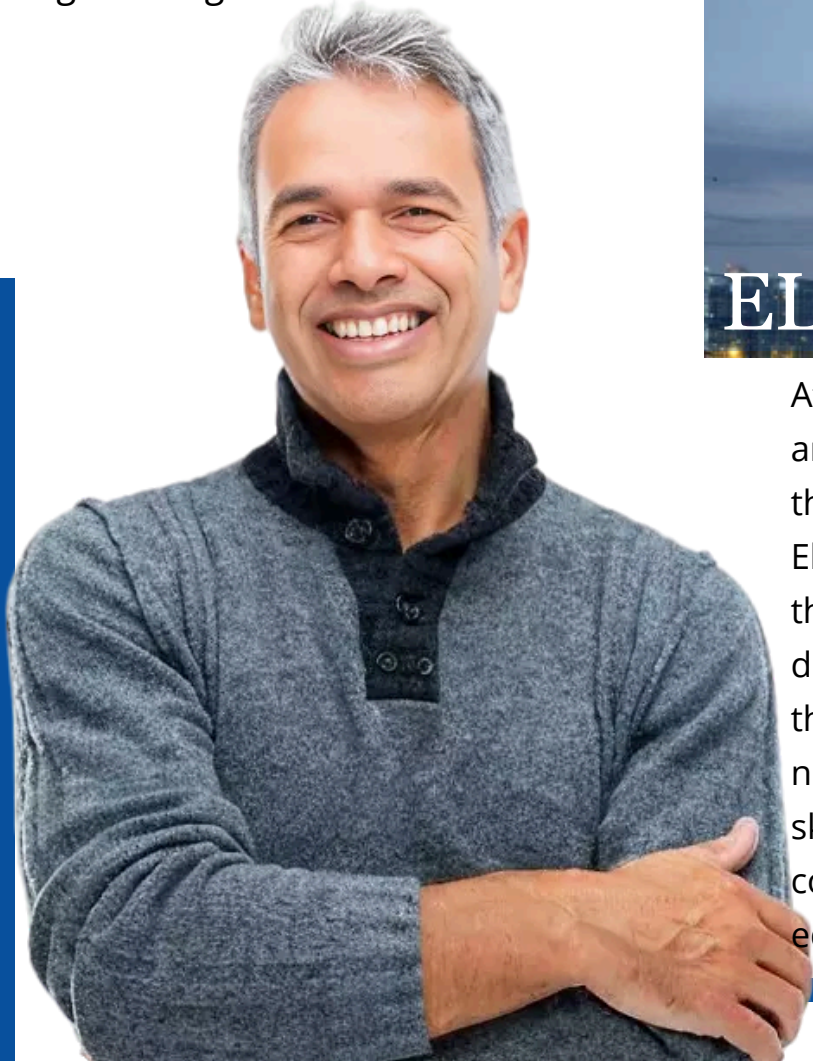


ENGINEERS' CERTIFICATION PROGRAM

Engineering Skills



PSS@E _ Live Training

Power System Simulator for Engineering

ELP

PSS®E


High-performance Transmission
Planning and Operations
Software for the Power Industry

At Electrical Learning Portal (ELP), we are dedicated to shaping the future of the electrical and MEP (Mechanical, Electrical, and Plumbing) industries through professional training and development. Our mission is to bridge the gap between the ever-evolving needs of employers and the dynamic skill set of engineers by providing comprehensive, industry-relevant education and training.

Degree + Skills = Career Growth

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 info@electricallearningportal.com

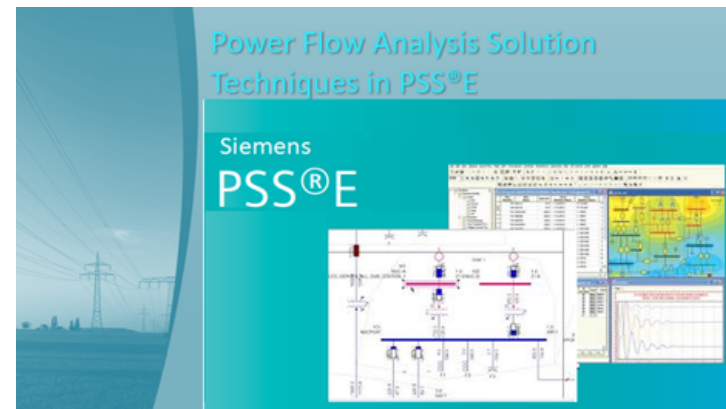
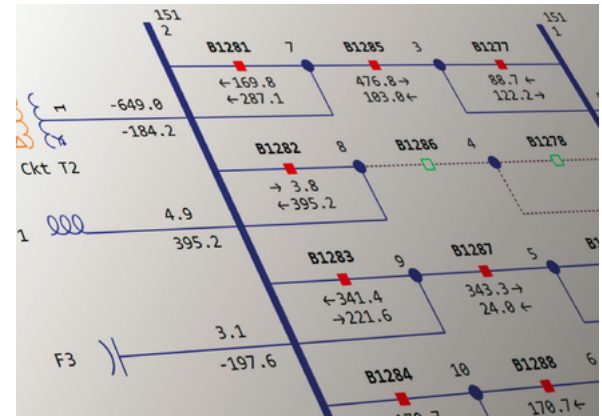
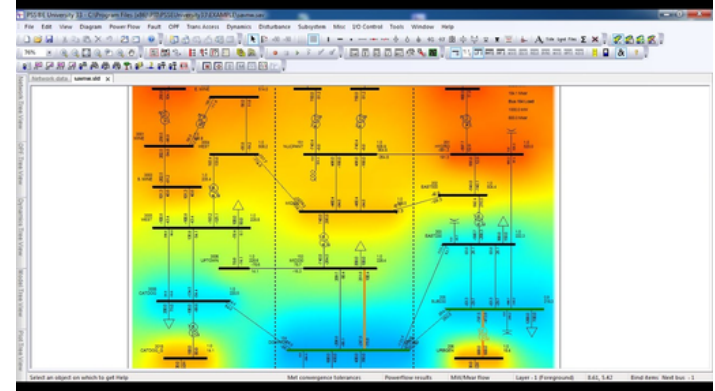
 <https://electricallearningportal.com>

