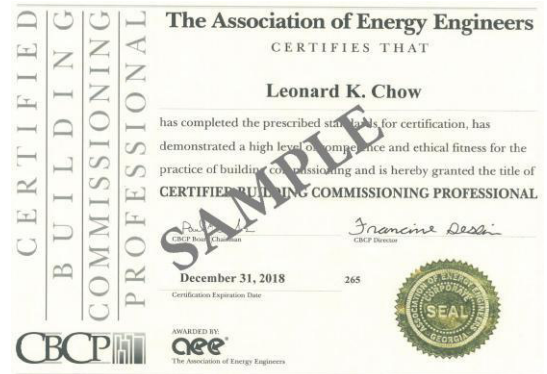




Certified Building Commissioning Professional (CBCP®)

Date: 25-29 July, 2017
Time: 9:00 am to 5:30 pm
Exam: 1:30 pm to 5:30 pm (Last Day)
Venue: To be Advised

Course Code: CBCP /01/ HK
Registration Deadline: 10 July, 2017



THE MARK OF A COMMISSIONING PROFESSIONAL

Since 1981, AEE has certified thousands of professionals within the energy industry. AEE's certifications are recognized by governmental agencies, including the U.S. Department of Energy and the U.S. Agency for International Development, as well as by utilities, end users, and energy service companies. When you earn the right to put the initials "CBCP" behind your name, you are distinguishing yourself as one who brings to your professional activities the full scope of knowledge requisite to the effective commissioning of existing buildings. You have demonstrated high levels of experience, competence, and specialized knowledge within your field.

COMPREHENSIVE 5-DAY TRAINING PROGRAM FOR CBCP-FUNDAMENTALS AND PRACTICAL OF BUILDING COMMISSIONING

This course covers the contents of "Technical Guidelines on Retro-commissioning" issued by EMSD. This course in Hong Kong is specially tailored for Hong Kong practice. The US instructors shall travel from the headquarters to Hong Kong to conduct the training. CBCP certificates will be issued by AEE USA Headquarters.

Course & Exam Fee: US \$1,800.00 (HK \$14,000)

Conditions

1. All candidates should firstly fax the form for registration and issue cheque for final seat confirmation.
2. Every effort will keep the course date unchanged. However, all candidates will be informed well in advance should there be any change of course date due to venue booking and other reasons.
3. The course contents may subject to change in accordance with the instructor(s).
4. The organizer reserves the right to cancel the course should there be insufficient candidates or other reasons. Course fee will then be refunded 100%.
5. All exam passed candidates will enjoy 1-year free AEE membership and a CBCP certificate if he/she fulfils the eligibility criteria.

Fundamentals and Practical of Building Commissioning

Preparatory Course for the Certified Building Commissioning Professional

In addition to providing preparation for AEE's **Certified Building Commissioning Professional (CBCP®)** certification program, this five-day course is designed to meet all training needs of those who want to understand the technical details of the commissioning process. The comprehensive workshop goes into considerable details on the fundamental principles of both new building commissioning and existing building commissioning (also called Re-Commissioning or Retro-Commissioning).

PROGRAM OF STUDY

Commissioning is the process of ensuring that building systems are designed, installed, functionally tested, and capable of being operated and maintained according to the owner's intent, requirements, and operational needs. Commissioning also can restore existing buildings to high productivity through renovation, upgrade and tune-up of existing systems. AEE's CBCP® course program examines all aspects of building commissioning. Dozens of case studies from successfully completed projects are presented, including hospitals, data centers, airports, university campuses, school districts, commercial buildings, government properties, district heating and cooling, and research facilities taken from the instructors' more than 40 years of combined experience in commissioning. Participants are encouraged to produce real-world examples from their own personal experience to share with the class.

The CBCP® certification exam will be administered at the close of instruction on day five of each course to those who have qualified in advance to sit for the exam by submitting a completed CBCP® application and fee.



CERTIFICATION ELIGIBILITY

Each applicant for the CBCP certification is required to attend AEE's five-day "Certified Building Commissioning Professional" training program in order to sit for the exam. Prior to sitting for the exam, each candidate must complete an application. Each candidate must also pass the four-hour written exam as well as meet one of the following criteria:

A **four-year degree** from an accredited university or college in science, engineering, architecture, business, law, finance, or related field, or be a **registered professional engineer (P.E.)**, or **registered architect (R.A.)**. In addition, the applicant must have at least **3 years'** experience in facilities management, HVAC or process engineering design, construction project management, electrical/controls design, installation or operations, testing, adjusting and balancing, or building commissioning.

--OR--

A **two-year technical degree**, or **vocational school certificate in HVAC/Electrical**; or valid **HVAC or Electrician contracting license**; or hold a **four-year non-technical degree** from an accredited university or college in a field not specified above. In addition, the applicant must have at least **5 years'** experience in facilities management, HVAC or process engineering design, construction project management, electrical/controls design, installation or operations, testing, adjusting and balancing, or building commissioning.

--OR--

Ten years or more **verified experience** in facilities management, HVAC or process engineering design, construction project management, electrical/controls design, installation or operations, testing, adjusting and balancing, or building commissioning.

--OR--

The current status of **Certified Energy Manager (CEM®)**.



