Training Courses
Specialized education to help you fully utilize your SCADA, MES or Historian software
EDUCATIONAL SERVICES

INTERMEDIATE

Vijeo Citect / CitectSCADA Configuration
Vijeo Citect / CitectSCADA Cicode Programming
Vijeo Historian / CitectHistorian Configuration
Ampla Performance
Ampla Express

ADVANCED

Vijeo Citect / CitectSCADA Architecture and Redundancy
Vijeo Citect / CitectSCADA Customization and Design
Vijeo Citect / CitectSCADA Upgrade
Educational Services

Educational Services offers a suite of programs and courses designed for end-users, engineers, system integrators, technical colleges, universities and educational establishments. Our courses provide you with hands-on experience, leaving you feeling confident to design and configure your own systems. Our programs are designed to facilitate the latest knowledge and application of Vijeo Citect™ / CitectSCADA™, Vijeo Historian™ / CitectHistorian™ and Ampla™ MES software.

Courses include instructor-led, online and onsite offerings for the suite of SCADA, Historian and MES software and related complementary software products. They include configuration and programming courses, upgrade courses, as well as introductory courses for Vijeo Citect / CitectSCADA, Vijeo Historian / CitectHistorian and Ampla.

Programs include:

- **Certified Education Centre Program** which regulates the standard of SCADA, Historian and MES courses.
- **Onsite training** - Run a course at your premises or at your chosen location, allowing your organization to educate more employees and save travel time and expense.
- **Academic Program** provides tertiary institutions with access to instructor courseware which may be used to construct your own courses in related fields.
- **Certified Engineer Program (CEP)** recognizes engineers skilled in the integration of SCADA-based automation projects. To become a Vijeo Citect Certified Engineer (VCCE) or CitectSCADA Certified Engineer (CSCE), a pass grade of 70% must be achieved in all current exams.

Our educational methodology has been proven effective through thousands of hours of instruction. Feedback received from customers confirms our success and drives continuous development in services offerings. We have implemented a guided stream of learning that facilitates progression from basic through to advanced knowledge of our suite of SCADA, Historian and MES products.
INTERMEDIATE

Vijeo Citect / CitectSCADA Configuration
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“Very beneficial - I would eagerly send any staff to Schneider courses knowing they provide a high level of training and understanding.”

“Easy to follow, plenty of information to take home and awesome folder to take home as well...”
Vijeo Citect / CitectSCADA
Configuration

Course Description
Gain insight into Vijeo Citect / CitectSCADA project design and become familiar with configuration techniques. Learn how to design a project from start to finish and configure various features, including the new time scheduler and equipment hierarchy. This interactive course includes hands-on practice with plant control, data collection, trending and reporting.

Audience
> Individuals who want to become familiar with Vijeo Citect / CitectSCADA project development techniques
> Vijeo Citect / CitectSCADA users including engineering staff, maintenance staff and plant supervisors
> Technical users who maintain and improve their installed Vijeo Citect / CitectSCADA and control systems
> Managers who want more than a basic understanding of Vijeo Citect / CitectSCADA
> Vijeo Citect / CitectSCADA system integrators and designers

Prerequisites
> It is essential that students are familiar with Microsoft® Windows operating systems
> Experience in PLC control system design and/or programming is desirable

Course outline
Day One involves introduction to the various components of Vijeo Citect / CitectSCADA, project design, communications and graphics:
> SCADA configuration environment
> Managing projects
> Using equipments
> Setting up communications
> Graphics

Day Two implements various areas of the Vijeo Citect / CitectSCADA project design, including controls and alarms:
> Operator input
> Genies and Popup pages
> Devices
> Events
> Alarms

Day Three continues with the project design elements of Vijeo Citect / CitectSCADA and introduces methods of reporting and monitoring the system:
> Trends via the Process Analyst
> Page management
> Reports
> Scheduler
> Security
Programming with Cicode

Course Description
Get insight into the major features of the Cicode™ language and learn how to apply, formulate and troubleshoot Cicode programming solutions with this totally redesigned course. This hands-on, interactive course is aimed at users with no previous programming experience, and is also useful for experienced users who wish to become familiar with Cicode.

