


AEE Columbia River Chapter

***** CEM Training*****

Comprehensive Five-day Training Program for Energy Managers Certified Energy Manager (CEM®) 21-25 June 2010

Who Should Attend	This course is open to all “pre-qualified” employed, unemployed and transitioning professionals	
When	Monday, 21 June 2010 through Friday, 25 June 2010	
Where		<p>National Electrical Contractors' Association, 16021 NE Airport Way Portland, OR 97230</p>
Prerequisite	Please complete the AEE application for CEM before the class. Here is the link http://www.aeecenter.org/certification/CEMAppPacket-LiveSeminarVersion.pdf (NO application fee is required.)	

Here is the daily schedule along with instructor bios:

Daily Schedule for CEM Seminar

- A** Need for Energy Management
- B** Conducting an Energy Audit
- C** Energy Survey Instrumentation
- D** Energy Codes and Standards, Indoor Air Quality
- E** Energy Purchasing
- F** Energy Accounting in Buildings
- G** Energy Rate Structures
- H** Electric Rate Structures
- I** Economic Analysis and Life Cycle Costing
- J** Sample CEM Examination Questions
- K** Electrical Systems
- L** Lighting System Basics and Lighting System Improvements
- M** Motors and Applications; Drives; and Compressed Air Systems
- N** Green Buildings, LEED and Energy Star
- O** HVAC Basics and Improvements; Building Envelope; and Thermal Energy Storage
- P** Boilers and Thermal Systems; Boiler Efficiency Improvement
- Q** Industrial Systems; Cogeneration and CHP Systems

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- R** Energy Audit Case Study
- S** Writing User-Friendly Energy Audit Reports
- T** Using Psychrometric Charts
- U** Maintenance Programs and Building Commissioning
- V** Building Automation and Control Systems
- W** Alternative Financing
- X** CEM Exam Package of Charts and Tables
 - Appendix A List of Acronyms
 - Appendix B Charts and Tables for CEM Examination.

Monday Schedule

- 8:15-9:00 Welcome and Introductions
- 9:00-10:00 The need for energy management (A); CEM examination information (A)
- 10:00-10:15 *Break*
- 10:15-11:45 Conducting an energy survey (B);
Energy survey instrumentation (C)
- 11:45-1:00 *Lunch*
- 1:00-3:00 Building energy codes and standards (D); Indoor Air Quality (D); Energy Purchasing (E)
- 3:00-3:15 *Break*
- 3:15-5:00 Building energy use (F); Energy rate structures (G); and Electric rate structures (H)

Tuesday Schedule

- 8:00-10:00 Economic analysis and life cycle costing (I)
- 10:00-10:15 *Break*
- 10:15-11:45 Electrical systems; Peak load reduction; Power factor improvement; Power quality and harmonics (K)
- 11:45-1:00 *Lunch*
- 1:00-2:30 Lighting basics (L)
- 2:30-2:45 *Break*
- 2:45-5:00 Lighting system improvements (L), and Building commissioning (U)

Wednesday Schedule

- 8:00-10:00 Electric motors and applications (M)
- 10:00-10:15 *Break*
- 10:15-11:45 Motors and drives; Compressed air systems (M)
- 11:45-1:00 *Lunch*
- 1:00-2:45 HVAC basics and system improvements (O)
- 2:45-3:00 *Break*
- 3:00-5:00 Building envelope (O)

Thursday Schedule

- 8:00-10:00 Boilers and thermal systems; Boiler efficiency improvement (P)

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- 10:00-10:15 Break
- 10:15-11:45 Industrial systems; Cogeneration and CHP (Q)
- 11:45-1:00 Lunch
- 1:00-2:45 Green buildings, LEED (N)
- 2:45-3:00 Break
- 3:00-5:00 Energy Star (N), Building automation and control systems (V)

Friday Schedule

- 8:00-10:30 Thermal energy storage (O), Maintenance (U), and Alternative financing (W)
- 10:30-11:15 NECA Tour
- 11:15-12:30 Lunch
- 12:45-3:45 CEM Examination (Optional for attendees)

CEM Course Instructors



Timothy B. Janos, C.E.M., C.D.S.M., C.S.D.P., B.E.P., is a Life member and Past President of the AEE. Over a span of 35 years, Mr. Janos has designed and implemented numerous and innovative mechanical, electrical and temperature control projects designed to save energy for his clients. Virtually his entire professional career has been dedicated to energy efficiency and energy savings. His extensive background features hundreds of very successful energy audits that have identified cost savings projects for major clients including automotive, industrial, educational and commercial facilities. As the primary energy auditor for the Cleveland Non-Profit Energy

Conservation Fund during the 1980s, his company performed hundreds of in-depth surveys throughout Northern Ohio, which identified literally thousands of opportunities. This fund offered no-cost audits for all non-profit organizations in Northern Ohio and provided both grants and low-cost loans to implement the recommendations. As Principal of Spectrum Energy Concepts, Inc., Mr. Janos is currently involved in a wide variety of energy-related projects. Mr. Janos' formal education includes Degrees from John Carroll University and a JD from Cleveland State University. Besides his technical knowledge and success in saving energy, Mr. Janos has been a tireless promoter of the energy profession both locally and nationally. Thousands have benefited from the meetings, workshops, and lectures he has done or helped to organize. He served as AEE President in 2006 and for 15 years as Chairman of the Certified Energy Manager Board.

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T. Kenneth Spain P.E., C.E.M., C.L.E.P., G.B.E., LEED-AP, Senior Research Associate at the University of Alabama. Kenny Spain is an internationally recognized energy engineer, manager and trainer. He is currently an “on-call” Research Scientist with the Earth System Science Center of The University of Alabama in Huntsville (UAH) with over 25 years of service as a Senior Research Associate through sponsored programs at that University. He has provided energy analysis and technical support to help public institutions, schools, businesses and industries reduce their energy costs and to train government and business energy managers throughout the world. Besides all of his registered credentials and certifications, Kenny Spain has been with AEE for many years, is a member of ASHRAE, IESNA, and is a past member of ASHRAE/IESNA 90.1 Energy Standard Committee. Kenny's service to AEE includes President of his State Chapter for multiple terms, participation in several AEE committees, the CLEP certification board and he co-teaches certification training courses for the CLEP and CEM certification programs. He has taught over 300 seminars. Kenny Spain was inducted into the AEE Hall of Fame in 2002, and was AEE's International Energy Engineer of the Year in 1995.

Program Coordinator -- Contact Information

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"Code CNM - 50% discount on first year's dues for new member joining through the Columbia River Chapter."

***All officers are required to be members in good standing in AEE International.**

It is anticipated that all other chapter members will join AEE International within six months of joining chapter.