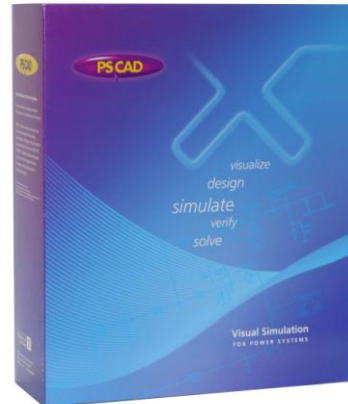


Fundamentals of PSCAD and Special Applications

The Professional's Power Systems Transient Simulator



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Course Benefits

PSCAD X4 introduces the new era of toolsets for the simulation of electric power systems, distribution systems and power electronic systems. This course is designed to familiarize users with the general operation of PSCAD. With numerous hands-on examples, users will be able to develop proficiency with PSCAD X4 and its applications. While this course is aimed at new and novice users, the last 2 days of the course can be quite informative for most PSCAD users.

Modern power, distribution and electronic systems are becoming increasingly complex. Traditional single frequency based study and design software is unable to deliver the precision needed to confidently deliver the best engineering solution. This course will help increase your engineering skills in this rapidly developing and competitive world.

Course Outline: Four Days

9:00 AM – 5:00 PM (Day 1, 2, 3)

1. PSCAD Student Edition installation
2. Introduction to PSCAD
3. Project Tree and Message Tree
4. Master Library
5. On-line Help System
6. Loading and Running a Case
7. Building a New Case: Hands-on Tutorial
8. Measuring and Plotting Voltage, Current, etc.
9. Use of Sliders, Switches, Buttons and Dials
10. Data Arrays
11. Advanced plot features
12. Fast Fourier Analysis using FFT block
13. Component Workshop: Creating graphics and connections, writing dynamics scripts, writing FORTRAN subroutines, C and MATLAB interface.
14. Hierarchical Modeling: Page Module, X Nodes, Wired/Wireless Exports and Imports, Global Constants
15. Custom Library: Components, .obj, .lib and .f files
16. Documentation: Sticky notes, Annotations, File references
17. Reporting and Printing: Features and Strategies
18. Batch Processing: Multiple Run Component
19. COMTRADE file generation for protection studies
20. Source Representation
21. Transformers

- 22. Transmission Lines and Cables
- 23. Electric Machines: Synchronous, Induction and DC
- 24. Controls: Overview of the controls library
- 25. Advance Features: Discussion
 - Multiple instance modules
 - Interpolation: How and when to use it.
 - Chatter (Numerical Oscillation): Detection and Removal
 - Optimal Ordering: Advantages
- 26. Other Transient Simulation Issues

9:00AM – 5:00PM (Day4)

- 27. Demonstrations of Advanced Examples: Transformer inrush, Induction motor starting, Network validation, Switching studies, Insulation Co-ordination studies and related IEEE standards, Ferroresonance, active filters, HVDC, SVC, UPFC, SSR, Wind Energy Systems, Fuel Cell Systems, etc. Brief demonstration and discussions only.

Computer Requirements

Please bring your own laptop for the hands-on workshop. The latest version of PSCAD Student Edition will be installed on your computer. We will also install a PSCAD Professional Edition Trial. Recommended minimum system requirements:

- Minimum Microsoft Windows XP or higher
- Pentium, 1 GB RAM, 400 MB Disc Space, CD ROM Drive, 1024x768 Screen. USB port
- TCP/IP protocol.

Cost

- ₹.20,000/- + ST (10% early registration discount is available for fully paid registrations up to three weeks before the course starting date)
- Educational Customer (Please contact Nayak Power Systems for seat availability and academic discount)

***Registration fee includes Presentations, tutorials, lunch & snacks.
Participants have to carry their own laptops*

Travel and Accommodation are the responsibility of the participant

Payments and Cancellations

- Training conformation and the venue details will be sent to the registered participants two weeks prior to the scheduled training date
- Advance payment required by Cheque or Bank Transfer
- No onsite registration and No Cash payment accepted
- Completed registration form and cheque payable to “Nayak Power Systems Pvt. Ltd.” can be mailed to our office
- Registration forms are also accepted via email and fax
- If Nayak Power Systems cancels the course for any reason, 100% of the fee will be refunded
- 100% fee will be refunded for all cancellations three weeks before the course start date and 50% of the fee will be refunded afterwards