

Paladin Advanced Power Systems (Course #MG-375)

About the Course:

This short course is a combined offering of the Penn State/DOE GridSTAR Center, Power Analytics Corporation, and Eaton Corporation. It will introduce facets of microgrid design, modeling, and analysis. The class will emphasize the basic power system concepts and algorithms including short circuit and protective device coordination, as well as advanced power system concepts and algorithms including power flow and transient stability. Course materials will provide advance knowledge of how these concepts and algorithms can be leveraged for practical implementations in microgrids and other commercial facilities. Students will get hands on training with modeling and design software, hands on knowledge of equipment and equipment factors, and lessons learned from practical implementations. The Power Analytics Paladin Design Base software will be used by each student using a temporary license for their PC.

Total Course Length: 30 hours (5 days)

Why You Should Attend:

1. Understand basic concepts of power system analysis and operations
 2. Design and model electrical systems using the Power Analytics Paladin Design Base software
 3. Understand basic concepts of power systems analysis and the advantages and limitations of software modeling to support the analysis
 4. Understand how equipment characteristics and the installation configuration can affect the software model.
 5. Model microgrid interconnection and operation
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Prerequisites:

- Students should have a basic knowledge of electrical circuits from physics, EE, or a work experience base.
- Students should be familiar with the Windows operating system and the general operation of graphical user interfaces (GUI's) used to construct diagrams in office software.
- Prior familiarity with other modeling software or practical experience with electrical components and circuits is a plus.
- Prefer students to bring individual laptop computer for class



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Agenda:

Day 1: 1:00 p.m.-5:00 p.m.

Introduction to Power System Analysis

Three-Phase Power Fundamentals

Day 2: 8:00 a.m.-5:00 p.m.

Short-Circuit Fundamentals

PALADIN DesignBase Modeling Interface

AC Short-Circuit Analysis using DesignBase

Day 3: 8:00 a.m.-5:00 p.m.

Overcurrent Protection

Arc Flash Fundamentals

Day 4: 8:00 a.m.-5:00 p.m.

Arc Flash Calculations using DesignBase

Distribution Equipment Ratings

Power Flow Fundamentals

Power Flow using DesignBase

Day 5: 8:00 a.m.-10:00 a.m.

Practical Example using DesignBase

Introduction to Microgrids

Introduction to Transient Stability

Upon completion of the course, participants will receive a Certificate of Completion.

10805 Rancho Bernardo Road, Suite 270
San Diego, CA 92127
(858) 675-9211



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Course Fees and Registration:



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Please Contact Jadranka Bozinovska at Power Analytics to reserve your spot!

(Accommodation information will be provided at time of registration)

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(858) 675-9211

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Advanced Power Systems Course

Attn: Whitney Bennett

Penn State Center for Sustainability

310 Sackett Building

University Park, PA 16802

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Training rates for 2013 classes are:

\$2,000 per student

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