GREEN BUILDING RESEARCH INSTITUTE

COURSE CATALOG

2015

GREEN BUILDING RESEARCH INSTITUTE

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GREEN BUILDING RESEARCH INSTITUTE

COURSE DESCRIPTIONS

THE FUTURE OF SUSTAINABLE ARCHITECTURE (30 HOUR SERIES)

The Future of Architecture: Buildings That Can Think and Adapt

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

Are there green buildings that can think, react, and adapt to real-time weather conditions? Can buildings respond to natural calamities like earth quakes, tsunamis, cyclones, and hurricanes? This course walks you through design strategies, and state-of-the-art emerging and smart technologies, as they relate to sustainable buildings.

Bigger and Better: The New LEED v4

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course walks you through the main highlights of the much anticipated LEED v4 rating system. The course compares LEED v4 to the previous version LEED v3.0 and highlights major differences and additions.

Chicken Soup for the Soil: Sustainable Landscapes and Storm-Water Management

3 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course looks at strategies for creating optimal sustainable landscapes and storm-water management systems to positively impact the built environment and undeveloped land. Apart from looking at numerous sustainable projects that are leading edge in the synergistic landscaping approach, this course will also look at LEED v4 updates and the future of sustainable landscapes and storm-water management.

Demystifying Embodied Energy

2 Hours | LEED General | AIA HSW LUs

One of the seemingly more mysterious concepts in building green is embodied energy. What is it, and do green building rating systems recognize and account for embodied energy? This course demystifies embodied energy and identifies what you need to know before sourcing materials for green building projects. The course also reviews how LEED v4 addresses embodied energy.

Better Late Than Never: Recharge, Renew Rejuvenate Your Existing Buildings

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course discusses the process for determining whether existing buildings should be renovated or torn down and rebuilt from the ground up. It identifies and explores cost effective strategies and cutting edge technologies that can recharge, renew and rejuvenate an existing building.

EcoBalance and Biomimicry: Inspired by Nature

2 Hours | LEED General | AIA HSW LUs

This course explores the innovative ways building designers and architects are mimicking nature, using a sustainable design methodology called Biomimicry, to find solutions to some of the our biggest environmental challenges, such as depletion of nonrenewable natural resources, overpopulation, and climate change.

BIMagination: From 3D to 5D

2 Hours | LEED General | AIA HSW LUs

From 3D to 4D or time and 5D or cost, Building Information Modeling (BIM) enables designers and project teams to model various building elements, components, and configurations to achieve optimal energy usage and green building functionality. This course looks at how BIM is being utilized by the design, construction, and operations professionals to embrace sustainability. The course also looks at BIM case studies in which modeling software and strategies have been used in real world projects.

GREENovation: Simulate and Enhance Your Building's IEQ

3 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course looks at advanced strategies, methods, and techniques that can be used to enhance the indoor air quality and ambiance of a building. In addition, the course also looks at technological tools to simulate and enhance IEQ, such as daylighting modeling, CFD analysis, and BIM and the LEED v4 enhancements to IEQ standards and implementation strategies.

Energy Modeling: Harnessing Technology to Go Green

2 Hours | LEED Specific BD+C & ID+C | AIA HSW LUs

Instead of just considering the type of HVAC system, building designers and contractors can input additional elements like the building envelope and the local climate. Ideally, energy simulation strategies are also used to also monitor and assess energy performance after building occupancy to achieve optimal operations and maintenance in terms of energy consumption. This course explores the topic of energy modeling and the availability of free energy modeling software like eQuest for green building design.

iGreen: Going Digital for the Next Generation

2 Hours | LEED General | AIA HSW LUs

It's hard to spot a person without a smart phone or a social media account these days. Understand how going digital can save projects, organizations and individuals to collectively reduce their carbon foot print and, at the same time, enhance operational efficiency. Learn how the latest innovative digital programs and tools can assist you and your project to cut down on travelling to site, reduce printing, and enhance integrated project planning.

Pushing the Envelope

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

As envelopes are pushed further and further to meet sustainable objectives, the need to properly commission the envelope becomes paramount. This course considers the pros and cons of commissioning the building envelope, including identifying the benefits and concerns, costs, and relationship to building codes.

Zero Waste 101

1 Hour | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course will introduce the concept of zero waste as it applies to today's world and discuss the benefits of a zero waste facility. In addition, the instructor will analyze zero waste strategies and showcase a case study to highlight the successful implementation of this concept.

Advanced Storm-Water Strategies: Flattening the Learning Curve

1 Hour | LEED General | AIA HSW LU

This presentation will look into the various legal issues regarding storm-water management and what may be mandatory in the future. We will also look at advanced storm-water management strategies like environmental site design, rainwater harvesting, and treatment trains. A lot can be learned about successful implementation storm-water management by reviewing real-world sustainability and green building projects from around the nation. This course also reviews how LEED v4 addresses storm-water management and looks into the future of storm-water management.

