2015

GREEN BUILDING CENTER

simplifying Sustainability

Education Programs

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Coming Soon:

Green Your Existing Building - Plan Development & Implementation
Climate Reality – Planning & Building for Carbon Neutrality
Green Materials for LEEDv4 & LBC Compliance
WELL Building Standard Training

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EDUCATION PROGRAMS

USGBC, AIA CEUs Available

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1. LEED® Training

By Jason Kliwinski, AIA, LEED BD&C/O&M
LEED Fellow & Faculty, CSBA

LEED 101: Green Building Basics & LEED

The workshop provides an introduction to USGBC, green building principles and the basics of LEED. Learn about green building motivators, best practices, incentives, and intentions of LEED concepts and terms for each LEED credit category.

OBJECTIVES

- Describe green building and the role of USGBC and LEED
- Recognize the intents of each LEED Credit Category
- Explain key sustainability terms and concepts
- Identify green building best practices
- Examine cutting-edge examples of green building
- Explain cost considerations
- Recognize your role in green building

DURATION

This course for those new to green building and looking to learn the basics of green building and LEED Green Building Rating System. The course is intended to be a 4 hour course but can be condensed to 2 hours as a shorter summary review.

LEED 201: Core Concepts and Strategies

Gain essential knowledge of sustainable building concepts fundamental to all LEED rating systems. Learn LEED intents and concepts at the credit category level and basics of the LEED certification process. *This course provides a foundation for pursuing the LEED Green Associate exam.*

OBJECTIVES

- Discuss the basic LEED Certification process.
- Describe the intents and associated concepts of each LEED credit category.
- Explain regulations, recognitions and incentives related to each credit category.
- Recognize successful LEED strategies and measurements for achieving credit category goals.

DURATION

The course is intended to be a full day, 8 hour course but can be broken in to 4 or 2 hour modules.

LEED 201: Core Concepts and Strategies + GA Exam Prep

In addition to the material covered in the basic LEED 201 course, project case studies, exam prep questions, and specifics of registering for and taking the exam will be covered in detail. For those prepping for the exam, this provides additional guidance, practice, and resources to assist in your efforts above and beyond the basic 201 course.

DURATION

The course is intended to be a full day, 8 hour course but can be broken in to 4 or 2 hour modules.

LEED® Training (cont'd)

BD&C 251: Understanding the Building Design and Construction LEED Rating System

Gain essential knowledge of the LEED BD+C rating systems, including credit intents, requirements, and referenced standards & synergies among credits; and foundations of the LEED certification process. This course provides a foundation for pursuing the LEED AP BD+C exam. Course Prerequisites: General green building knowledge. It is also recommended that you have completed the LEED 201 course.

OBJECTIVES

Recognize the unique aspects of the BD+C rating system family, and differences between each rating system (NC, CS, and Schools) within this family

- Identify the minimum program requirements for the BD+C rating systems
- Describe the goal, intent, and requirements of BD+C prerequisites and key credits
- Identify synergies between BD+C credits
- Plan for key considerations and requirements for the LEED certification process

DURATION

The course is intended to be a full day, 8 hour course but can be broken in to 4 or 2 hour modules.

O&M 251: Understanding the Operations and Maintenance LEED Rating System

Gain essential knowledge of the LEED O+M rating system, including credit intents, requirements, and referenced standards; synergies among credits; and foundations of the LEED certification process. This course provides a foundation for pursuing the LEED AP O+M exam.

Course Prerequisites: General green building knowledge. It is also recommended that you have completed the LEED 201 course, either in-person or online.

OBJECTIVES

- Recognize the goal, intent, and unique aspects of credits and strategies to meet them
- Identify the minimum program requirements
- Understand the unique aspects of the EB:O+M rating system (including process differences)
- Understand the costs and benefits of EB:O+M certification
- Identify requirements and strategies to meet prerequisites and key credits
- Plan for key considerations and requirements for the LEED certification process

DURATION

The course is intended to be a full day, 8 hour course but can be broken in to 4 or 2 hour modules.

