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### **Course Description**

The US Green Building Council's Leadership in Energy and Environmental Design (LEED™) green building rating system has become one of the most widely accepted and nationally acknowledged metrics of green building in the world.

This 8 hour workshop is offered as a two part series. The training will center around the field of Green Building to help USGBC-NJ members align themselves with the ever-changing demands on workforce skill. The new trainings will focus in large part on several main areas including core competency in sustainable principals, technology, strategies, and practical applications. Using the LEED® (Leadership in Energy and Environmental Design) categories and credits as the foundation for these more indepth sessions, attendees will also learn the fundamentals of the LEED rating system in preparation for attendees to obtain their LEED Green Associate accreditation.

Session 1 is a general overview of LEED and green building. Concepts, LEED categories, and intents will be reviewed generally during this session to familiarize everyone with terms, process, the rating system, and conceptual application.

Session 2 is intended to be a more in-depth review of technologies, strategies, and practical applications related to LEED credits, using case studies. As part of this session, LEED certification will be reviewed as well as practice questions introduced.

Classes will be held in 1 eight hour session

It is anticipated that up to 8 AIA (HSW and SD) & USGBC Continuing Education Credits will be offered

## Session 1: Green Building Basics & LEED

4 hours

Lunch Break (1/2 hr)

## Session 2: Exam Preparation & LEED Technical Review

3.5 hours

- A. Sustainable Site Planning (30 minutes)
  - Sustainable Site Selection
  - Alternative Transportation
    - Mass Transit Opportunities & Challenges
    - Bicycle Integration
    - Low Emitting & Fuel Efficient Vehicle encouragement
  - Sustainable Site Development
    - Habitat Protection & Restoration Measures
    - Open Space
  - Storm Water as a resource
    - Quantity Control
    - Quality Improvement
  - Heat Island Effect
    - Nonroof measures and impacts
    - Roof concerns and opportunities
    - Light Pollution Reduction & Prevention
  
- B. Water Efficient Design (15 min)
  - Potable Water Use Reduction
    - Technologies & applications in the building & on site
  - Wastewater Technologies
  
- C. Energy & Atmosphere Conservation (45 min)
  - Commissioning
    - Fundamental & Enhanced benefits, costs, process and differences
  - Optimizing Energy Performance
    - ASHRAE 90.1 2007
    - IEEC 2009
    - Holistic Design

- Orientation
- Building Envelope
- Passive & Active Solar Design & Daylighting
- Natural & Mechanical Ventilation
- Lighting Design
- Building controls and efficient operation
- Renewable Energy Systems design and integration
- Energy Modeling
- Green Power Purchasing
- Energy Incentives, Grants, and financing opportunities
- Refrigerant Management & green house gases

*Break (15min)*

D. Material & Resource Efficiency (10min)

- Planning for building recycling efforts
- Construction Waste Management

E. Indoor Environmental Quality (20min)

- Increased Ventilation strategies
- Daylighting Design & Views

F. LEED Online & Certification Process Review (15min)

G. Course Review, sample test questions, and group exercise (1 hr)