

## Siemens Power Academy TD

# PSS®E – Advanced Power Flow

## PSSC 710

### At a glance

Utility engineers who conduct studies with PSS®E must understand the fundamental concepts of power system behavior as well as know how to execute the many advanced routines within the program. This course is directed at the experienced PSS®E user who would like to increase his or her analytical skills in steady state applications.

In **PSSC 710** participants will gain knowledge in:

- Power flow and short circuit interface navigation
- Modeling two-winding and three-winding transformers for power flow and short circuit calculations
- Fault analysis applications, including ANSI and IEC calculation procedures
- Modeling of FACTS Devices, e.g., SVC, STATCOM and HVDC in steady state analyses
- Automating and customizing procedures using Response Files, IPLAN\* and Python™\*
- Performing DC/AC contingency analysis, network islanding and redispatch, multi-level contingency analysis, and contingency ranking
- Understanding the causes and event sequences of voltage collapse and the use of PVI/QV analyses
- Using and understanding optimization methods, including Optimal Power Flow (OPF), Preventive Security Constrained OPF (PSCOPF) and N-1-1 analysis

- Performing probabilistic transmission reliability assessment
- Evaluating the reliability of a substation in terms of probabilistic indices.

\* *This course provides a brief introduction to the use of IPLAN and Python in PSS®E. Siemens Power Academy offers separate comprehensive courses in IPLAN programming and the Python language.*

Program users will be able to perform advanced steady state analyses with ease upon completion of the **PSS®E Advanced Power Flow** course.

### Prerequisites

Participants must be employees of a company that is a current lessee of PSS®E. They should either have setup and operating experience with power flow solutions or have completed the Introductory PSS®E Power Flow and Steady State Analysis course.

### 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 PSSC 710 Course Schedule on the web:**

[https://siemens.coursewebs.com/siemens/pageCourseInfo.aspx?Course\\_ID=PSSC\\_710](https://siemens.coursewebs.com/siemens/pageCourseInfo.aspx?Course_ID=PSSC_710)

### 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):

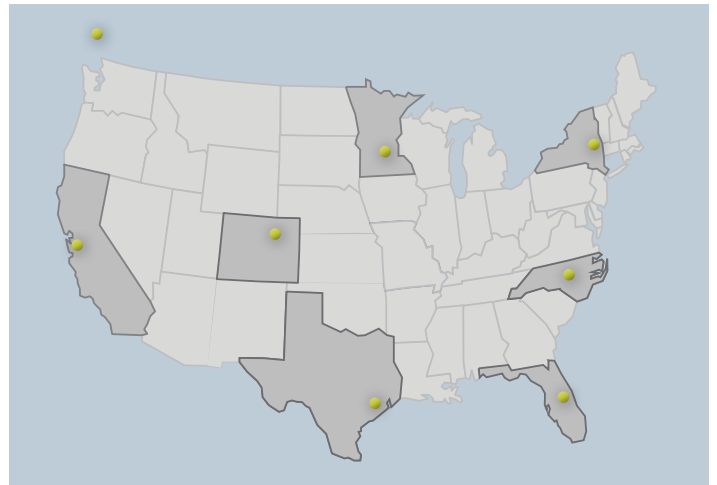
Licensed engineers, on a voluntary or mandated basis, attend continuing professional education for licensure renewal to ensure competency. All courses offered through Siemens Power Academy meet the requirements for CEUs and PDHs.

- 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.

### Convenient training locations

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

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



### 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.

### Contact us

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