Audience
> Programmers and non-programmers who want to become familiar with the Cicode language
> Vijeo Citect / CitectSCADA system integrators and designers
> Technical users who wish to maintain and improve their installed Vijeo Citect / CitectSCADA and control systems

Prerequisites
> It is essential that students are familiar with Microsoft Windows operating systems
> It is also recommended that students attend the Vijeo Citect / CitectSCADA Configuration course prior to attending Cicode Programming or have a good working knowledge of Vijeo Citect / CitectSCADA
> A general understanding of PLC communication is desirable

Course outline
**Day One** provides an introduction to programming, and demonstrates how Cicode may be used:
> Applying prototyping techniques to model programming
> The Cicode Editor
> Formulating Cicode programming solutions
> Structure programming techniques
> Error Handling and debugging

**Day Two** introduces further Cicode Programming techniques. Students will get into a variety of problems and will practice what they learned in Day One by implementing programmatic solutions based on broad task descriptions.
Vijeo Historian / CitectHistorian Configuration

Course Description
Vijeo Historian / CitectHistorian takes information gathered from your SCADA system and makes it available for display in industry standard applications. This course is designed for engineers who wish to configure and maintain a Vijeo Historian / CitectHistorian project and managers who wish to analyze the data in the client tools.

**Audience**
- Individuals who want detailed knowledge on how to set up and use Vijeo Historian / CitectHistorian
- Managers who require knowledge of how to use Vijeo Historian / CitectHistorian client tools to access data
- Vijeo Citect / CitectSCADA system integrators and designers

**Prerequisites**
- Solid experience in both Microsoft Windows operating systems and Vijeo Citect / CitectSCADA is required

**Course outline**

**Day One** provides an introduction to Vijeo Historian / CitectHistorian and its various components including hands-on technical training:
- Data sources
- Historian at-a-glance
- Historian status
- Publish information
- Backfill Manager

**Day Two** extends on the topics of day one and covers:
- Project management
- Tasks
- Events
- Excel client
- Web client

**Day Three** extends the techniques studied in the first two days to include reporting:
- Simple maintenance
- Historian interpolation
- Process Analyst
- Reports Deployment Manager
- Energy reports
- Case study

Intermediate Level
3 DAYS
Instructor-led course
Refresments and lunch provided
Ampla Performance

Course Description
This training course introduces new users of Ampla to the basic concepts and methods involved in configuring and using Ampla Studio and Production Analyst to model performance.

Audience
> Engineers and system integrators who will be responsible for the design, implementation and maintenance of an Ampla system, as a starting point in their training journey
> Plant managers, IT managers and operators who will need to get an understanding of Ampla and to maintain an existing Ampla project

Prerequisites
> It is beneficial, but not necessary, that students have prior Vijeo Citect / CitectSCADA experience
> Students should have an understanding of important metrics that drive business decisions within their organization

Course outline

Day One introduces participants to the framework of Ampla and covers the following topics:
> Overview of overall equipment effectiveness (OEE)
> Product architecture and core components
> Managing projects
> Creating a plant hierarchy
> Configuring security
> Configuring the Production module
> Production Analyst

On Day Two, participants configure a performance solution for the case study introduced on day one. This covers the following topics:
> Configuring the Downtime module
> Configuring the Energy module
> Configuring the Metrics module
> Production Analyst
> Web Client

Intermediate Level
2 DAYS
Instructor-led course
Refreshments and lunch provided
Ampla Express

Course Description
This training course introduces users to the Ampla Express: Insights™ and Ampla Express: OEE+E™ (Overall Equipment Effectiveness + Energy) components and gives them an overview of the Ampla Express features. It covers the basic concepts and methods involved in configuring and using Ampla Studio and Production Analyst to model performance and energy consumption.

Audience
> Engineers and system integrators who will be responsible for the design, implementation and maintenance of an Ampla system, as a starting point in their training journey
> Plant managers, IT managers and operators who will need to get an understanding of Ampla and to maintain an existing Ampla project

Prerequisites
> It is beneficial, but not necessary, that students have prior Vijeo Citect / CitectSCADA experience
> Students should have an understanding of important metrics that drive business decisions within their organization

Course outline
**Day One** introduces participants to the framework of Ampla Express and covers the following topics:
> Overview of OEE+E
> Managing projects
> Product architecture and core components
> Creating a plant hierarchy
> Configuring security
> Configuring the Production module
> Configuring the Metrics module - Insights
> Production Analyst

On **Day Two**, participants configure an energy efficiency and performance solution for the case study introduced on day one. This covers the following topics:
> Configuring the Downtime module
> Configuring the Energy module
> Configuring the Metrics module - OEE+E
> Production Analyst

Intermediate Level
�� 2 DAYS�� Instructor-led course�� Refreshments and lunch provided
This training has saved me many potential hours of setup for future projects. It was very helpful and will be put to good use!