U.S. GREEN BUILDING COUNCIL MEMBER

U.S. GREEN BUILDING COUNCIL USGBC

EDUCATION PROVIDER

"Jason made the material easy and fun to understand. He was very informative, patient, and had great case studies." Avison Young

LEED® Training (cont'd)

BD+C 301: Implementing the LEED Building Design and Construction Rating System

This workshop is intended for professionals who are familiar with the basic concepts of the LEED for New Construction and Major Renovations Rating System, but new to implementing it on projects or looking to brush up on implementation best practices. It is appropriate for new LEED APs, as well as those pursuing GBCI's LEED AP Building Design + Construction credential. The workshop provides both LEED-specific credit, and AIA credits.

The workshop addresses LEED tools and unique aspects of the New Construction rating system. Workshop participants will discuss the roles and responsibilities of key stakeholders in the LEED process, as well as strategies for communicating with team members at various stages of that process. Our official USGBC LEED Faculty who is a LEED Fellow and facilitation expert will walk the class through the phases of a typical project, including key decisions that project teams must make and guidance on how to make them. Throughout the day, you will engage with other participants in interactive activities using case examples to enable you to work hands-on with LEED implementation strategies and Rating System tools, including project forms from LEED Online.

OBJECTIVES

- Explain unique aspects of the LEED 2009 for New Construction and Major Renovations rating system
- Apply and facilitate the LEED process with stakeholders
- Apply LEED tools to a new construction or major renovation project
- Identify key green decisions throughout the process of earning LEED certification

DURATION

The course is intended to be a full day 8 hour course but can be broken into 1, 2, or 4 hour modules.

O&M 301: Implementing the LEED Operations and Maintenance Rating System

This workshop is intended for professionals who are familiar with the basic concepts of the LEED for Operations and Maintenance Rating System, but new to implementing it on projects or looking to brush up on implementation best practices. It is appropriate for new LEED APs, as well as those pursuing GBCI's LEED AP Operations & Maintenance credentials. The workshop provides both LEED-specific credit, and AIA credits.

The workshop addresses LEED tools and unique aspects of the New Construction rating system. Workshop participants will discuss the roles and responsibilities of key stakeholders in the LEED process, as well as strategies for communicating with team members at various stages of that process. Our official USGBC LEED Faculty who is a LEED Fellow and facilitation expert will walk the class through the phases of a typical project, including key decisions that project teams must make and guidance on how to make them. Throughout the day, you will engage with other participants in interactive activities using case examples to enable you to work hands-on with LEED implementation strategies and Rating System tools, including project forms from LEED Online.

OBJECTIVES

- Explain unique aspects of the LEED 2009 for New Construction and Major Renovations rating system
- Apply and facilitate the LEED process with stakeholders
- Apply LEED tools to a new construction or major renovation project
- Identify key green decisions throughout the process of earning LEED certification

DURATION

The course is intended to be a full day 8 hour course but can be broken in to 1, 2, or 4 hour modules.

EDUCATION PROGRAMS

USGBC, AIA CEUs Available

2. Energy Efficient Design

By Jason Kliwinski, AIA, LEED BD&C/O&M
LEED Fellow & Faculty

Course Summary:

Acknowledging the ongoing connection between the production of primary power via fossil fuels and the consequences for air pollution, global warming and ozone protection, we know the built environment is responsible for using 65% of all electricity in the US and producing 40% of all green house gas emissions. With the rising costs of energy, both monetarily and environmentally, the pursuit for energy conservation and renewable sources are essential.

This series is intended to be taught as a semester long course and is currently available at the New Jersey Institute of Technology as course number Arch 665 through the School of Architecture as an undergraduate and graduate level elective or adult learner course. This course is worth 3 college credits and provides 45 hours of interactive, experiential learning focused on understanding the principals of energy efficiency in the design if sustainable buildings and reduction in carbon emissions. It is part of NJIT's certificate program in sustainability and minor in sustainability. While this is intended to be a complete curriculum private workshops are available and can be taken as individual courses or groups of courses that interest participants without any pre-requisites necessary. The individual courses are structured to stand on their own as well as build on the knowledge base of the other preceding courses. Individual credit for AIA and/or GBCI may be obtained by self reporting.