POWER SYSTEM SIMULATOR FOR ENGINEERING (PSS@E)

Welcome to the "PSS@E" training program, hosted by the Electrical Learning Portal (ELP). This comprehensive PSS®E (Power System Simulator for Engineering) course is designed for electrical engineers and professionals looking to enhance their expertise in power systems analysis and simulation. PSS®E is a powerful tool used by industry experts worldwide for planning, operation, and analysis of electrical power systems.

Throughout this course, participants will gain hands-on experience with PSS®E software, learning how to model power systems, perform load flow studies, analyze faults, and conduct dynamic simulations. The course covers essential topics such as voltage stability, harmonic analysis, and Python scripting, making it an ideal program for those looking to strengthen their understanding of complex power systems and improve their problem-solving skills.

Whether you're an experienced engineer or just beginning your journey in power systems, this course offers practical knowledge and case studies to help you master PSS®E and apply it effectively in real-world scenarios.



TOPICS

Module 1: Introduction to PSS®E and Power Systems

- Overview of power systems (generation, transmission, and distribution)
- Key concepts: buses, generators, loads, transformers, transmission lines
- Introduction to PSS®E software: installation, license setup, and interface overview
- Basic navigation in PSS®E (menus, toolbars, network diagram)

Module 2: Power System Modeling in PSS®E

- Creating a new power system network
- Entering data for buses, generators, loads, transmission lines, and transformers
- Understanding network components and their parameters
- Saving and managing case files in PSS®E

Module 3: Load Flow Analysis

- What is load flow analysis and its significance?
- Setting up and running a basic load flow study
- Inputting load and generation data
- Solving the load flow problem
- Understanding key output results: bus voltages, line flows, power losses
- Interpreting load flow reports

Module 4: Fault and Short Circuit Studies

- Introduction to fault analysis: symmetrical and asymmetrical faults
- Setting up a short circuit analysis
- Running fault studies in PSS®E
- Understanding fault current results
- Basics of protective relay coordination

Module 5: Basic Dynamic Analysis

- Introduction to dynamic simulation and its importance
- Setting up a simple dynamic model (adding dynamic components like generators, and governors)
- Running a basic dynamic simulation for transient stability analysis
- Analyzing system behavior during disturbances (e.g., faults, load shedding)

Module 6: Reporting and Visualization

- Generating standard load flow reports
- Customizing output reports
- Exporting and visualizing results
- Plotting graphs of power flows, voltages, and other key parameters

Module 7: Introduction to PSS®E Python Scripting

- *Basics of Python scripting in PSS®E*
- *Automating load flow analysis with simple Python commands*
- *Creating and running a batch process for multiple case studies*
- *Extracting results programmatically*

Module 8: Voltage Stability Issues

- *Principles of voltage stability and voltage collapse*
- *Identifying weak points in the system*
- *Analyzing voltage stability using PSS®E*
- *Solutions and methods to improve voltage stability*

Module 9: Harmonic Analysis

- *Basics of harmonics in power systems*
- *Sources and effects of harmonics on the system*
- *Harmonic analysis tools in PSS®E*
- *Mitigation techniques for harmonic distortion*

Module 10: Case Studies and Hands-On Practice

- *Running sample projects to reinforce learning*
- *Small case studies (e.g., a simple two-bus system or a small regional grid)*
- *Interpreting the results and making recommendations*
- *Troubleshooting common issues in simulations*

Tools

- o All Classes are Live via Google Meet or Zoom
- o MS PowerPoint slides
- o Calculation on MS Excel
- o PDF material

FEATURES

1. Live trainer interaction
2. Access to recorded sessions
3. Career counseling support
4. Weekly assignments

BENEFITS

1. Job-ready programs
2. Updated course content
3. ISO-certified completion certificate
4. PDF notes provided
5. 100% refund guarantee

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