build graphical displays.

System Administration and Communications – Technical instruction focused on the administrative duties required for the Spectrum Power™ applications and the configuration, administration, and use of communication protocols.

Applications – Courses that focus on a variety of power systems applications.

Workshops – Workshops span a variety of topics and are developed based on customer specific requirements. Workshops are not part of the standard Spectrum Power™ courses. They require special scheduling arrangements and are priced based on requirements and necessary preparation.

Language

Our courses are available in English and German. You can see the available languages in the general information section of each specific course. For classes in any other language, an interpreter might be necessary, and course customization charges might apply. Customers with language translation requirements should contact Siemens Training Department.

Delivery Methods

Our courses are available via multiple delivery methods:

Classroom	Instructor-led training session at a formal classroom setting at Siemens
Remote	Live, Instructor-led training session given via online conferencing tools
On-Site	Instructor-led training session provided at the customer facility in a training environment supplied by the customer
eLearning	Pre-recorded training session provided on demand
Blended Learning	A combination of eLearning and instructor led training
On-The Job	Execute tasks and get hands-on experience, under the supervision of a trainer

You can see the available Delivery Methods in the general information section of each specific course.

Training Material

Training materials are specifically developed for Spectrum Power™ training courses. Siemens shall provide all necessary training materials, including course manuals and reference material in hard copy and/or PDF (Portable Document Format) files. Each trainee shall receive individual copies of the training materials. The contents of Spectrum Power™ training materials are confidential and proprietary, and usage is protected by Siemens copyright and to be used for internal use only.

Course registration and Contact information

Registration requests should be submitted to the Training Center no later than 15 business days prior to the scheduled begin date of any class. To ensure adequate access to the laboratory equipment, enrollment in many of the classes is limited. Seating for classes is reserved in the order that requests are received.

For registration, or if you want to get more information about our courses or have special training requests, please reach out to your local Siemens sales partner, or contact us directly at gridsoftware-training@siemens.com

Cancellation Policy

Siemens may cancel classes with less than the minimum of five (5) registered students, no less than two weeks prior to the scheduled start of that class. Any enrolled students would be notified of the cancellation and optionally rescheduled for a later offering.

Customer cancellation of student enrollments received less than two weeks prior to the start of the class will be subject to a cancellation fee equal to 50% of the tuition. If an enrolled student fails to appear for a scheduled class, a cancellation fee equal to 100% of the tuition will be charged.

Spectrum Power^{TM} Overview Courses

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SP5 – Overview

Objectives

This course presents the Spectrum Power™ 5 system in broad terms. The course serves as a top-down overview of the hardware, the software, and configuration. The capabilities of the system are introduced.

General Information

Course Code	GSW-U-SP5-OV
Delivery-Method	Classroom, Remote and On-Site
Duration	4 hours
Language	English and German

Target Audience

This course is targeted for all who need an introduction to the system e.g. operators, dispatchers, system administrators, engineers and management personnel

Prerequisites

• None

Content

• System Functional Overview
• Hardware Configuration Overview
• Software Overview
• System Data Flow
• System Design Goals

Operation & Dispatching Courses

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SP5 Operator/Dispatcher Training

Objectives

The participants will learn to use basic functions of Spectrum Power™ 5 and handle first tasks. They will gain basic knowledge which enable them to do monitoring and control of the power system as well as evaluate and display net data. After successful participation, the trainee can execute self-dependent the necessary operator control action and function.

General Information

Course Code	GSW-U-SP5-OP
Delivery Method	Classroom, Remote and On-Site
Duration	2 Days
Language	English and German

Target Audience

This course is targeted for all who are responsible for observing and operating power system control centers

Prerequisites

- General knowledge in power system management
- Basic knowledge in operating Microsoft Windows

Content

- Functional overview of Spectrum Power™ 5
- System configuration, server types
- Log on and log off to Power™ 5
- User access rights
- Toolbar "PAT"
- Picture call up, navigation, options
- Summarily call up (general summary, alarm lists), filter
- Manual update
- Switching procedures
- Control, interlocks
- Markers and tags
- Alarm concept (acoustic and visual alarming, Workflow on an alarm)
- Remote alarming
- Trending, Runtime Explorer, Property tool
- Jumpers, Cuts and Grounds
- Archive, archive request
- Workflow on system faults
- Study mode and Test mode

Database & Display Building Courses

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SP5 Data Engineering

Objectives

Understand and handle the basic steps to parameterize the network model in Spectrum Power™ 5. Understand the means to customize objects in the network to achieve the desired functions and behavior of objects.

