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PSEC 600

Power System Dynamics – Introduction

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

At a glance

Understand the dynamic models of power system components and the classical control techniques to determine system transient and small signal stability. The **Power Systems Dynamics – Introduction** course explores both theory and practice for modeling major power system components, such as synchronous machines, excitation systems, governors and loads, and provides examples using PSS®E.

Topics covered in **PSEC 600** include:

- Modeling synchronous machines for stability studies
- Understanding the synchronous machine model development procedure
- Modeling DC, AC and static excitation systems

- Examining the characteristics of prime movers and developing models that can be used in power system studies
- Exploring the characteristics of load models such as constant power (MVA) load, polynomial load, exponential load, etc.
- Modeling of induction motors
- Studying the transient behavior of synchronous machines due to electrical and mechanical phenomena
- Exploring the factors affecting small signal stability
- Understanding the design, structure and use of power system stabilizers (PSS).

Upon completion of this course, participants will have a better understanding of dynamic effects encountered in operation of the power system and expansion planning analysis.

Prerequisites

Participants should have a degree in electrical engineering and be familiar with load flow and stability topics.

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 PSEC 600 Course Schedule on the web:

https://siemens.coursewebs.com/cart/pageCourseInfo.aspx?Course_ID=PSEC_600

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

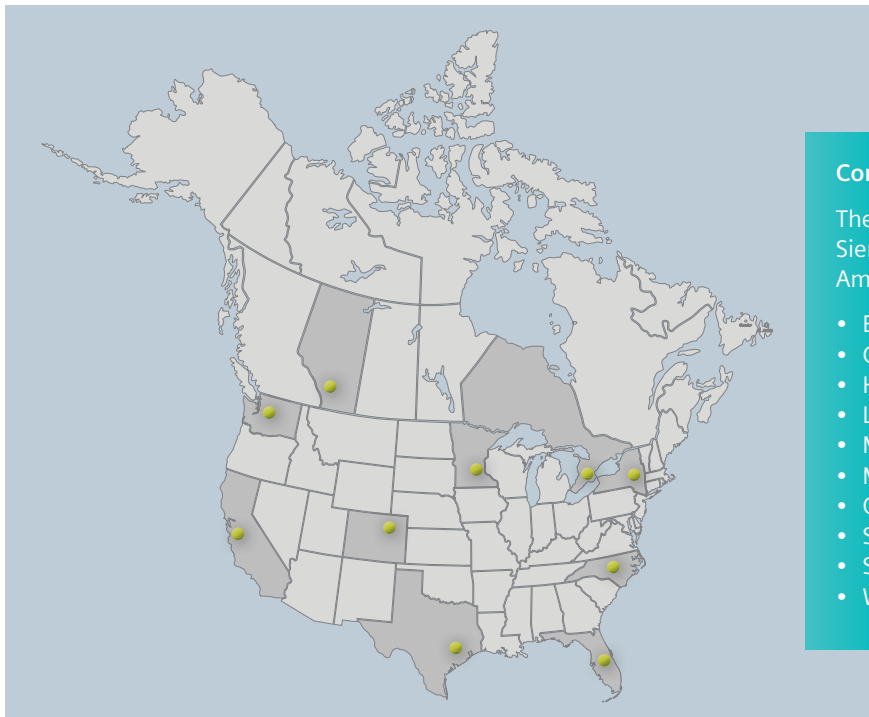
Power Academy meet the requirements for CEUs and PDHs.

- 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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