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Course 1: Energy & Atmosphere Conservation Overview

This course will review the various aspects of energy efficient design as identified in the Energy and Atmosphere (EA) topic areas used for credits in the Leadership for Energy and Environmental Design (LEED™) Green Building Design & Construction (GBDC) –Version 4 as developed by the US Green Building Council. Topic areas to be reviewed include the following:

Fundamental Commissioning
Energy Performance
Fundamental Refrigerant Management
Optimize Energy Performance
Integrating On-Site Renewable Energy & Green Power
Benefits of Enhanced Commissioning
Climate Impacts of Enhanced Refrigerant Management
Developing a Measurement & Verification Protocol

OBJECTIVES

- Understand the goals of the EA Category of LEED
- Review the credit requirements & strategies
- Identify synergies between credits and strategies
- Recognize energy efficiency best practices

DURATION

The course is intended to be a 3 hour course but can be condensed to 2 or 1.5 hours as a shorter review.

Energy Efficiency (cont'd)

Course 2: Characteristics of Energy Efficient Building Design, Processes, and Technology

This course will examine building envelope design and its affect on HVAC and lighting energy use, the integrated design/build process, and various technologies for providing high performance HVAC, lighting, and controls. We will also discuss the triple bottom line of sustainable design and the relationship of energy efficiency, in particular the key formula for net zero energy design. This course is an overview of these concepts with more in depth classes on each to follow.

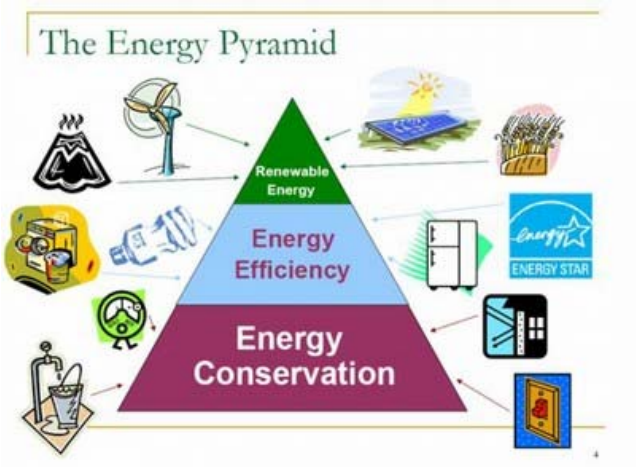
OBJECTIVES

- Understand the synergy between building envelope design and other systems
- Review the integrated design process
- Identify high performance technologies & strategies
- Recognize the benefits of the triple bottom line

DURATION
The course is intended to a 3 hours session but can be broken in to smaller modules.

READING
Cradle to Cradle, Bill McDonough & Michael Braungart

COURSE WORK
Complete your personal carbon footprint at www.earthlab.com



Course 3: Integrated Building Envelope, Energy Efficiency & LEED

This course will look more in depth at high performance building envelop designs, including key principals such as orientation, massing, shading, and context in addition to specific construction types and methods. We will then review the affects of such design on overall energy demand and its place in the LEED rating system.

OBJECTIVES

- Recognize different high performance building envelope considerations and impacts
- Identify energy efficiency concepts specific to building envelope design
- Understand the synergies between building envelope and effective lighting design.
- Review key contributions of high performance building envelope design to obtaining LEED credits.

DURATION
The course is intended to a 3 hours session but can be broken in to smaller modules.

READING
Energy Efficient Buildings: Architecture, Engineering, & Environment, W.W. Norton

COURSE WORK
Prepare a comparative chart of the 3 LEED EA sections read, noting differences and similarities in credits.

"I found this course to be incredibly well taught and useful in understanding energy efficiency and how to apply it to my projects." NJIT Graduate Student

Energy Efficiency (cont'd)

Course 4: Design for Day lighting, Passive Solar & LEED

This course will look in depth at optimal design principles and methods for day lighting a building. Lighting accounts for nearly 20% of all energy use in buildings. Proper integration of day lighting, including controllability of artificial lights in conjunction, can dramatically reduce energy demands in buildings. Another key method to reduce demand on energy use is associated with heating and cooling. Heating represents the largest single amount of energy use in buildings in the US on average, closely followed by cooling. Remembering to incorporate passive heating methodologies when possible can have a tremendous impact on consumption. We will review the fundamentals of passive solar design. Finally, we will look at how these two approached to demand reduction are reflected and rewarded in the LEED rating system.

