TRAINING COURSE

POWER SYSTEMS ELECTROMAGNETIC TRANSIENT SIMULATIONS WITH PSCAD™

April 16, 17 & 18, 2024

From 9:00 to 17:00

INDIELEC Training Room | Parque Tecnológico de Valencia
Ronda Narciso Monturiol 17
Edificio AS Center Rojo. Oficina 1-15
46980 Paterna, Valencia (Spain)

REGISTER

OBJETIVES

The main objective of this course is to become familiar with the simulation environment of PSCAD™ software for the introduction of power system models, as well as the execution of electromagnetic transient simulations and the analysis and processing of their results.

CONTENTS

This course will cover the fundamental phenomena applicable to the study of electromagnetic transients in electrical networks. Several applications areas such as AC transients, fault and protection, transformer saturation, initialization of electric machines, transmission lines, as well as other power systems topics will be discussed with practical examples serving to illustrate the subject.

WHO SHOULD ATTEND

This course is intended for practicing engineers, graduate students, and researchers in power systems, who are interested in developing an in-depth understanding of the modern tools available for the analysis of electromagnetic transient events in the network.

The course is intended for PSCAD™ users as well as introductory users.

REGISTRATION DEADLINE

Until April 5, 2024

REGISTRATION FEE

1.200,00 € per attendee (VAT not included)

MORE INFORMATION & CONTACT

Ingeniería de Diseño Electrotécnico SL
(+34) 961 303 462
formacion@indielec.es
www.indielec.com

ORGANIZED BY:

INDIELEC | INGENIERÍA DE DISEÑO ELECTROTÉCNICO

TRAINING COURSE

POWER SYSTEMS ELECTROMAGNETIC TRANSIENT SIMULATIONS WITH PSCAD™

April 16, 17 & 18, 2024

From 9:00 to 17:00

INDIELEC Training Room | Parque Tecnológico de Valencia
Ronda Narciso Monturiol 17
Edificio AS Center Rojo. Oficina 1-15
46980 Paterna, Valencia (Spain)

REGISTER

TRAINING PROGRAM

MODULE 1: General Features
- Selection of simulation tools
- Typical studies in PSCAD
- Simulation theory
- Specifications

MODULE 2: First steps with PSCAD
- PSCAD step by step
- Create projects
- Access to the Master Library
- On-line help

MODULE 3: Plotting, metering and control devices
- Plotting curves
- How to export results
- Dynamic control devices
- Plotting results
- Snapshots
- Types of parameters in PSCAD
- Multiple run simulations
- Control blocks & sequencers

MODULE 4: Breakers & Faults
- Breakers and their control
- Faults and their control

MODULE 5: Switching & Interpolation
- Semi-conductors models
- Interpolation method

MODULE 6: Transformer models
- Classical vs UMEC models
- Equivalent circuit
- Main parameters and settings
- Ideal transformer
- Transformer saturation

MODULE 7: Electric machines
- Electric machines and other components
- Initialization process of electric machines

MODULE 8: Transmission lines & Cables
- Equivalent circuit models
- Travelling wave models

MODULE 9: User components
- EMTDC structure and solving process
- How to create a component step by step
- Parameterizing a component
- Defining the code

MODULE 10: Organizing the worksheet
- Creating page modules

MODULE 11: Blackboxing modules
- How to convert an open module in a blackbox

MODULE 12: PSCAD Automation with Python
- My first script in PSCAD

ORGANIZED BY:

INDIELEC | INGENIERÍA DE DISEÑO ELECTROTÉCNICO