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PDEC 630

Low-voltage Networks – Theory and Practical Applications

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

At a glance

Most major cities throughout the country have low-voltage network systems in the downtown commercial areas, supplying important loads requiring highly reliable service. Many network systems have been in service for more than 60 years and the engineers familiar with these have retired. An understanding of the fundamentals of network system design, protection and operation is required by engineers and technicians involved with secondary networks for the first time.

The **Low-voltage Networks – Theory and Practical Applications** course teaches the design, operation and protection practices used for both dedicated feeder grid and spot network systems, and for non-dedicated feeder spot network systems.

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

- Fundamentals of low-voltage network system design and operation
- Basic components of a low-voltage network, including substation and primary feeders, and network unit
- Identification of parameters significantly affecting network voltages
- Minimum loading required for forward power flows
- Power flows during normal conditions and faults
- Cable limiter types, functions and time-current
- Closed transition switching/generation on spot networks and network-relay testing
- 480-volt spot network protection
- Protector relaying and coordination for primary feeder faults
- Primary system grounding schemes.

Upon completion of this course, participants will be able to better understand and apply these concepts when working with low-voltage networks systems.

Prerequisites

The course participants should have an engineering degree, an electrical technology background or practical experience with low-voltage networks.

Course structure

This is a three-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.

To view the PDEC 630 Course Schedule on the web:

https://siemens.coursewebs.com/cart/pageCourseInfo.aspx?Course_ID=PDEC_630

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

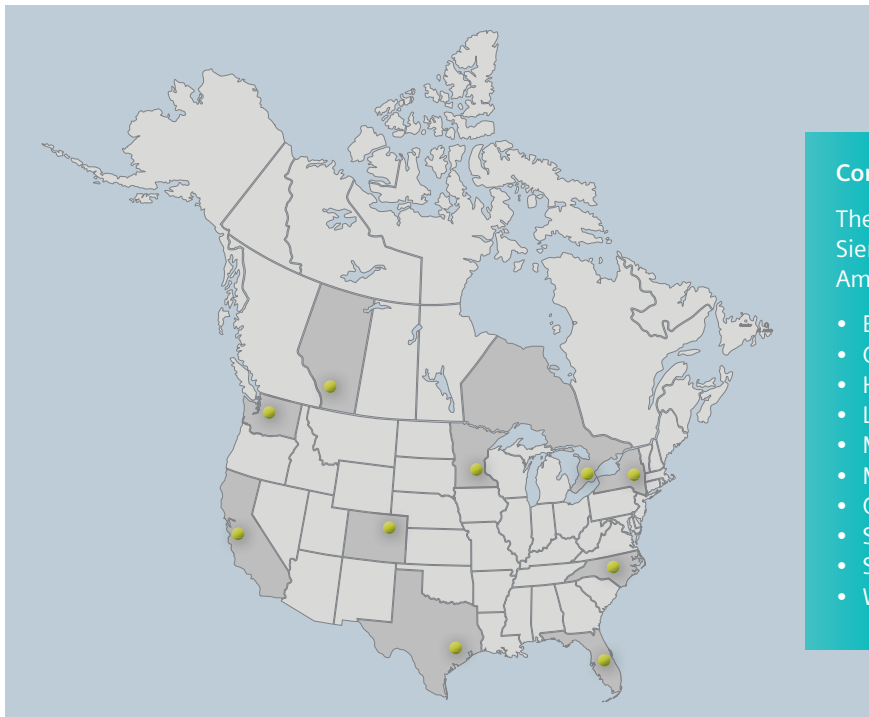
Power Academy meet the requirements for CEUs and PDHs.

- 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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