OBJECTIVES

- Recognize optimal day lighting strategies
- Identify synergies in day lighting and passive solar design.
- Understand passive solar design approaches and rules of thumb.
- Review key contributions of day lighting and passive solar to obtaining LEED credits.

DURATION
The course is intended to be a 4 hours session but can be broken in to smaller modules.

READING
Whole Building Design Guide (WBDG) online www.wbdg.org

COURSE WORK
Select a LEED Platinum Certified building and diagram the day lighting patterns and any passive solar systems.

Course 5: EPA Energy Star Portfolio Manager Program & Renewable Energy Design and Implementation

This first half of this course will review the EPA Energy Star Program, specifically Portfolio Manager which is used by LEED for Existing Buildings as the benchmark standard in energy performance and is useful in the design of new buildings to understand energy consumption of similar building types. We will review the Portfolio Manager registration and setup process and the results you can expect from its use across multiple buildings. The second half will concentrate on renewable energy systems, their design, and implementation. Rules of thumb for optimal efficiency, sizing, design and operation will be covered in addition to the economics of renewable energy.

OBJECTIVES

- Understand how to use Portfolio Manager to quantify building energy consumption
- Identify best practices for renewable energy design.
- Understand different renewable energy systems and their applications.
- Review key contributions of energy bench-marking and renewable energy systems to obtaining LEED credits.

DURATION
The course is intended to be a 4 hours session but can be broken in to smaller modules.

READING
EPA Energy Star Program (online) www.energystar.gov; WBDG

COURSE WORK
Select a building or open site and prepare a layout for a solar array, including calculations using PVWatts to predict the annual power output and energy savings.

Energy Efficiency (cont'd)

Course 6: Building Commissioning & Energy Modeling as a Design Tool

This course will look in depth at two fundamental requirements of creating energy efficient buildings. We will review the commissioning process in detail, including timing of key elements and stakeholder roles and responsibilities. The second portion of the course will focus on the creation, interpretation and use of energy modeling for the average person. This is not meant to be a modeling training course but rather an in depth review of information needed and from whom to create an accurate energy model. We will then discuss what to do with the information provided from modeling and how to use it as a design tool rather than as a check on performance after the fact. Finally, we will look at how these two requirements are reflected and rewarded in the LEED rating system.

OBJECTIVES

- Recognize commissioning requirements and stakeholder responsibilities.
- Identify key inputs needed to complete an energy model.
- Understand how and why to use modeling as a design tool.
- Review key contributions of commissioning and modeling to obtaining LEED credits.

DURATION
The course is intended to be a 4 hours session but can be broken in to smaller modules.

READING
Building Commissioning Association website. www.bcxa.org. New Jersey Clean Energy Program Guide to Commissioning, Section 3. www,njcleanenergy.com

COURSE WORK
Select a LEED Platinum Certified building and identify systems requiring commissioning, then prepare a commissioning plan.

Course 7: Energy Incentives & Carbon Neutrality Planning and Implementation

This first half of this course will review the State and Federal incentive programs available for energy efficiency strategies. While State incentive specifics vary State to State, there are similarities in what is being incentivized. Following this we will discuss carbon neutrality and the creation of carbon neutral master plans , building designs, and their implementation. Energy efficiency using the triple prong approach of demand reduction, efficient system design, and renewable energy integration is a fundamental cornerstone of achieving carbon neutrality. Living Building Challenge and Architecture 2030 will be reviewed as part of this discussion.

OBJECTIVES

- Understand where to find incentives for a project and the kind of technologies and strategies that likely qualify.
- Identify key components of a carbon neutrality strategy.
- Understand the synergy between demand reduction, efficiency, and renewables in achieving carbon neutrality.
- Review key contributions of incentives and carbon neutrality to obtaining LEED credits.

DURATION
The course is intended to be a 4 hours session but can be broken in to smaller modules.