COURSE OUTLINE

Module 01 - Building Commissioning History, Philosophy and Fundamentals

Module 02 - Introduction to Building Commissioning

Module 03 - Prominent Resources of Building Commissioning Guidelines and Organizations

Module 04 - New Building Commissioning

Module 05 - LEED® BD+C Commissioning

Module 06 - Retro-Commissioning (RCx)

Module 07 - LEED® O+M Commissioning (LEED Version of RCx)

Module 08 - Building System Cx Know-How & RCx in Depth

Module 09 - RCx Best Practices

Module 10 - “Brain-Storm Session” (Part I & II)

Module 11 - Commissioning Software Tools

Module 12 - Smart Building Commissioning

Extra: Retro-Commissioning Guideline from Hong Kong Government

COURSE INSTRUCTOR

Song Deng



SONG DENG, M.S., P.E., CBCP®, CMVP®, CEA™, REP®, CBCPM®, formerly served as a Principal Investigator and an Associate Director at the Energy Systems Lab of Texas A&M University, where he led dozens of researchers, engineers,

technicians and graduate students implementing building commissioning and retro-commissioning programs with a total annual budget of over \$8 million. He was also the program director for a comprehensive energy management/RCx project on the Texas A&M university campus for which cumulative savings exceeded \$90 million over a performance period of 16 years.

Currently, as the Technical Advisor at Austin, TX-based Bee (Building energy efficiency, LLC, BeeUSA.com), he consults and lectures worldwide in the scientific fields of building commissioning, master planning, energy management, energy efficiency, O&M, sustainability, smart buildings and campus, data analytics and intelligence.

A co-instructor will accompany Mr. Deng and co-present.



Schedule		Modules
25/7 Tue	AM	Module 01 - Building Commissioning History, Philosophy and Fundamentals
		Module 02 - Introduction to Building Commissioning
		2.1 Traditional Building Commissioning Approaches
		2.2 Difference between Commissioning and Testing, Adjusting and Balancing (TAB) and Energy Audit (EA)
		2.3 Weakness of Traditional Commissioning Approaches
		2.4 Life-Cycle Building Commissioning (LCBCx)
		2.5 International Commissioning Developments
		Module 03 - Prominent Resources of Building Commissioning Guidelines and Organizations
		3.1 Organizations and Major Cx Certification Programs
	3.2 AEE and Its Training/Certification Programs	
	3.3 BCA, PEI and NCBC, ACG, Canmet Energy, and Institutional Programs	
	3.4 ASHRAE Standard 202	
	3.5 LEED Rating System Commissioning Requirements and Credits	
	3.6 Major Government Sustainability Goals/Target	
	3.7 Government Laws and Regulations (US and International)	
	PM	Module 04 - New Building Commissioning
		4.1 Cx Process Outline
4.2 Pre-Design Phase Commissioning		
4.3 Design Phase Commissioning		
4.4 Construction Phase Commissioning		
4.5 Occupancy Phase Commissioning		
4.6 Ongoing Commissioning		
Module 05 - LEED® BD+C Commissioning		
5.1 Introduction		
5.2 Fundamental Commissioning and Verification		
5.3 Enhanced Commissioning		
Review and "homework" assignment - attendees' own Cx/RCx experience and stories preparation for presentation on Wed and Thr PMs		
26/7 Wed	AM	Module 06 - Retro-Commissioning (RCx)
		6.1 Introduction
		6.2 RCx Case Study & Work Scope, Team Qualification/Formation and Roles
		6.3 Process and Phased Approach
		6.4 Assessment and Implementation
		6.5 From RCx to Capital Investments – RCx as “Road-Map” Tool
		6.6 Performance-Based RCx - Baselines and M&V
		6.7 Deferred Maintenance and RCx-Compatible O&M Program
	6.8 The Training Component	
	PM	Module 07 - LEED® O+M Commissioning (LEED Version of RCx)
		7.1 Introduction
		7.2 Existing Building Commissioning Analysis
		7.3 Existing Building Commissioning Implementation
7.4 Existing Building Ongoing Commissioning		
Module 08 - Building System Cx Know-How & RCx in Depth		
8.1 Fundamentals		
8.2 Tools		
8.3 Good Operations and Maintenance		
8.4 HVAC System		
27/7 Thu	AM	8.5 EMCS
		8.6 CUP
		8.7 Building Envelope
	PM	8.8 Electrical System
		8.9 Lighting System
Module 10 - “Brain-Storm Session” (Part I)		
“Show & Tell” Roundtable “hands-on” and “know-how” with participants' own project stories and presentations.		
28/7 Fri	AM	Module 09 - RCx Best Practices
		9.1 Hospitals
		9.2 Office Buildings
		9.3 Higher Education
	PM	9.4 Data Centers
9.5 Airports		
Module 10 - “Brain-Storm Session” (Part II)		
29/7 Sat	AM	Module 11 - Commissioning Software tools
		Module 12 - Smart Building Commissioning
	Extra: Retro-Commissioning Guideline from Hong Kong Government	
PM	Review and Prepare for Exams	
		Exam



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The Certified Building Commissioning (CBCP®) Program for Professional Certification

Course Code: CBCP /01/ HK

Registration

Course Deadline: 10 July, 2017

(First come first served, application may early close if class size reaches 40)

To register, please complete the reply slip and fax to +852 3107 1388 or email to fiona.lok@cinotech.com.hk

Method of Payment, please refer to below:

By direct deposit or ATM transfer to AEE's HSBC Account no. 614-054229-838.

(Please write your name on the bank-in slip and then email to **Ms Fiona Lok** (tel. +852 2151 2083):

fiona.lok@cinotech.com.hk)

Course Enquiry

Dr Leonard Chow, AEE Authorized Course Certification Administrator in Hong Kong.

Tel: (852) 2566 3397, leonardchow@ispl.com.hk

Course & Exam Fee : HK \$14,000.00

Re-sit exam : N/A

Name (Same as HKID Card): _____ (Ir/Mr/Ms/Miss)

Company Name: _____

Position Title: _____

Company Address: _____

Contact Phone: (Office) _____ (Mobile) _____

Fax #: _____ Email Address: _____

Institution: _____ Membership No: _____

Amount (HK\$): _____ Your Pairing Candidate's Name : _____ N/A