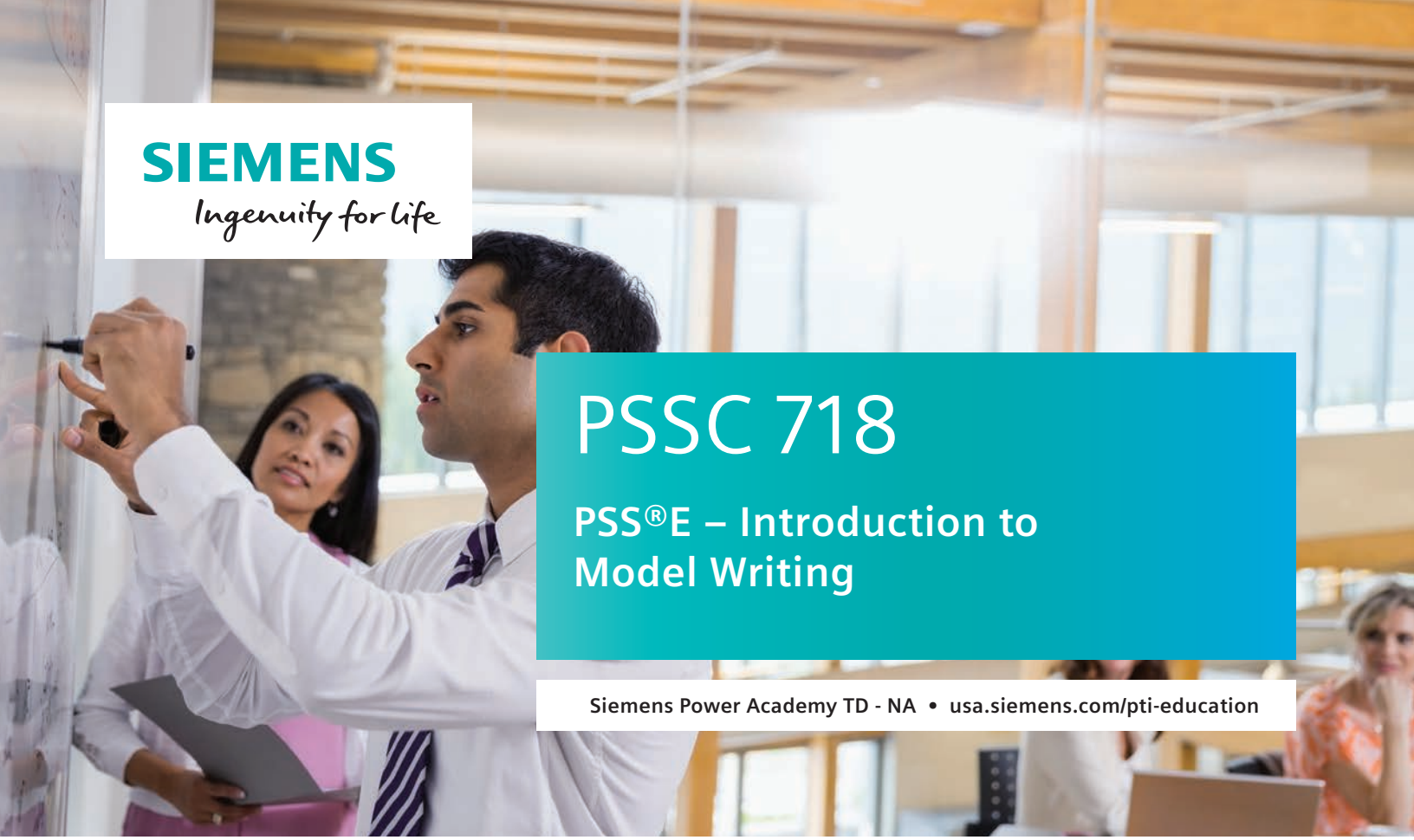

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PSSC 718

PSS®E – Introduction to Model Writing

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

At a glance

Design, operation and protection of generation and transmission systems requires a thorough understanding of dynamic behavior of machines and controls as well as their interaction with the network and loads. System designs require unprecedented detail and dimensions in simulation capability; they depend on accurate prediction of transient and dynamic stability.

The **PSS®E – Introduction to Model Writing** course provides participants with an understanding of the practical and theoretical aspects of dynamic modeling using PSS®E, a power simulation tool. A hands-on course, participants will have an opportunity to write several user-defined models.

In this course, participants will:

- Understand the landscape of dynamic simulation and disturbances on the power system
- Explore the disturbance phenomena and the limitations of simulation tools
- Discuss dynamic simulation objectives and the need for user-defined models
- Understand the overall flow of dynamic simulation within PSS®E
- Understand the process of compile and link, and the differences between object and library ("obj" and "lib") files versus "dll" files
- Discuss "dll" creation process, advantages of using a "dll" as opposed to "obj" and "lib" files
- Understand the development requirements for a user-written model
- Learn how to determine the starting values of CON, STATE, VAR, and ICON indices for various models
- Learn the DYRE entry format for various user-written models
- Learn to simplify the process of writing PSS®E dynamic models by building elementary blocks for handling various transfer functions
- Write PSS®E dynamic models for simple models like AVR, and turbine governors.

Upon completion of this course, participants will understand dynamic simulation objectives and requirements and will be able to use this knowledge to develop their own models in PSS®E.

Prerequisites

Participants should have either, setup and operating experience with power flow and dynamic simulation of power systems, or should have completed all introductory courses in PSS®E.

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 PSSC 718 Course Schedule on the web:

https://siemens.coursewebs.com/cart/pageCourseInfo.aspx?Course_ID=PSSC_718

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

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