The Legacy of Carbon Credits: A-Z

2 Hours | LEED General | AIA HSW LUs

It is difficult to NOT come across a discussion on carbon credits and carbon footprints these days. Carbon credits have turned into a multi-billion dollar industry where countries, regions, and businesses buy and sell credits through special markets. Learn important tools and techniques to analyze your project's carbon foot print and how LEED v4 address carbon credits.

Building Green on a Budget: A Life Cycle Approach

2 Hours | LEED General | AIA HSW LUs

This course conducts a detailed analysis of the cost of building green throughout the life cycle of a project. It looks at different green elements starting from the conception of the project to the point where the project is handed over to the building owner. Learn from the experts how to reduce the costs of building green without losing the essence of the project.

A NEW PERSPECTIVE ON THE BUILT ENVIRONMENT: THROUGH THE EYES OF LEED V4 (30 HOUR SERIES)

Bigger and Better: The New LEED v4

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course walks you through the main highlights of the much anticipated LEED v4 rating system. The course compares LEED v4 to the previous version LEED v3.0 and highlights major differences and additions.

Sites Done Right

2 Hours | LEED Specific BD+C & O+M | AIA HSW LUs

Sites Done Right examines the various critical factors of site design including location, heat island effect, erosion and storm-water management plans as well as strategies to restore sites. We will walk you through the LEED v4 Sustainable Sites category and highlight selected strategies through a case study analysis.

Lighten-Up: Efficient Lighting Strategies

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

Join us to examine lighting as it relates to LEED v4 credits and codes that are applicable to lighting design. We will then look at energy efficient strategies, technologies and processes applicable for projects. The course will conclude with analysis of a case study that illustrates the concepts discussed throughout the course.

Super-Charged: Energy Star Through the Eyes of LEED v4

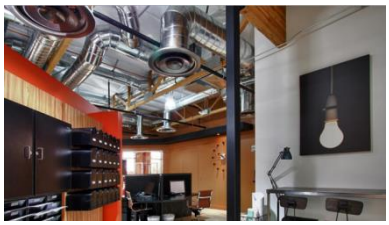
2 Hours | LEED General | AIA HSW LUs

With Energy Star being one of the most recognizable certification bodies in our industry, this course will bring you up to date on all you need to know about Energy Star. We will begin with a brief overview of the origination of Energy Star, walking you through the latest updates and changes with the standards. Case studies will illuminate various areas discussed throughout the course.

The HVAC Factor

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

In this course, we will be discussing options for energy-efficient HVAC systems, as well as design and engineering options for making buildings more efficient. HVAC is the primary user of energy in commercial buildings, so by addressing system efficiency, buildings can save a significant amount of energy and money.



New Visions of BIM

2 Hours | LEED General | AIA HSW LUs

This course will explore the genesis of Building Information Modeling and give you insight into how BIM can be used to reduce potential issues from arising on a project. Be brought up to date on how BIM plays into the new LEED v4 and explore how BIM can be used to maximize the effectiveness of a project throughout its life cycle.

Down the Runway: Energy Modeling

2 Hours | LEED Specific BD+C & ID+C | AIA HSW LUs

This course will examine the background of energy modeling, the importance and drivers of energy simulation, energy efficiency strategies and how they are modeled using the latest technologies and the process of simulating energy performance. We will also highlight the LEED v4 credits and ASHRAE requirements related to energy modeling.

Waves of Change: Outdoor Water Efficiency

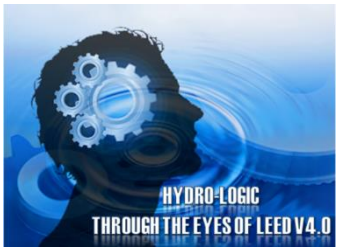
2 Hours | LEED Specific BD+C & O+M | AIA HSW LUs

This course will identify and explore outdoor water efficiency measures that projects may incorporate in an effort to conserve water. This course will highlight efficient landscaping, xeriscaping, rainwater harvesting, gray water reuse, drip irrigation as well as many other strategies. We will also carefully examine the LEED v4 Water Efficiency category as it relates to Outdoor Water Efficiency and conclude with a case study.

Hydro-Logic: Indoor Water Efficiency

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course will explore water usage throughout the U.S. and identify strategies and technologies that support water efficient practices that contribute to LEED projects. In addition, we will perform indoor water efficiency calculations for LEED credit compliance and analyze several case studies that provide specific examples of successful LEED projects that utilized water efficiency.



The Good, The Bad, and the Green: Sustainable Materials

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course is an introductory level course designed to help LEED and design professionals understand the effect of materials used within various building products. In this course, we'll focus on full-life cycle sustainability as it applies to the environment, end user satisfaction, and socioeconomic factors, as well as explore the LEED credits for BD+C, ID+C and O+M. We'll also identify greenwashing and discuss the importance of third-party validation in the promotion and marketing of products.

10 Things You Should Know About LEED v4

1 Hour | LEED Specific BD+C, ID+C, O+M | AIA LU

This course will explore the top ten salient features and changes present in LEED v4 as it compares to LEED 2009. We will examine the changes relevant to accredited professionals as well as project certifications.

