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PDEC 655

Distribution Automation

Siemens Power Academy TD - NA • usa.siemens.com/pti-education

At a glance

Government and regulatory bodies are pressuring power utilities to improve power supply reliability while maintaining voltage level of the system within limits. Distribution Automation is one of the smart grid applications that can enable reliability improvement while accounting for voltage control. The **Distribution Automation** course provides participants with a practical understanding of system, equipment, economic and communication aspects of Distribution Automation applications.

In **PDEC 630**, participants will explore:

- Review the current system, including distribution system topologies, equipment, electrical fundamentals, reliability, peak load, losses, and distributed power generation
- Discuss distribution system concerns currently facing utilities, including reliability, power quality, and increasing distributed generation penetration
- Learn the market drivers of the smart grid

- Discuss an overview of smart grid applications, including smart meters, substation automation, distribution automation (DA), distributed generation, and microgrids
- Explore DA applications, including volt/var control and optimization (CVR, IVVC), intelligent line switching (FDIR, ONR), and transformer monitoring and diagnostics
- Review distribution system equipment in use today and discover the next generation of smart equipment
- Discuss IT enterprise management systems (SCADA, DMS, MDMS, EAM), evolution in IT architecture, development of standards and the importance of cyber security
- Understand DA communication basics (data paths, packet switching, protocols, etc.), DA architecture, and communication mediums
- Explore DA economics, including utility economics, and financial incentives for smart grid deployment.

With knowledge gained from completion of this course, participants should better understand how to develop a business case to ensure funding to deploy a DA program.

Prerequisites

No previous experience in Distribution Automation is required, although a basic understanding of power distribution systems is recommended. This course is recommended for engineers, planners, and managers who wish to understand how to implement a DA application.

Course structure

This is a four-and-one-half day course. Material is presented in both morning and afternoon sessions for a total of six hours of daily instruction. Standard course hours are 9:00 a.m. to 4:00 p.m. each day, except the last day, which concludes at noon.

To view the PDEC 655 Course Schedule on the web:

https://siemens.coursewebs.com/cart/pageCourseInfo.aspx?Course_ID=PDEC_655

Instructors

All courses offered through Siemens Power Academy are developed and taught by leading industry engineers. In addition to their proven instructional ability, our engineers have advanced degrees complemented by first-hand knowledge and experience solving power system problems throughout the world.

Continuing Education Units (CEUs), Professional Development Hours (PDHs):

Licensed engineers, on a voluntary or mandated basis, attend continuing professional education for licensure renewal to ensure competency. All courses offered through Siemens

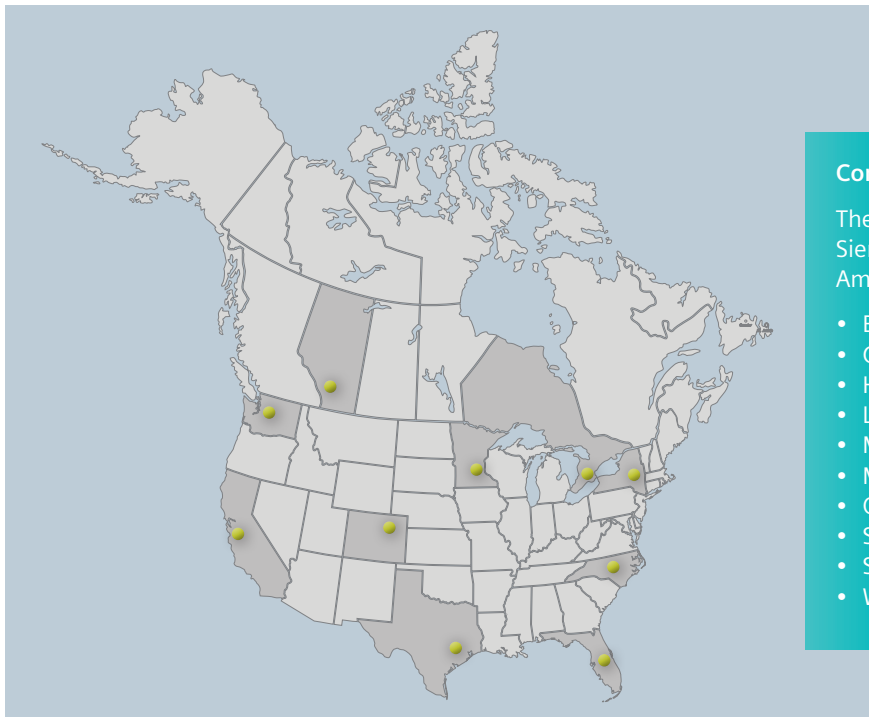
Power Academy meet the requirements for CEUs and PDHs.

- Continuing Education Units (CEUs) are the nationally recognized units for recording participation in professional development and noncredit educational programs. Participants completing this course will be awarded CEUs based on the instructional hours of the course: one CEU is awarded for 10 classroom hours of instruction.
- Professional Development Hours (PDHs) – Continuing education training for the Professional Engineer (PE) – that needs to earn annual Professional Development Hours

(PDHs). Through our instructor-led training, participants earn one PDH for each one hour of instruction. The participant is responsible for maintaining records of courses taken in support of licensure.

Client site and custom training

All courses are available for presentation at any client's location by special arrangement. At client sites, it is recommended that sufficient computer terminals be available to enable a fully interactive and productive class, if applicable. Client site courses can also be tailored to address specific topics of local importance.



Convenient training locations

The course is scheduled on a regular basis at Siemens offices located throughout North America, including:

- Burlington, Ontario, Canada
- Calgary, Alberta, Canada
- Houston, Texas, USA
- Littleton, Colorado, USA
- Minnetonka, Minnesota, USA
- Mountain View, California, USA
- Orlando, Florida, USA
- Schenectady, New York, USA
- Seattle, Washington, USA
- Wendell, North Carolina, USA

Contact us

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Export Control

AL-Number:

ECCN: EAR99

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