

Electric Distribution Fundamentals

1 ½ Days, January 13 – 14, 2015

Distribution Overcurrent Protection

1 ½ Days, January 14 – 15, 2015
Orlando, FL

What are these courses about?

Electric Distribution Fundamentals

Attendees will receive a broad overview of distribution engineering, analysis techniques, and a review of calculations used in making daily decisions. Practical concepts are emphasized to ensure sufficient understanding of the various components within the distribution systems. Real world problems are used to teach methods of calculation that are easily understood and put into practice.

Distribution Overcurrent Protection

This course focuses on the application of protective devices to distribution systems including device coordination, reach, location, and selection, with the goal of maximizing reliability impact. The training will utilize practical examples to reinforce the classroom concepts. UCS training is vendor-neutral and focused on the technical engineering protection issues, not any specific manufacturer's equipment or device. The course includes the following:

- Review of modern distribution system overcurrent protection and sectionalizing practices
- The impact of system design, equipment selection, and protection practices

Who should attend?

Distribution engineering and technical personnel of any experience levels who desire a better understanding of the distribution system. New comers to electric distribution find these courses to be the 101 classes they should have had to prepare them for the electric utility environment. The experienced veterans find it to be the perfect avenue to tie practice back to academic theory.

Continuing Education Credits

Attendees will receive a certificate for 10.5 Professional Development Hours (PDH) for each class they attend. Professional engineers seeking continuing education credits should verify acceptance of this course with their state board.

Instructor Bios:

Kent Hoffman, PE, is a Senior Consultant for UC Synergetic. Kent, a graduate of NC State University, brings over 40 years of experience in distribution system protection, standards, and reliability. During his career at Progress Energy, Mr. Hoffman held various technical leadership positions, including Manager of Distribution Planning & Coordination, where he was responsible for standards and practices related to distribution system protective coordination. He has served on numerous technical committees and currently assists with UC Synergetic training programs and projects.

Jerry Josken is a Senior Consultant for UC Synergetic. Jerry holds a BS in Electrical Engineering Technology from the Milwaukee School of Engineering and a MBA from North Central College. During his 30+ year career with Eaton's Cooper Power Systems Jerry has served as Test Engineer, Design Engineer, Distribution Protection Engineer and Field Application Engineer. Passed leadership positions include Chair of IEEE Rural Electric Power Conference (2012) and GLEMS Distribution Equipment /Controls (2013-2014). Presently, Jerry coordinates UCS Training Programs.

Course Outlines

Electric Distribution Fundamentals

Classes will be held 8:30AM- 4:30PM

Tuesday & 8:30AM - 12:00PM Wednesday

Tuesday 8:30AM – 12:00PM (3.5 PDH)

Electric Distribution Basics

- Electric Utility Overview
- Intro to Distribution Equipment
- Basics of Line Construction
- Line Construction Equipment
- Metering Basics

Tuesday Afternoon

1:00 – 4:30 pm (3.5 PDH)

Electrical Definitions

Power Triangle

- KW, KVA, KVAR

Voltage Drop Equation

Loss Calculation

Voltage Profile Analysis

Load and Demand Modeling

Wednesday Morning

8:30 am – 12:00 pm (3.5 PDH)

System Protection Basics

- Overcurrent Protection
- Overvoltage Protection

Power Quality

Utility Economics & Rates

Distribution Overcurrent Protection

Classes will be held 1:00PM – 4:30PM

Wednesday & 8:30AM – 4:30PM Thursday

Wednesday 1:00PM – 4:30PM (3.5 PDH)

Protection Basics

Selective Coordination

Time Current Characteristics

Protective Equipment Characteristics

- Fusing Devices
- Circuit Breakers and Protective Relays

Thursday 8:30AM – 12:00PM (3.5 PDH)

- Automatic Circuit Reclosers
- Fault Interrupters

Device to Device Coordination

- Fuse/Fuse
- Breaker-Relay/Fuse
- Breaker-Relay/Recloser

Thursday 1:00PM – 4:30 pm (3.5 PDH)

- Recloser/Fuse
- Recloser/Sectionalizer

Dispersed Generation Protection

Reliability Indices

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Course Location

The course will be held at Marriott Courtyard - Altamonte Springs - Maitland
Location address is 1750 Pembroke Dr., Orlando, FL 32810

Course Registration

The course tuition is **\$895 per person**. Attend both seminars for \$1,595 – a \$195 savings.

Tuition will include course materials, refreshments, and lunch on Tuesday and Thursday.
Hotel accommodations, transportation and other incidentals will be the student's responsibility.

It is recommended students bring an engineering calculator to class.

To register, please complete the attached registration form.

Cancellations received after December 30, 2014 will receive a credit that can be used for tuition on a future UC Synergetic Course. The credit is good for one year and is transferable within the same company. In the unlikely case of course cancellation, UC Synergetic liability is limited to refund of the course registration fee only.

For additional information about this course, other UCS course offerings, or on-site pricing, please contact **Jerry Josken at (919) 348-3234** or via e-mail at: jjosken@ucseng.com.

Registration Form
Electric Distribution Fundamentals
Distribution Overcurrent Protection

Orlando, FL - January 13 – 15, 2015

Payment methods:

By check, payable to **UC Synergetic, LLC** Please attach check to the registration and mail to the address below.

By credit card. *An electronic invoice will be sent to you via email**. This is a secure payment method through **PayPal**. It does not require a PayPal account.*

Circle one: Enclosed is a check for /Please charge my credit card for the following:

___ \$895 ___ Electric Distribution Fundamentals, **or**
 ___ Distribution Overcurrent Protection

___ \$1,595 Attending both courses.

Please Complete the Information Below:
(Attach additional sheets for multiple registrations)

Name _____ Title _____

E-mail** _____

**Please provide email address if you would like confirmation of your registration or would like to pay online through PayPal.

Company: _____

Telephone: _____

Fax: _____

Address: _____

City: _____ State _____ Zip _____

Referred by: _____

**For payment by check, PO, or other questions
regarding payment, please contact:**

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