

# DISTRIBUTION FEEDER DESIGN

April 19-20, 2017  
EUCI Offices, 4601 DTC Blvd  
Denver, CO



EUCI is authorized  
by IACET to offer  
1.0 CEUs for this  
course

## OVERVIEW

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This course exposes attendees to the process of designing and dealing with issues associated with feeder construction. Overhead design includes pole selection and framing both single and three phase. Underground design covers loop feed and radial design as well as requirements for conduit, duct and direct buried cable construction. An introduction to a variety of distribution protection and power equipment will provide attendees with an understanding of design considerations.

## LEARNING OUTCOMES

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Attendees will:

- Review and be able to apply Ohm's Law and the electric power triangle
- Be able to calculate pole heights given soil conditions, required equipment and crossing situations
- Be capable of calculating guy strength requirement
- Review and be capable of sizing distribution transformer for residential and commercial loads

## INSTRUCTORS

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### Patrick Liebel

**Certified Project Manager Professional, UC Synergetic**

Patrick received his PMP certification through the Project Management Institute in 2013. He has ten years of power systems and project management experience, three of which were in Quality Assurance and Corporate Training with responsibilities of utility NESC Compliance, internal/external quality control program development and implementation. In addition, he has worked extensively in Electric Distribution Project Management and Communication Infrastructure systems with regard to distribution line construction and asset reliability management.



### Jerry Josken

**Senior Consultant, 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. Past leadership positions include Chair of IEEE Rural Electric Power Conference (2012) and Chair of GLEMS Distribution Equipment /Controls (2013-2014). Presently, Jerry coordinates UCS Training Programs.

# COURSE TIMING

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WEDNESDAY, APRIL 19, 2017

**12:30 – 1:00 pm**      **Registration**

**1:00 – 5:00 pm**      **Course Timing**

THURSDAY, APRIL 20, 2017

**8:00 – 8:30 am**      **Continental Breakfast**

**8:30 am – 5:00 pm**      **Course Timing**

**12:00 – 1:00 pm**      **Group Luncheon**

# PROGRAM AGENDA

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## **Review of Electrical Formulas**

- Ohm's Law – Voltage, Current and Resistance/Impedance
- Power Triangle – kW, kVA, kVAR and Power Factor
- Voltage Drop Formula
- Line Loss Calculations

## **Overhead Design**

- Poles and Framing
- Conductors and Guying
- Right-of-Way Considerations
- Vegetation and Wild Life Management
- Maintenance Considerations
- Project Planning and Staking
- Transformer, Secondary Cable Calculations
- Three Phase Commercial Service
- Power Quality and Protective Equipment

## **Underground Design**

- Single and Three Phase Systems
- Cable and Connectors
- Single Phase Loop Configurations
- Riser (Dip) Pole
- Padmount Transformers

## **Commercial, Three Phase Service**

- Three Phase Loop Design and Equipment
- Padmount Transformers

## **Underground Sectionalizing Equipment**

# REQUIREMENTS FOR SUCCESSFUL COMPLETION OF PROGRAM

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Participants must sign in/out each day and be in attendance for the entirety of the course to be eligible for continuing education credit.

## INSTRUCTIONAL METHODS

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PowerPoint presentations and classroom discussions will be used in this course.

## PROCEEDINGS

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The proceedings of the course will be published, and one copy will be distributed to each registrant at the course.

## EVENT LOCATION

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### **EUCI Offices**

4601 DTC Blvd. Suite 800  
Denver, CO 80237

## NEARBY HOTELS

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### **Hyatt Regency Denver Tech Center**

7800 E. Tufts Ave  
Denver, CO 80237  
Phone: 303-779-1234  
0.3 miles away

### **Denver Marriott Tech Center**

4900 S. Syracuse St  
Denver, CO 80237  
Phone: 303-779-1100  
0.7 miles away

### **Hampton Inn & Suites**

5001 S Ulster Street  
Denver, CO 80237  
Phone: 303-804-9900  
0.5 miles away

### **Hilton Garden Inn Denver Tech Center**

7675 E Union Ave  
Denver, CO 80237  
Phone: 303-770-4200  
0.7 miles away

## IACET CREDITS

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EUCI has been accredited as an Authorized Provider by the International Association for Continuing Education and Training (IACET). In obtaining this accreditation, EUCI has demonstrated that it complies with the ANSI/IACET Standard which is recognized internationally as a standard of good practice. As a result of their Authorized Provider status, EUCI is authorized to offer IACET CEUs for its programs that qualify under the ANSI/IACET Standard.

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**REGISTRATION**  
*to register [CLICK HERE](#) or*

**Call: 201 871 0474**  
**fax: 253 663 7224**  
**email: [register@pmaconference.com](mailto:register@pmaconference.com)**  
**web: <http://pmaconference.com/>**  
**Mail: POB 2303 Falls Church Va 22042**

Please make checks payable to: "PMA"

# EVENT LOCATION

**EUCI Offices**  
 4601 DTC Blvd. Suite 800  
 Denver, CO 80237  
**See nearby hotels on page 4**

## PLEASE SELECT

- BOTH NATIONAL ELECTRIC SAFETY CODE WITH 2017 REVISIONS COURSE AND DISTRIBUTION FEEDER DESIGN COURSE:**  
 APRIL 18-20, 2017: US \$2195,  
 Early Bird on or before MARCH 31, 2017: US \$1995
  
- DISTRIBUTION FEEDER DESIGN COURSE:**  
 APRIL 19-20, 2017: US \$1395,  
 Early Bird on or before MARCH 31, 2017: US \$1195

How did you hear about this event? (direct e-mail, colleague, speaker(s), etc.)

Print Name Job Title

Company

What name do you prefer on your name badge?

Address

City State/Province Zip/Postal Code Country

Phone Email

List any dietary or accessibility needs here

**CREDIT CARD INFORMATION**

Name on Card Account Number

Billing Address Billing City Billing State

Billing Zip Code/Postal Code Exp. Date Security Code (last 3 digits on the back of Visa and MC or 4 digits on front of AmEx)

**OR** Enclosed is a check for \$ \_\_\_\_\_ to cover \_\_\_\_\_ registrations.

**Substitutions & Cancellations**

Your registration may be transferred to a member of your organization up to 24 hours in advance of the event. Cancellations must be received on or before March 17, 2017 in order to be refunded and will be subject to a US \$195.00 processing fee per registrant. No refunds will be made after this date. Cancellations received after this date will create a credit of the tuition (less processing fee) good toward any other EUCI event. This credit will be good for six months from the cancellation date. In the event of non-attendance, all registration fees will be forfeited. In case of course cancellation, EUCI's liability is limited to refund of the event registration fee only. For more information regarding administrative policies, such as complaints and refunds, please contact our offices at (201) 871-0474.