READING
Inconvenient Truth & Our Choice by Al Gore
World Changing, A User's Guide for the 21st Century
Architecture 2030 website.
www.architecture2030.org

COURSE WORK
Identify a carbon neutral building or development and prepare a spreadsheet of strategies contributing to achieving it.

EDUCATION PROGRAMS

USGBC, AIA, PSE, NJSBA CEUs Available

Indoor Environmental Quality

By Jason Kliwinski, AIA, LEED Fellow/Faculty

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3.1 Indoor Environmental Quality - Overview

People spend 90% of their time in buildings. The impact of the indoor environment on human health and well being is significant. This course will explore the indoor environment in depth. The course will relate the various aspects of holistic sustainable design to their place in the Indoor Environmental Quality (IEQ) topic areas as identified in the LEED™ rating system.

We will also take a look at other guidelines and best practices in the creation of healthy indoor spaces including but not limited to the WELL Building Standard, Living Building Challenge, Wellness Certification, Feng Shui & Bau-biologie®, with the intent to focus on optimizing human health and well being.

OBJECTIVES

- Recognize the components of good IEQ
- Explain key concepts to create good IEQ
- Understand different approaches to analyzing spaces for IEQ quality
- Define the impact of the indoor environment on human health

DURATION

The course is intended to be a full day, 8 hour course but can be broken in to 2 hour modules or reduced to a summary version program of 1.5 to 2 hours as needed.

3.2 Outdoor Air Delivery & Increased Ventilation

One of the fundamental cornerstones of healthy IEQ is adequate ventilation. This course will look at different ways to provide adequate fresh air in a building, ensure it is properly controlled, and options to increase ventilation beyond code minimum standards. Attention to how this relates to energy consumption and facility operations will be given as well.

OBJECTIVES

- Recognize areas of opportunity to optimize ventilation
- Explain key natural and mechanical ventilation methods
- Identify best practices to increase ventilation without increasing energy consumption
- Understand ASHRAE 62.1 ventilation requirements in different types of spaces.

DURATION

The course is intended to be a 2 hour module.

IEQ (cont'd)

3.3 Low Emitting Materials

One of the easiest ways to create a healthy indoor environment is not to put toxic materials in it in the first place. There are over 40,000 unregulated chemicals in building products that are potentially harmful to human health with effects ranging from nausea to cancer and everything in between. This course will help you define what makes a material healthy, identify options and specific materials, and understand the myriad of third party certifications for healthy products and how they apply. Additionally, we will look specifically at material selection requirements related to LEEDv4, Living Building Challenge, and WELL Building Standard criteria for compliance.

OBJECTIVES

- Recognize impact of materials and chemicals on human health
- Explain what makes a product a healthy choice over others
- Identify specific materials and products that comply with many green building standards
- Understand the different third party product certifications and what they mean.

DURATION

The course is intended to be a half day, 4 hour course but can be broken in to 2 modules or reduced to a summary version program of 1.5 to 2 hours as needed.

"Jason's real life experiences make the material easier to understand and more engaging."

Prudential Real Estate Investment Group

3.4 Managing Pollutant Sources in Buildings & During Construction for good Indoor Air Quality

In the daily operation of buildings, thousands of potential contaminant are introduced by the peopled entering and leaving the building, cleaning products used, activities taking place, and the building's ventilation system potentially. Likewise, during construction buildings are particularly vulnerable to pollutants from poor site management practices, contamination of materials stored improperly, exposure to the elements, and improper installation or use of products that are not healthy. This course will explore the methods for ensuring pollutant source control during the operation of the building as well as best practices during construction that all projects should follow. Attendees should be able to conduct an existing building assessment after this course to identify concerns and opportunities for improvement. Attendees will also be able to develop protocols for proper Indoor Air Quality management during construction.

OBJECTIVES

- Recognize sources of pollution during construction and building operations
- Explain key IAQ concerns and protocols
- Identify IAQ best practices during construction and building operations
- Develop an IAQ plan for during construction

DURATION

The course is intended to be a half day, 4 hour course but can be broken in to 2 modules or reduced to a summary version program of 1.5 to 2 hours as needed.