General Information

Course Code	GSW-U-SP5-ENG
Delivery Method	Classroom, Remote and On-Site
Duration	3 Days
Language	English and German

Target Audience

Persons who are responsible for maintaining and extending the network data, the graphical displays, the parameterizing of the process interface in Spectrum Power™ 5 and further configuration of the system

Prerequisites

• Participation at the SP5 Operator/Dispatcher Training (GSW-SP5OP) is recommended

Content

• Introduction into the tools for data engineering (IMM, Graphic Editor)
• Job management
• Structure of the data model
• Calculations and formulas
• Alarm configuration
• Picture creation, picture modification (creation of station diagrams, creation of graphic objects for network data)

• Presentation logics
• Views and picture call up
• Topologic coloring and netgroup coloring
• Calculations and formulas
• Process interface over IEC process protocols
• Import and export of network data
• Creation and modification of network data for electrical, water and gas networks

System Administration & Communications Courses

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SP5 System Administration

Objectives

The participants gain basic knowledge about the hardware and software configuration of Spectrum Power™ 5, system administration and security aspects. The participants will learn tasks required for proper user administration and system maintenance. After this course they will be able to independently create backups, execute tasks to maintain the system, and perform first diagnostic steps on system faults, as well as support with qualified hints.

General Information

Course Code	GSW-U-SP5-ADM
Delivery Method	Classroom, Remote and On-Site
Duration	2 Days
Language	English and German

Target Audience

System administrators, personnel responsible for maintaining and troubleshooting the Spectrum Power™ 5 System

Prerequisites

- Common knowledge in (Microsoft Windows) system administration
- Basic knowledge in Spectrum Power™ 5, operation and data engineering
- Participation at the SP5 Data Engineering (GSW-SP5ENG) is recommended (Data base & Network knowledge)

Content

- System overview (server functionality, network, databases, architecture)
- User administration, user access rights
- Console access rights
- Start and stop of Spectrum Power™ 5
- Backup and restore
- Diagnostic
- Basic fault analysis
- System supervision
- Redundancy, failover

Applications Courses

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SP5 Archive – Historical Information System (HIS)

Objectives

Participants gain basic knowledge of the functions of the "Historical Information System HIS", and how to retrieve data using the implemented tools

General Information

Course Code	GSW-U-SP5-HIS
Delivery Method	Classroom, Remote and On-Site
Duration	1 Day
Language	English and German

Target Audience

Operators and those who need historical data of the SCADA system

Prerequisites

• Familiar handling with Spectrum Power™ 5

• Participation at the SP5 Operator/Dispatcher Training (GSW-SP5OP) is recommended

Content

• Technological background, "time series"
• Introduction to the HISWebUI
• Retrieving data with HISWebUI
• User displays
• Export data
• Additional interfaces

SP5 Study Mode and Switching Procedures

Objectives

Understanding study modes, configure and use on different scenarios. Ability to create and execute switching procedures

General Information

Course Code	GSW-U-SP5-SM
Delivery Method	Classroom, Remote and On-Site
Duration	1 Day
Language	English and German

Target Audience

Operators who need to plan operations and those who want to analyze networks states.

Prerequisites

• Familiar handling with Spectrum Power™ 5

• Participation at the SP5 Operator/Dispatcher Training (GSW-SP5OP) is recommended

Content

• Different types of studies
• Launching and configure a study
• Save Cases
• HIS Replay
• Creating and executing Switching procedures
• Options for Switching procedures

SP5 Calculation Enhancement

Objectives

Gain deep understanding about calculations in Power™ 5 and learn about additional options. Introduction to the Scada Scripting API

General Information

Course Code	GSW-U-SP5-CE
Delivery Method	Classroom, Remote and On-Site
Duration	1 Day
Language	English and German

Target Audience

Data engineers who need additional calculations capabilities in Spectrum Power™ 5.

Prerequisites

• Familiar handling with Spectrum Power™ 5

• Participation at the SP5 Operator/Dispatcher Training (GSW-SP5OP) is recommended

Content

• Differences between calculation types
• Parameter elements (time, object path, quality)
• Useful hints
• Enhancements with ScadaScripting
• Enhancement in worldmaps
• Example: control a switch with ScadaScripting