High Performance Interiors

2 Hours | LEED Specific ID+C | AIA HSW LUs

This course will look at tenant fit-outs, considering especially the issues associated with selecting and installing materials and finishes. The course will also discuss how to negotiate with landlords for lease terms that allow for more environmentally friendly fit-outs, and at how the location of the project can affect the environment. We will also look at how the design of a project and the materials specified can increase energy efficiency for the project and create spaces for workers that are more pleasant and healthy.

15 Things You Should Know to Make Your Home Healthier

1 Hour | LEED Specific HOMES | AIA HSW LU

At the end of the day everyone has a place that they go to call home. Some may have a house, some may have an apartment but these places are extensions of our personal values and personalities. This course will review some of the key components that should be incorporated into the home to guarantee a healthier home and environment. We will also take a look at how these 15 things have affected real-life projects.

14 Things You Need to Know about Energy Modeling

1 Hour | LEED General | AIA HSW LU

This course will introduce you to the booming Energy Modeling industry, giving insight into what energy modeling can do for you as well as clear up many common misconceptions.

Inspired by Daylight

1 Hour | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

In this course, we will evaluate several daylighting strategies and weigh the pros and cons of each. We will look at ways to integrate daylighting solutions into different project types and also discuss daylighting applications that can help earn LEED v4 credits.

Making Cent$ Out of Green Tax Incentives

1 Hour | LEED General | AIA HSW LUs

Join us to learn about major tax incentives offered in the United States, including 179D tax deductions. We will explore the IRS' requirements for energy modeling and software programs, as well as qualifications and limitations for rebates. You will learn about federal, state and local incentives for greener building.

Communities Redefined: Sustainable Neighborhoods

2 Hours | LEED General | AIA HSW LUs

This course will deliver a new perspective on "neighborhoods" by exploring the history of neighborhoods as we know them. We will analyze LEED ND under the new LEED v4 rating system, highlighting strategies that will be most effective in creating neighborhood efficiency.

Black & White: A Comparison of LEED v4 and Green Globes

1 Hour | LEED General | AIA HSW LU

Compare the two leading green building rating systems today head-to-head in areas such as projects, professional credentials as well as environmental impact. We will look at the controversies making headlines with both rating systems and conclude with a look at what the future of green building rating systems may hold.

HORIZONS (30 HOUR SERIES)

Green Technology: Spruce Up Your Boiler

2 Hours | LEED General | AIA HSW LUs

This course will discuss the factors that building owners and managers should consider when selecting a replacement boiler for existing buildings. Energy efficiency, system sizing, initial investment, maintenance considerations, and ROI will be discussed for various system types.

The International Green Construction Code: How Does This Affect You?

2 Hours | LEED General | AIA HSW LUs

This course reviews the 2012 International Green Construction Code (IGCC) developed by the International Code Council. It was developed to raise the bar for new and existing buildings by reducing their negative impacts on the environment.

A Step-by-Step Approach to Energy Star

2 Hours | LEED General | AIA LUs

This course will provide an introduction to the Energy Star rating system and describe the criteria used to label homes and buildings. In this session, we will demonstrate how existing building projects can apply for Energy Star certification, what data will be required, and what benefits projects may earn. The course includes background on the Energy Star for buildings program, applicable tax incentives, demonstrations of EPA tools such as Portfolio Manager, and suggested strategies to improve the energy performance of existing buildings in cost-effective ways. We will conclude with case studies to highlight real-world applications of the efficiency measures described.

Green Schools I: Design Elements

2 Hours | LEED Specific BD+C | AIA LUs

This course is the first in a two-part series which will explore green educational facilities in-depth. Part one, Design Elements, will look at school design and what strategies and features are most beneficial, easy to implement, and significant. LEED criteria and case studies will be included.

Green Schools II: Costs, Benefits & Challenges

2 Hours | LEED General | AIA LUs

This is the second course in a two-part series, which explores green schools in-depth. Part two, Costs and Benefits, will look at the premiums on green features for schools and their benefits, both in terms of economic return on investment and the impacts of these interventions on student performance and engagement.

All About Green Globes

2 Hours | LEED General | AIA HSW LUs

This course is designed as an introduction to the Green Building Initiative's Green Globes rating system. The course will highlight the evaluation and certification process, the criteria for projects to earn Green Globes certification, and select case study projects. An overview of the rating system, as well as a discussion of Green Globes applicability for various project types is included.

Net-Zero for Government Buildings: Going Beyond the Executive Orders

2 Hours | LEED General | AIA HSW LUs

In accordance with Executive Order 13123, government buildings are increasingly being designed to net-zero standards. This course will describe the design requirements for net-zero buildings to comply with new government regulations, and highlight examples of compliant buildings and interventions. Costs, savings, lessons learned, building certification and case studies will also be highlighted.

High-Performance Healthcare Facilities

2 Hours | LEED General | AIA LUs

Healthcare is a growing part of our economy and our lives. This course focuses on how healthcare facilities can be designed to serve patients effectively and efficiently, looking at costs, ROI, and patient outcomes. The LEED for Healthcare and Green Guide for Healthcare standards will be outlined, and we will look at how green building features impact recovery times and patient outlooks. Case studies of sustainable healthcare centers will be presented.