IEQ (cont'd)

3.5 Optimizing Occupant Comfort Design & Verification

The trickiest part of creating a good indoor environmental is understanding and meeting individual comfort needs. This is so hard because almost everyone has a different definition of what makes them comfortable. This course will explore all the aspects that affect comfort including, but not limited to light, sound, temperature, acoustics, ergonomics, ventilation, aesthetics, controllability and materiality.

The course will also review the LEED related requirements and ASHRAE standards 62.1 & 55 related to this topic and explain how to conduct occupant comfort surveys and implement programs to improve and measure comfort in buildings.

OBJECTIVES

- Recognize elements of a successful plan
- Identify implementation best practices
- Understand opportunities and challenges
- Integrate stakeholders

DURATION

The course is intended to be a full day, 8 hour course but can be broken in to one or two hour modules.

3.6 Designing for Daylighting

It has been shown in studies that buildings with increased and properly controlled daylighting have tremendous positive impacts on human health and performance. These include increased scores on math & language tests in schools, early discharge from hospitals, increased product sales, improved quality of work and significant increases of productivity. Increasing the productivity of a person in an office setting is equivalent to a $2.50/sf payback on the building every year for the life of the buildings.

OBJECTIVES

- Recognize ways to increase daylighting in buildings
- Explain health benefits of daylighting
- Identify strategies to properly design for daylighting and daylighting control
- Understand the impacts of daylighting on human health and energy consumption

DURATION

The course is intended to be a half day, 4 hour course but can be broken in to 2 modules or reduced to a summary version program of 1.5 to 2 hours as needed.

3.7 Indoor Air Quality Management

This course will review the facets of Indoor Air Quality (IAQ) that are necessary to implement a successful Indoor Air Quality Management Program, in accordance with USEPA guidance and LEED EB:O&M. Topics discussed shall include Moisture and Mold, Hazardous Materials, Outdoor Contaminants and Sources and Indoor Contaminants and Sources. Maintenance of Heating, Ventilating and Air Conditioning (HV/AC) Systems will be discussed in the context of IAQ. Inspection and assessment methods for identification of IAQ issues will be reviewed. This course will assist Building Managers to prepare a proactive IAQ Management Plan for existing buildings.

OBJECTIVES

- Explain key Indoor Air Quality concepts
- Identify methods of inspection and assessment
- Understand best management practices
- Recognize key components of an IAQ Management Plan

DURATION

The course is intended to be a full day, 8 hour course but can be broken in to one or two hour modules or reduced to a half day summary course.

EDUCATION PROGRAMS

USGBC, AIA, PSE, NJSBA CEUs Available

Corporate Sustainability

By Jason Kliwinski, AIA, LEED Fellow/Faculty

4.1 Sustainable Corporate Operations - Overview

This course will assist leadership in assessing their current operating practices and developing, implementing and measuring sustainable procedures to reduce energy, water, & resource usage using a triple bottom line approach. A fundamental key to success is in developing a consistent method across your portfolio. We will review the process and procedures to assess current practices, plan for improvement, implementation programs with specific goals, measure results, educate staff and the public on your successes, and learn from results to plan for continual improvement. The class will provide tools, case studies, and in-class exercises to reduce environmental impact while improving occupant/staff comfort and your bottom line.

OBJECTIVES

- Recognize areas of opportunity to reduce impact
- Explain key sustainability concepts
- Identify green building best practices
- Assess and Plan for improved performance
- Understand cost considerations
- Integrate stakeholders by understanding their role

DURATION

The course is intended to be a full day, 8 hour course but can be broken in to 2 hour modules or reduced to a summary version program of 1.5 to 2 hours as needed.

4.2 Sustainable Corporate Operations - Energy

This course will focus on energy consumption and reduction along with associated impacts on your carbon footprint. Buildings are responsible for approximately 65% of all energy use and 40% of all carbon emissions in the United States alone. Most carbon emissions are typically associated with energy consumption. By reducing demand, utilizing the most efficient systems and equipment possible, and looking for cost effective and smart ways to offset remaining usage with alternate sources, your organization can strive to achieve net zero energy results and greatly reduce its carbon footprint in the process. This course will help managers and staff identify energy conservation measures by using ASHRAE Level 1 inspection protocols and Energystar Benchmarking Platforms to perform their own visual inspections and identify opportunities to reduce demand, increase efficiency, and incorporate alternate energy. Building envelope, HVAC, lighting, controls, equipment, and processes will be discussed.

