Paladin Advanced Power Systems Modeling Training (Course #DB-313)

About the Course:
Power Analytics’ Advanced Power Systems Modeling course is a three-day, hands-on workshop for graduates of Power Analytics Power Systems Basic Training, and experienced Paladin DesignBase users. Students will learn advanced methodologies for power systems design, including short circuit analysis, protective device evaluation, transient analysis, and power quality investigation (i.e. harmonics analysis, voltage sag, switching transients, etc.)

Total Course Length: 24 hours (3 days)

Why You Should Attend:

1. Understand basic concepts of power system analysis and operations
2. Understand how equipment characteristics and the installation configuration can affect the electrical software model
3. Understand the importance of arc flash calculations
4. Identify the important electrical characteristics to define a model
5. Develop an understanding of electrical network coordination principles

Prerequisites:

- Basic knowledge of electrical circuits
- Power Systems experience a plus
- Prefer students bring individual laptop computer for class
Agenda:

08:00 - 10:00 DesignBase Training
10:00 - 10:30 Break
10:30 - 12:00 DesignBase Training
12:00 - 13:00 Lunch & Break
13:00 - 15:00 DesignBase Training
15:00 - 15:30 Case Studies
15:30 - 16:00 Break
16:00 - 17:00 Open Workshop

Day One

- Review System Modeling concepts
- Review System Analysis: per unit method, symmetrical components
- IEEE Standards
- Subtransient, transient and steady state short circuit current
- Short Circuit Reports
- Circuit Duty, Switching equipment capabilities
- Protective Device Evaluation
- Numerical examples
- Protective Device Coordination (PDC)
- Protection principles
- Methods of coordination
- Performing a PDC study using Paladin DesignBase PDC program
- Arc Flash analysis
- Numerical examples
Day Two

- Introduction to power quality
- Linear and Non-Linear Loads
- Harmonics based power quality investigation using Power Analytics
- Frequency Scan
- Transformers and K Factors
- Capacitors and Resonance
- The Harmonics Program Control Interface
- Modeling Harmonics Sources in Power Analytics
- Adding Filters (Manually, Auto Filter Sizing)
- Phase Shifting Transformers
- Generic approach on power quality investigation
- Practical Exercises
- Voltage based power quality investigation: sags, fluctuations

Day Three

- Steady state models and dynamic models
- Generator dynamic models
- Motor dynamic models
- Governor models
- AVR models
- Modeling disturbances in Paladin DesignBase Adv. Transient program
- Power Analytics Universal Logic Controller: built dynamic models
- Practical Exercises: bus transfer, plant start up, motor sequencing, dynamic motor starting; faults, voltage sags, modeling relays, CBs, fuses, etc.
Course Fees and Registration:

Please Contact Jadranka Bozinovska at Power Analytics to reserve your spot!
(Accommodation information will be provided at time of registration)
10805 Rancho Bernardo Road, Suite 270
San Diego, CA 92127
(858) 675-9211
jbozinovska@poweranalytics.com

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Training rates for 2013 classes are:
$3,000 per student

IEEE Members:
Through a special arrangement with IEEE, Power Analytics training courses qualify for Continuing Education Units (CEUs) and Professional Development Hours (PDHs). IEEE members qualify for a 10% discount on normal course tuition so long as they:

• Are an IEEE Member at the time of course registration, and
• Enroll through an offering available through this site
* 3 day training course will earn 3 IEEE CE Units (CEU's)