Optimizing Water Use Through Xeriscaping in North America: A Region by Region

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course will look at the importance of xeriscaping in areas where water is increasingly precious. Industry, agriculture, and expanding development footprints create water scarcity that is exacerbated by droughts and other climatic conditions. We will discuss the basis of xeriscaping, and look at implementation strategies for regions throughout North America.

Passive Building Strategies

2 Hours | LEED General | AIA HSW & SD LUs

This course will provide an overview of passive design concepts and strategies, including a discussion of the history of passive design. We will look at various strategies that can be implemented in green buildings, and at the limitations and benefits of their application. The course will also discuss how passive design strategies may be applicable to LEED projects, and the credits that they may contribute towards.

Geothermal Building Systems

2 Hours | LEED Specific BD+C, ID+C, O+M, ND | AIA LUs

This course will describe several geothermal systems and their applications. We will look specifically at how geothermal systems can be integrated into green buildings, and at how the LEED rating system addresses the use of geothermal heat and energy.

LEED Commissioning: Lessons Learned by CxA

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA LUs

Led by experienced commissioning agent Kimberly Dickey, principal of KD Ecotistical by Design, this course will discuss her experiences acting as a commissioning agent on different project types. Both a large chain store project and a small local government building will be highlighted to demonstrate the shared and unique commissioning aspects of each.

Plan it Green! EcoDistricts & Green Zoning

1 Hour | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course will look at cities that have instituted ecodistricts and green zoning codes. We will compare the initiatives from several such neighborhoods, and look at how they are impacting new and existing development in these areas. The course will be primarily comprised of case studies, and will also highlight the policy decisions and processes involved in the creation of sustainable districts and codes.

Advances in HVAC Technology: What's New?

2 Hours | LEED Specific BD+C, O+M | AIA LUs

This course will describe and analyze newer innovations in HVAC technology such as Air side economizers, Advanced (Cold Climate) Heat pumps, Energy Recovery Ventilators (ERV), etc. In addition, operational costs, system benefits, efficiency, and other considerations will be discussed. We will also explain how to choose a system, design tradeoffs, LEED Applicability and will look at LEED Case Studies.

Materials & Chemicals of Concern: The Red List

2 Hours | LEED Specific ID+C | AIA LUs

We are exposed to over 80,000 chemicals in our daily lives, with varying degrees of safety and testing. Green building rating systems are increasingly taking note of the potential health and environmental risks associated with chemicals found in common building materials, and are taking steps to encourage projects to identify and select safer products. Join us to learn about chemicals of concern identified in the LEED and Living Building Challenge rating systems, what common products they are found in, potential risks, and safer alternatives.

SPOTLIGHT (30 HOUR SERIES)

Sustainability Around the World & LEED v3 Updates

2 Hours | LEED General | AIA LUs

This course looks at what's happening in the world of sustainability, allowing you to stay current and be prepared to work on sustainable projects anywhere in the world. We will walk you through green building standards and regulations in eight regions across the globe, and use case studies to describe how sustainable objectives are achieved in diverse settings. We will also discuss updates to LEED version 3.0.

Energy Star & Green Buildings

2 Hours | LEED General | AIA HSW LUs

This course will look at the genesis of the Energy Star rating system and its marketplace introduction. We will discuss the criteria used to evaluate appliances, products and buildings and how adaptation of Energy Star standards impacts the spread of sustainable development. We will explore how Energy Star's standards are applied to buildings, as well as how these standards compare to LEED standards. We will also review how a building is certified through Energy Star and look at how Energy Star scoring impacts LEED Existing Building O+M.

Lessons Learned from 99 LEED Projects- Materials

2 Hours | LEED Specific BD+C, ID+C, O+M| AIA HSW LUs

We will be discussing the most frequently applied strategies, those that are easiest to implement, and those that stand out as especially unique or elegant solutions. This particular course provides an in- depth look at the importance of Materials and Resources as it applies to Green Buildings; LEED Projects. 99 LEED certified Projects (30+Platinum, 40+Gold and Rest Silver) representing new construction, existing building and commercial interior were chosen to analyze the strategies these projects implemented.

Lessons Learned from 99 LEED Projects- Water

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

We will be discussing the most frequently applied strategies, those that are easiest to implement, and those that stand out as especially unique or elegant solutions. This particular course provides an in- depth look at the importance of Water Efficiency as it applies to Green Buildings; LEED Projects. 99 LEED certified Projects (30+Platinum, 40+Gold and Rest Silver) representing new construction, existing building and commercial interior were chosen to analyze the strategies these projects implemented to enhance water efficiency.

Sustainable Sites- Design, Construction and Operation

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course discusses sustainability options that projects may incorporate with respect to site location, topography, runoff, storm water management, heat island effect, proximity to amenities and public transportation. We will discuss how site factors fit into the 3 major LEED rating systems, as well as briefly discussing the necessary documentation calculations.

