



Building Operator Certification Okemos Level I Schedule - March 2012

Building Operator Certification® (BOC) training includes 74 hours of classroom and project work (7.4 CEUs) in building systems operation and maintenance. Courses are completed in one-day training sessions, except *BOC 103 – HVAC Systems and Controls*, a two-day course.

To become certified, participants must pass an exam at the end of each day of training and complete assigned projects. Tuition for BOC training is \$1,200. **Customers of Consumers Energy may be eligible for a \$600 tuition rebate upon successful completion of all course requirements.** Unless otherwise noted, training begins at 8am. and ends by 4pm. **Registration deadline: February 29th.**

Our training facility and meals in Okemos are generously provided by Consumers Energy.

Online registration is available at www.boccentral.org.

Holiday Inn Express Hotel
2209 University Park Drive.
Okemos, MI 48864
Front Desk: 517-349-8700

Date	Course
Wednesday, March 7, 2012	BOC 101 – Building Systems Overview
Wednesday, March 21, 2012	BOC 102 – Energy Conservation Techniques
Wednesday, April 4, 2012	BOC 107 – Facility Electrical Systems
Tues-Wed, April 17-18, 2012	BOC 103 – HVAC Systems and Controls
Wednesday, May 2, 2012	BOC 104 – Efficient Lighting Fundamentals
Wednesday, May 16, 2012	BOC 106 – Indoor Environmental Quality
Wednesday, May 30, 2012	BOC 105 – O&M Practices for Sustainable Buildings

For more information, contact:

Haley Murray
Midwest Energy Efficiency Alliance
(312) 784-7269
hmurray@mwalliance.org

The Midwest Energy Efficiency Alliance is providing BOC training in Okemos, Michigan with generous support from Consumers Energy and the Michigan Department of Energy, Labor and Economic Growth. The cost of this training will be paid in full by eligible Consumers Energy customers. A partial reimbursement of \$600 may be given to the customer by Consumers Energy upon successful completion of the certification requirements. Consumers Energy will have sole discretion to determine successful completion of the program.

Consumers Energy

Count on Us



MEEA

Midwest Energy Efficiency Alliance



BOC COURSE DESCRIPTIONS

BOC 101 - BUILDING SYSTEMS OVERVIEW (1 DAY)

Provides an overview of preventive maintenance, energy efficiency principles, and fundamentals of building systems, equipment, and operations. Reviews heating, cooling, ventilation and control systems, water, lighting, and indoor air quality. Covers system interaction and relationship to overall building performance.

Provides a foundation for later courses.

PROJECT: Facility and Equipment Floor Plan

BOC 102 - ENERGY CONSERVATION TECHNIQUES (1 DAY)

Helps operators gain a better understanding of how energy is used in commercial buildings and how to identify and prioritize conservation opportunities. Includes basic principles of energy accounting, evaluation of fuel options, operation and maintenance strategies to improve efficiency, and energy management planning techniques.

PROJECT: Energy Use Profile for Facility

BOC 103 - HVAC SYSTEMS AND CONTROLS (2 DAYS)

Focuses on operation and maintenance of equipment and components typically found in commercial buildings, including central heating, cooling, air and ventilating systems in buildings. Provides an introduction to automatic control systems and equipment, particularly for central air systems. Emphasis is placed on group problem solving and exercises with respect to preventive maintenance.

PROJECT: Heating System Operational Review

BOC 104 - EFFICIENT LIGHTING FUNDAMENTALS (1 DAY)

Covers lighting fundamentals and types of lighting for economical and energy-efficient lighting systems. Participants learn the principles of efficient lighting including evaluation of lighting levels, quality and maintenance. Other topics include lighting fixture and control technologies, common upgrades, retrofit and redesign options, and lighting management strategies as they apply to space use and function.

PROJECT: Lighting Survey for Facility

BOC 105 – OPERATION AND MAINTENANCE PRACTICES FOR SUSTAINABLE BUILDINGS (1 DAY)

Focuses on a set of best practices for operations and maintenance that create and sustain green or high performance buildings. National green building rating systems such as LEED® and tools through ENERGY STAR® for evaluating the sustainability of the existing buildings are discussed. Students will learn to identify and apply O&M practices for improving the performance of existing buildings and newly designed green buildings.

BOC 106 - INDOOR ENVIRONMENTAL QUALITY (1 DAY)

Introduces the basic causes of indoor air quality problems and begins to develop a method of diagnosis and solution. Students will gain an understanding of the dynamic components of indoor air quality in relation to source control, occupant sensitivity and ventilation. Emphasis will be placed on communications with building occupants for reliable investigations without aggravating existing issues.

BOC 107 - FACILITY ELECTRICAL SYSTEMS (1 DAY)

Develops an understanding of how electricity is distributed in a facility and common electrical distribution problems. This course will emphasize the fundamentals of electricity and its application to the workplace.

PROJECT: Electrical Distribution Sketch for Facility