OBJECTIVES

- Recognize areas of opportunity to reduce energy demand
- Explain key energy conservation concepts
- Identify energy efficiency best practices
- Conduct an ASHRAE Level 1 visual inspection
- Understand cost considerations
- Integrate renewable energy solutions

DURATION

The course is intended to be a full day, 8 hour course but can be broken in to 2 hour modules or reduced to a summary version program of 1.5 to 2 hours as needed.

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Corporate Sustainability (cont'd)

4.3 Sustainable Corporate Operations - Water

This course will focus on reducing potable water consumption. Only 3% of the Earth's water supply is potable. Of that, buildings consume 14% on average. Water conservation is critical to any corporate sustainability plan. We will identify areas of potable water usage, demand reduction strategies, water efficient options, and alternate non-potable sources such as grey water and rainwater catchment, that may be viable substitutes. Water benchmarking and reduction planning will be discussed along with specific technologies and strategies that will reduce potable water use and therefore operating costs while maintaining comfort.

OBJECTIVES

- Recognize areas of opportunity to reduce water demand
- Explain key water conservation concepts
- Identify water efficiency best practices
- Conduct a water audit
- Understand cost considerations
- Integrate alternate water solutions

DURATION

The course is intended to be a half day, 4 hour course but can be broken in to 2 modules or reduced to a summary version program of 1.5 to 2 hours as needed.

4.4 Sustainable Corporate Operations - Resource Conservation

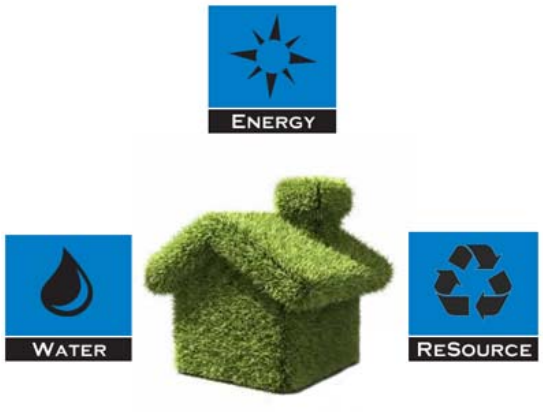
This course will focus on reducing consumption of natural resources. Buildings are responsible for consuming 40% of all raw materials globally and contribute over 36% of all landfill material from construction alone. Materials that contain recycled content, are sustainably harvested, locally produced, and from rapidly renewable materials can reduce demand on natural resources substantially. Development of a sustainable purchasing policy that includes sourcing and vendor participation is critical as well as a mechanism to track and report results. Conversely, what goes in, must come out. Creating a sustainable waste policy and implementation is also critical. Reducing waste at its source, recycling, and implementing a process to track and measure results will be reviewed.

OBJECTIVES

- Recognize areas of opportunity for sustainable purchasing and recycling
- Explain key sustainable material concepts
- Identify sustainable purchasing and recycling best practices
- Conduct a purchasing and waste audit
- Understand cost considerations

DURATION

The course is intended to be a half day, 4 hour course but can be broken in to 2 modules or reduced to a summary version program of 1.5 to 2 hours as needed.



"Jason made the material easy and fun to understand. He was very informative, patient, and had great case studies." Avison Young

Corporate Sustainability (cont'd)

4.5 Green the Supply Chain

This course will focus on creating detailed implementation plans around the sustainable policies and practices discussed within the energy, water, and resource conservation sessions. Specifically, the discussion will include building and landscape management, water efficiency, energy efficiency, renewable energy, purchasing, disposal, indoor air quality and green cleaning. The implementation plan provides a level of detail and the clear defining of roles, responsibilities, metrics, and timelines to achieve the goals. This often requires identification of stakeholders outside the organization such as product vendors and service providers in order to successfully implement green supply chain choices.