Sustainable Neighborhoods & LEED ND

2 Hours | LEED Specific ND | AIA HSW LUs

This course is an in-depth look at the newest LEED rating system, LEED ND. We will discuss what neighborhood sustainability means and how you can incorporate sustainable principles into you projects. As a part of our analysis of LEED ND, we will compare it to other neighborhood rating systems around the world. We will also look at the specifics of LEED ND categories and credits.

Indoor Air Quality- Postoccupancy

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW & SD LUs

This course provides an in-depth look at the issues and strategies associated with preserving and maintaining indoor air quality after building occupancy. Included are discussions of how design decisions made prior to occupancy, as well as practices instituted once a building is operational, can affect occupant health, productivity and attitudes. Strategies to prevent contamination will be discussed, and the course will focus on LEED credits from the BD+C, ID+C, and O+M rating system that relate to post-occupancy IAQ.

Indoor Air Quality- Preoccupancy

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW & SD LUs

This course provides an in-depth look at the issues and strategies associated with preserving and maintaining indoor air quality prior to building occupancy. Included are discussions of how construction activities and design decisions made prior to occupancy can affect occupant health, productivity and attitudes. Preventative strategies will be discussed, and the course will focus on LEED credits from the BD+C, ID+C, and O+M rating system that relate to preoccupancy IAQ.

Tenant Fit-Outs

3 Hours | LEED Specific ID+C | AIA HSW & SD LUs

This course is a 3-hour course that will look at tenant fit-outs, considering especially the issues associated with selecting and installing materials and finishes. The course will also discuss how to negotiate with landlords for lease terms that allow for more environmentally friendly fit-outs, and at how the location of the project can affect the environment. We will also look at how the design of a project and the materials specified can increase energy efficiency for the project and create spaces for workers that are more pleasant and healthy.

Alternative Water Supplies

2 Hours | LEED General | AIA HSW & SD LUs

This course explores non-municipal water sources, including rainwater, graywater, and cooling system condensate. We will look at strategies for water collection and how it may be used in new and existing buildings, and discuss case study examples.

The Economics of Green Building

2 Hours | LEED General | AIA HSW & SD LUs

The course will highlight where the costs for green building come in, and where projects can find savings from green interventions. We will look at specific green interventions, as well as their costs and expected return on investment, and relate this back to how effective each is from a sustainable standpoint. We will also highlight some of the most cost-effective green interventions, both from an environmental standpoint and in terms of the LEED points that can be earned for the intervention.

Renewable Energy for Green Buildings

2 Hours | LEED General | AIA HSW & SD LUs

The course will provide a broad overview of the types of non-renewable fuel sources used commonly today to provide power to the built environment; renewable fuel sources/technology alternatives to conserve and replace the use of fossil fuels in terms of supplying power to residential/commercial green buildings and credit achievement within the LEED Rating System.

Passive Building Strategies

2 Hours | LEED General | AIA HSW & SD LUs

This course provides an in-depth look at the issues and strategies associated with preserving and maintaining indoor air quality prior to building occupancy. Included are discussions of how construction activities and design decisions made prior to occupancy can affect occupant health, productivity and attitudes. Preventative strategies will be discussed, and the course will focus on LEED credits from the BD+C, ID+C, and O+M rating system that relate to preoccupancy IAQ.

Green Neighborhoods and Community Health

2 Hours | LEED Specific ND | AIA HSW & SD LUs

In this course, we will primarily be looking at how various neighborhood conditions affect the inhabitants of those neighborhoods, focusing on the lifestyle impacts and available choices. We will frame these sustainable neighborhood design elements in terms of the credits from the LEED ND rating system, evaluating what projects must do to earn these credits, and how these interventions may affect public health and the environment. We will compare these credits and interventions to determine which will have the greatest impact on the health and happiness of occupants, and which are easiest to implement.

Green Cleaning Basics

2 Hours | LEED General | AIA LUs

This course will discuss the potential impacts associated with building cleaning activities, and how these can be made friendlier to occupant health and the environment. We will look at what products and chemicals should be avoided, as well as at what effects these products may have on indoor air quality. We will look briefly at how green cleaning procedures are addressed in the LEED green building rating system.

Net-Zero Buildings

2 Hours | LEED General | AIA HSW & SD LUs

This course is an introduction and overview to the rapidly emerging field of Zero Energy Buildings (ZEB). We will compare and contrast the different definitions of a ZEB as well as learn how to carry out zero energy calculations. Additionally, we will overview the strategies used to reach zero energy, renewable energy options, and the associated costs of ZEBs.

Energy-Efficient HVAC

2 Hours | LEED General | AIA LUs

In this course, we will be discussing options for energy-efficient HVAC systems, as well as design and engineering options for making buildings more efficient. HVAC is the primary user of energy in commercial buildings, so by addressing system efficiency, buildings can save a significant amount of energy and money.