The training course I attended used up-to-date material which was presented in a user friendly manner that explained all aspects I needed to run the software successfully.
Vijeo Citect / CitectSCADA
Architecture and Redundancy

Course Description
Gain advanced networking skills and knowledge. Discover the new OPC DA Server and alarm server redundancy features of 7.30. Learn more about online changes, advanced security concepts and connecting to Vijeo Citect / CitectSCADA remotely through the Web Client.

Audience
> Engineers who are responsible for the design and maintenance of the SCADA network
> Network administrators who need to understand how Vijeo Citect / CitectSCADA is configured on their network
> Vijeo Citect / CitectSCADA system integrators and designers
> Technical users who maintain and improve their installed SCADA and control systems

Prerequisites
> It is essential that students are familiar with Microsoft Windows operating systems
> It is also recommended that students have attended a Vijeo Citect / CitectSCADA Configuration course or have at least six months experience in Vijeo Citect / CitectSCADA design

Course outline
Day One focuses on the details of networking in Vijeo Citect / CitectSCADA and the implementation of a fully distributed and redundant system:
> Vijeo Citect / CitectSCADA architecture
> OPC DA server
> Online changes
> Clustered control system

Day Two incorporates some of the most commonly used advanced communication and security features of Vijeo Citect / CitectSCADA:
> Vijeo Citect / CitectSCADA redundancy
> Web Client
> System security
Vijeo Citect / CitectSCADA Customization and Design

Course Description
Get insight into the principles behind project customization, using custom templates, genies and popup pages. Expand your knowledge of Vijeo Citect / CitectSCADA by looking at the new library controls and equipment features. Use ADO.NET functions to efficiently communicate with external databases. You will be using different programming environments, including Cicode and VBA®. In addition, you will learn how to exchange data between Vijeo Citect / CitectSCADA and other applications such as ActiveX® and SQL.

Audience
> Advanced programmers
> Vijeo Citect / CitectSCADA system integrators and designers
> Engineers who will be responsible for the design and maintenance of a Vijeo Citect / CitectSCADA system

Prerequisites
> It is essential that students are familiar with Microsoft Windows operating systems
> Students should also have attended the Vijeo Citect / CitectSCADA Configuration course and either a Cicode Programming or Vijeo Citect / CitectSCADA Architecture & Redundancy course, or have at least six months experience in Vijeo Citect / CitectSCADA design and programming

Course outline
Day One focuses on the details of creating customized pages in your Vijeo Citect / CitectSCADA project:
> Custom templates
> Smart genies

Day Two extends the material from Day One to improve the operation and management of graphics pages and incorporates some of the most commonly used advanced features including connecting to other applications:
> Smart popups and Super genies
> Cicode Forms
> SQL interface
> ActiveX integration
Vijeo Citect / CitectSCADA Upgrade

Course overview
This training course steps you through the most common procedures for a successful and seamless project upgrade. Get tuned on the new project design and configuration techniques, and investigate the latest product features.

Audience
- Engineers who need to know about new product features in the latest version of Vijeo Citect / CitectSCADA
- Vijeo Citect / CitectSCADA system integrators and designers
- Technical users of existing Vijeo Citect / CitectSCADA systems

Prerequisites
- It is essential that students are familiar with Microsoft Windows operating systems
- At least two years experience in Vijeo Citect / CitectSCADA design is required
- This course is primarily intended for users with strong experience in Vijeo Citect / CitectSCADA V6.x or above

Course outline
This course addresses how to install the latest version of Vijeo Citect / CitectSCADA and considers any issues that may arise with upgrading projects. Considerable time is then spent investigating features of the new version and how to make best use of them:

- How to prepare for an upgrade
- System requirements
- How to upgrade the projects
- Installing multiple versions of Vijeo Citect / CitectSCADA
- Templates
- Graphics enhancements
- Tag extensions
- Server-side online changes
- Distributed processing
- Equipment and scheduling
- OPC DA server
- The SQL interface
- System security
For further information, contact your local Schneider Electric office.