OBJECTIVES

- Recognize elements of a successful plan
- Identify implementation best practices
- Understand opportunities and challenges
- Integrate stakeholders

DURATION

The course is intended to be a two hour course.

4.6 Sustainability Management

The course will define sustainability management, discuss why it matters, and why we must learn how to manage organizations in a way that ensures the health of the planet. Discussion will connect environmental protection to organizational management by exploring the technical, financial, and managerial challenges of effectively balancing the triple bottom line of sustainability; people, planet, profits.

DURATION

The course is intended to be a two hour course.

4.7 Marketing Sustainability

Once you have made the effort to reduce environmental impacts, you need to 'get the word out'. Staff, the public, and your industry peers need to know what you've done and why. This will attract customers, engage staff, and obtain recognition in your industry. Messaging, branding, and consistency are important. This course will explore the types of messaging possible, including direct consumer outreach in your facility, the building as a teaching tool, social media and other forms. Engaging employees through sharing of success, reward for performance and identification for areas of improvement will be reviewed. Lastly, there are a number of ways to get the recognition you deserve. Industry awards, third party certifications, and target market acknowledgements will discussed. Making the business case for sustainability is often necessary as well. As part of this course, we will review the triple bottom line of sustainability and how it can be leveraged to get buy-in, execute projects, and market successes.

OBJECTIVES

- Recognize ways to create sustainability messaging
- Explain methods of communicating successes
- Identify sustainable strategies to use the building as a marketing tool.
- Develop targeted messaging through social media
- Understand triple bottom line
- Identify recognition opportunities

DURATION

The course is intended to be a half day, 4 hour course but can be broken in to 2 modules or reduced to a summary version program of 1.5 to 2 hours as needed.

EDUCATION PROGRAMS

GBCI, AIA, PSE CEUs Available

Green Cleaning Training

By: Jason Kliwinski, AIA, LEED Fellow/Faculty
Chair, USGBC-NJ Education Committee

1. Defining Green & Green Cleaning

This is the first class in the Green Cleaning series. The class introduces the student to the concepts behind green, green cleaning, sustainability and the triple bottom line using the LEED™ v4 rating system with a focus on the Indoor Environmental Quality category. The course also explores some of the environmental, economic, and social impacts of cleaning.

OBJECTIVES

- Define sustainability and the triple bottom line
- Explain how these concepts apply to the LEEDv4 IEQ credit requirements
- Define green and green cleaning
- Understand impacts of indoor environment on human health and well being

DURATION

The course is intended to be a 4 hour program which can be broken in to smaller segments.

2. Bundling a Green Cleaning Program

In this session, we help you understand how to select & purchase green cleaning products & equipment as well as develop and implement a complete green cleaning program—complying with LEEDv4 IEQ requirements.

OBJECTIVES

- Identify key components of the green program
- Discuss the requirements of product categories
- Identify emerging issues

DURATION

The course is intended to be a 2 hour program.

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3. Developing a Green Cleaning Policy

While many clients want to go green, they don't know where to start or what it really means. Often switching to green cleaning requires a change in practices and purchases that involves changing policy and processes from the norm. This course will walk you through the components of a green cleaning policy and provide templates and sample documents that have been reviewed and approved by USGBC for LEED certified projects.

OBJECTIVES

- Understand components of a green cleaning policy
- Develop green cleaning policies for clients
- Discuss the benefits of green cleaning programs and products

DURATION

The course is intended to be a 2 hour program.

EDUCATION PARTNER

Green Cleaning Training (cont'd)

4. Conducting an Indoor Air Quality Audit

One of the fastest ways to create a green cleaning program is to understand your needs and opportunities. A indoor air quality audit will provide the pathway to implementing a robust green cleaning program as well as understanding aspects such as ventilation, contaminant control, occupant comfort in alignment with adopted policies.

OBJECTIVES

- Understand what to look for when conducting an audit
- Communicate concerns related to a variety of products
- Identify issues in terms of overall building cleanliness and cleaning procedures

DURATION

The course is intended to be a 2 hour program.

GREEN BUILDING CENTER
simplifying Sustainability