Neighborhood Design: Practical Planning

2 Hours | LEED Specific ND | AIA LUs

The course looks at how to plan and execute neighborhood designs that are environmentally sound, occupant friendly, healthy, and economically viable. We will use the LEED ND rating system as a guide and explore some of the challenges and benefits of sustainable city and community planning.

The Policy and Politics of Green Building

2 Hours | LEED General | AIA HSW & SD LUs

This course is a broad overview of how policies on national, state, and local levels affect the green building industry. Attitudes towards green building are shifting in both the public and private sectors, and we will look at how these shifts in attitude translate to shifts in both policy and practice. In addition to outlining some of the policies that affect green building, we will look at some of the issues that are in the news today, and at their potential impact on the industry and the environment as a whole.

Right-of-Ways: Designing Safe, Healthy and Sustainable Streets

2 Hours | LEED Specific ND | AIA LUs

This is a 2-hour course that deals with street design and how urban planners can create streets that encourage positive community growth. This includes creating streets that are safe for drivers and pedestrians, encourage physical activity, provide appropriate parking solutions, increase connectivity, and promote economic growth. LEED ND credits that pertain to street design are discussed, along with their benefits.

Brownfield Redevelopment

2 Hours | LEED General | AIA LUs

This course looks at what steps are involved in the remediation of brownfield sites, the costs which are associated with these measures, and the tax credits and LEED points awarded for brownfield redevelopment. Case studies of brownfield redevelopments will also be highlighted.

Tax Incentives for Green Buildings 2012

2 Hours | LEED General | AIA HSW LUs

This course provides an overview of national and some state tax incentives available for green building projects, with a focus on the 179D tax deduction for energy efficiency. This is an ideal course for designers, project owners/ managers, contractors, and engineers who want to understand more about the economic incentives for green buildings. No prerequisite courses are required. This course will help attendees to better represent savings from green buildings to clients, and help them understand what incentives their projects are eligible for.

Waste Management Practices

2 Hours | LEED Specific BD+C, ID+C, O+M, HOMES | AIA HSW LUs

This course will look at the waste produced in construction, demolition, and renovation projects and discuss ways that projects can reduce the environmental impact of this waste. We will discuss the environmental problems with conventional waste disposal practices, the benefits of waste diversion for green building projects, and evaluate several projects to determine which waste diversion strategies are most viable. We will also create and implement a waste management plan.

PATHWAY (30 HOUR SERIES)

Building Information Modeling (BIM) for Green Buildings

2 Hours | LEED General | AIA LUs

This course is designed to be an overview of BIM applications and functionality, particularly as it relates to the green building industry. It will begin by looking at the problems that BIM was developed to solve, and then move on to the uses and benefits that BIM can offer a project. In this course we will explore BIM's applications to green building and see how the technology can be used in various project stages. We will look at the potential for reducing interdisciplinary clashes and the simplification of construction document production. We will also look at how BIM can be used to created LEED documentation.

Sustainability Around the World & LEED v3 Updates

2 Hours | LEED General | AIA LUs

This course looks at what's happening in the world of sustainability, allowing you to stay current and be prepared to work on sustainable projects anywhere in the world. We will walk you through green building standards and regulations in eight regions across the globe, and use case studies to describe how sustainable objectives are achieved in diverse settings. We will also discuss updates to LEED version 3.0.

Daylighting for Green Building Projects

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

Daylighting or natural lighting not only illuminates a space, but also provides a connection between the natural environment and surrounding the space. This course identifies and analyzes natural lighting or daylighting as a sustainable design and practice option for green building projects (Building Design and Construction, Operations & Maintenance). The course walks through various design strategies and looks at related LEED credits

Energy Star and Green Buildings

2 Hours | LEED General | AIA HSW LUs

This course will look at the genesis of the Energy Star rating system and its introduction into the marketplace. We will also discuss the criteria used to evaluate energy usage of appliances, products and buildings and how adaption of the Energy Star standards can impact the spread of sustainable development. It will explore how Energy Star's standards are applied to different building types, as well as how these standards compare to LEED standards.

Energy-Efficient Lighting Solutions for Green Buildings

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

Lighting is one of a building's major consumers of energy. We will discuss LEED credits and codes that are applicable to lighting design, such as ASHRAE and IESNA. We will also look at factors that influence decisions about artificial lighting systems, such as operational costs. We will go on to explore energy efficient strategies, technologies, and processes applicable for projects. LEED documentation requirements are discussed, and the course concludes with case studies that will demonstrate the concepts introduced.

Sustainable Flooring

2 Hours | LEED General | AIA HSW LUs

In this course we will look at major flooring types and green flooring options that you can incorporate into projects. We will explore the 'cradle-to-grave' impact of material choices, addressing the concepts of embodied energy, virgin materials, life cycle assessment, and other factors to consider when choosing flooring for your projects. Emphasis will be placed on documenting materials and resources (MR) credits for LEED projects and will teach you to perform the vital calculations to determine recycled content, regional materials, and other LEED MR criteria.

The Elements of a Green Home- IEQ & ID

2 Hours | LEED Specific Homes | AIA HSW LUs

The course explores how to use green technology and systems in home building and renovation. The course also includes lessons learned from building San Antonio's first LEED Platinum town home projects. This specific course is part two in our three-part series that introduces the LEED for Homes rating system. In this installation, we will look at issues related to indoor environments and at the design innovation involved in residential construction.

Green Materials, Greenwashing & Third-Party Certification

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA LUs

This is an introductory level course designed to help LEED professionals understand the materials they use in their building products. Focusing on full-lifespan sustainability as it applies to the environment, end user satisfaction, and socioeconomic factors will help participants to understand more about how the choices that they make with regards to project materials will affect the world around them.

Lessons Learned from 99 LEED Projects: Indoor Environmental Quality

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA LUs

We will be discussing the most frequently applied strategies, those that are easiest to implement, and those that stand out as especially unique or elegant solutions. This particular course provides an in- depth look at the importance of improved indoor environmental quality as it applies to Green Buildings; LEED Projects. 99 LEED certified Projects (30+Platinum, 40+Gold and Rest Silver) representing new construction, existing building and commercial interior were chosen to analyze the strategies these projects implemented to improve the indoor environmental quality for building occupants.

Lessons Learned from 99 LEED Projects: Materials

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

We will be discussing the most frequently applied strategies, those that are easiest to implement, and those that stand out as especially unique or elegant solutions. This particular course provides an in- depth look at the importance of Materials and Resources as it applies to Green Buildings; LEED Projects. 99 LEED certified Projects (30+Platinum, 40+Gold and Rest Silver) representing new construction, existing building and commercial interior were chosen to analyze the strategies these projects implemented.

Lessons Learned from 99 LEED Projects: Water

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

We will be discussing the most frequently applied strategies, those that are easiest to implement, and those that stand out as especially unique or elegant solutions. This particular course provides an in- depth look at the importance of Water Efficiency as it applies to Green Buildings; LEED Projects. 99 LEED certified Projects (30+Platinum, 40+Gold and Rest Silver) representing new construction, existing building and commercial interior were chosen to analyze the strategies these projects implemented to enhance water efficiency.

VOCs 201

1 Hour | LEED Specific BD+C & ID+C | AIA HSW & SD LUs

This course provides an in-depth look at the importance of low emitting materials. A detailed analysis on volatile organic compounds as it applies to LEED projects is included as part of this course. In addition, the course places special emphasis on LEED Credits related to VOC content, strategies, documentation, and calculations related to VOC Budget methodology. Students will learn how to strategically incorporate various measures for LEED credit compliance through case studies.

Lessons Learned from 99 LEED Projects: Energy

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

We will be discussing the most frequently applied strategies, those that are easiest to implement, and those that stand out as especially unique or elegant solutions. This particular course provides an in- depth look at the importance of Energy Efficiency as it applies to Green Buildings; LEED Projects. 99 LEED certified Projects (30+Platinum, 40+Gold and Rest Silver) representing new construction, existing building and commercial interior were chosen to analyze the strategies these projects implemented to enhance energy efficiency.

Lessons Learned from 99 LEED Projects: Innovation

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

We will be discussing the most frequently applied strategies, those that are easiest to implement, and those that stand out as especially unique or elegant solutions. This particular course provides an in- depth look at the importance of Innovation in design and operations as it applies to Green Buildings; LEED Projects. 99 LEED certified Projects (30+Platinum, 40+Gold and Rest Silver) representing new construction, existing building and commercial interior were chosen to analyze the strategies these projects implemented.

Lessons Learned from 99 LEED Projects: Sites

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

We will be discussing the most frequently applied strategies, those that are easiest to implement, and those that stand out as especially unique or elegant solutions. This particular course provides an in- depth look at the importance of Sustainable Sites as it applies to Green Buildings; LEED Projects. 99 LEED certified Projects (30+Platinum, 40+Gold and Rest Silver) representing new construction, existing building and commercial interior were chosen to analyze the strategies these projects implemented.

Sustainable Sites- Design, Construction and Operation

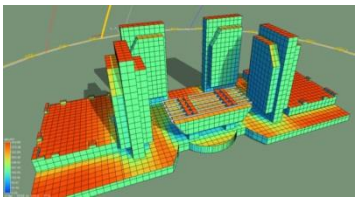
2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course discusses sustainability options that projects may incorporate with respect to site location, topography, runoff, storm water management, heat island effect, proximity to amenities and public transportation. We will discuss how site factors fit into the 3 major LEED rating systems, as well as briefly discussing the necessary documentation calculations.

Energy Modeling for Green Buildings

2 Hours | LEED Specific BD+C & ID+C | AIA HSW LUs

This course will cover all major strategies that typical energy simulation software can represent. It will discuss how professionals can apply energy modeling to projects, and define the point in a project when energy simulation should be considered. You will learn to analyze modeling requirements to conform to ASHRAE codes and perform an analysis of an energy modeling report for a LEED certified project.



Outdoor Water Efficiency

2 Hours | LEED Specific BD+C & O+M | AIA HSW LUs

This course will discuss the importance of water efficiency and its drivers, differentiate between water efficiency and water conservation and explain the water efficiency credits in LEED BD+C and O+M projects' intent, requirements and reference standards. We will also explore water efficiency strategies and technologies that could be implemented on Green Building projects for enhanced water efficiency in LEED Projects. Finally, we'll explain the water reduction calculations involved in LEED BD +C and O+M WE credits and discuss a water specific case study for NC& EBOM projects respectively.

Sustainable Neighborhoods & LEED ND

2 Hours | LEED Specific ND | AIA HSW LUs

This course is an in-depth look at the newest LEED rating system, LEED ND. We will discuss what neighborhood sustainability means and how you can incorporate sustainable principles into you projects. As a part of our analysis of LEED ND, we will compare it to other neighborhood rating systems around the world. We will also look at the specifics of LEED ND categories and credits.

Indoor Water Efficiency

2 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

This course discusses the importance of water efficiency in the built environment. We will walk through different strategies and technologies that LEED projects may incorporate to reduce water consumption, and analyze these strategies for use in BD+C and O+M projects. We will demonstrate sample calculations for LEED WE credit as an exercise for this course, and look at a LEED case study that relates to water efficiency.

Tax Incentives for Green Buildings 2012

2 Hours | LEED General | AIA HSW LUs

This course provides an overview of national and some state tax incentives available for green building projects, with a focus on the 179D tax deduction for energy efficiency. This is an ideal course for designers, project owners/ managers, contractors, and engineers who want to understand more about the economic incentives for green buildings. No prerequisite courses are required. This course will help attendees to better represent savings from green buildings to clients, and help them understand what incentives their projects are eligible for.

The Elements of a Green Home: Materials & Water

2 Hours | LEED Specific HOMES | AIA HSW LUs

This course explores how to use green technology and systems in home building and renovation. The course also includes lessons learned from building San Antonio's first LEED Platinum town home projects. This part of the course will discuss how the materials installed in a home will affect the comfort and health of residents as well as the global environment, and will look at how water is used and may be conserved in the home.

The Elements of a Green Home: Sites & Energy

2 Hours | LEED Specific HOMES | AIA HSW LUs

The course explores how to use green technology and systems in home building and renovation. The course also includes lessons learned from building San Antonio's first LEED Platinum town home projects. This installation will discuss the Sustainable Sites and Energy and Atmosphere sections of the rating system.

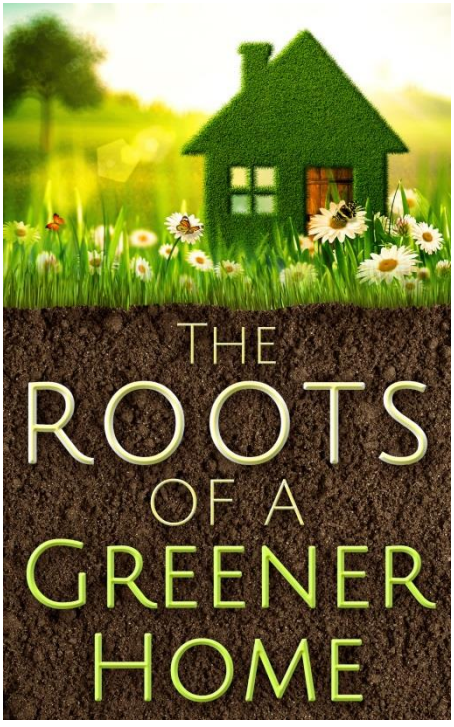
30 HOUR CE BOOK

30 Hours | LEED Specific BD+C, ID+C, O+M | AIA HSW LUs

The CE Book is a **compilation of articles, charts & images** on sustainability, green buildings and LEED that enrich a green building professional's knowledge and qualify them to **earn 30 CE hours** for their LEED credential (BD+C, ID+C, and O+M specialty) as well as AIA credential maintenance. The book is divided into categories that address sustainability as it applies to a project's site, water usage, energy usage, materials, indoor environmental quality and innovation. In addition, the book also includes articles on sustainability around the world and unique features of LEED. The book is available in a .PDF format so you can even read each topic on your iPad, Nook, or Kindle, and keep it as a resource to be used in the future as well.

THE ROOTS OF A GREENER HOME

60 Hours | LEED General | AIA LUs



The Roots of a Greener Home describes more than 130 projects and practices that will help you "green" your home, your surroundings, and your lifestyle. The book is divided into four main sections: Home and Garden, Home Improvements, Home Savings, and Home and Lifestyle. Each of these sections is then further divided into categories that address the components of the home from roof to floor and everything in between, including landscaping, lighting, water conservation practices, energy savings, cleaning, health and nutrition, transportation, and home audits that can lower the consumption of natural resources.

By following the suggestions in this book, you'll be amazed at how easy it is to address and improve many features in your home and to make better lifestyle choices in terms of eco-friendliness or contributions to sustainability. But Roots of a Greener Home will bring you greater advantages than simply lowering energy and water usage. You can also maintain your LEED & AIA credentials while learning green living tips. Keep the book for life as a resource to be used in the future, as well!