everblue™
training institute

| Lesson | Title | Lesson Description | Lesson Learning Objectives | Lesson Topics | CMP Category | Hours |
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| 1 | LEED CMP Explained | This lesson will provide students with an overview of Credential Maintenance Program (CMP) requirements for LEED Professionals. Additionally, students will be introduced to green building rating systems available on the international market. | ▫ Understand continuing education requirements for LEED Professionals<br>▫ Differentiate between the prescriptive and performance compliance paths for LEED APs without specialty<br>▫ Understand the Green Building Certification Institute's Credential Maintenance Program and how to keep individual credentials current<br>▫ Describe green building rating systems | ▫ Introduction to Everblue's LEED CMP Program<br>▫ Options for LEED APs without specialty<br>▫ Credential maintenance requirements for LEED APs with specialty<br>▫ The USGBC, LEED and sustainability today | Project Surrounding and Public Outreach | 2 |
| 2 | Update to LEED v3.0 | This lesson will highlight the major changes in LEED v3 for New Construction, Schools, and Core & Shell. | ▫ Paraphrase the major point changes in LEED for New Construction v3<br>▫ Explain how Regional Priority credits are awarded to LEED projects<br>▫ Understand the additional credits available to LEED for Schools and LEED for Core & Shell projects | ▫ Rating Systems, LEED Professionals, and Points<br>▫ BD+C Credits (SS, WE, EA, MR, IEQ, ID, RP)<br>▫ Summary of Changes | Stakeholder Involvement in Innovation | 2 |
| 3 | Stormwater | This lesson will introduce students to the negative impact that development can have on the natural environment because of increased stormwater runoff. Students will learn the LEED credits for stormwater as well as different mitigation measures that are available. | ▫ Understand the impacts of development on stormwater and watersheds<br>▫ Understand LEED Credit requirements for managing stormwater<br>▫ Describe measures for mitigating the negative impact of development on stormwater | ▫ Introduction to Stormwater<br>▫ Impacts of Runoff<br>▫ LEED Rating Systems and Stormwater | Water Management | 2 |
| 4 | Energy Impacts - Basics of Solar | This lesson will explain the history of humankind's use of solar power. Students will learn the different technologies that are available for producing electricity from sunlight. | ▫ Explain the history of solar and modern uses of solar energy<br>▫ Summarize the differences between on-grid and off-grid solar applications<br>▫ Explain the major difference between concentrating and photovoltaic solar power | ▫ History of solar<br>▫ Overview of electricity producing solar technologies<br>▫ Overview of solar thermal technology<br>▫ System maintenance | Project Systems and Energy Impacts | 2 |
| 5 | Energy Impacts - Carbon Accounting | This lesson will teach students the most widely accepted approaches to measuring the amount of carbon dioxide equivalents released into the atmosphere by an organization. | ▫ Discuss the Kyoto Protocol and more recent attempts at accounting for carbon emissions<br>▫ Restate the boundaries between Scope 1, Scope 2, and Scope 3 emissions<br>▫ Understand the challenges to accurately tracking carbon emissions at the organizational level | ▫ Introduction to Kyoto Protocol<br>▫ Carbon Accounting Methodology<br>▫ Software tools for carbon accounting | Project Systems and Energy Impacts | 2 |
| 6 | Energy Impacts - Homestar/Building Performance Institute | This lesson will give an overview of the major residential energy efficiency and weatherization programs available in the United States named by US Government's Homestar program. Participants will learn the major sources of energy loss, discomfort, and poor indoor air quality that are common in a majority of homes in the United States. | ▫ Define the components of Homestar legislation<br>▫ Understand the three forms of heat transfer<br>▫ Identify common building envelope problems that reduce efficiency, air quality, comfort, and occupant health & safety | ▫ Overview of Homestar legislation<br>▫ The role of a RESNET HERS rater<br>▫ The role of a BPI Building Analyst<br>▫ Energy modeling's impact on Homestar rebates | Project Systems and Energy Impacts | 2 |
| 7 | Project Materials - Green Product Criteria & Organizations | This lesson will explain to students the role resource management can play in an organization's sustainability program. Students will learn about nationally recognized 3rd party verification bodies for green products. | ▫ Give examples of resource management as practiced by the US government<br>▫ Explain the criteria for 3rd party reviewing bodies and why industry backed organizations have inherent conflicts of | ▫ Introduction to Resource Management<br>▫ Green Product Criteria<br>▫ 3rd Party Product Testing Organizations | Acquisition, Installation, and Management of Project Materials | 2 |
| 8 | Indoor Environment - Combustion Appliance Zone Safety | This lesson will teach students about the hazards of combustion appliances in residential buildings and appropriate combustion appliance zone testing procedures. | ▫ Give examples of Combustion Appliance Zones<br>▫ Explain the risk and source of carbon monoxide in residential homes | ▫ Overview of the hazards of carbon monoxide<br>▫ Impacts of positive & negative pressure<br>▫ Worst case depressurization testing<br>▫ Combustion appliance testing | Improvement to the Indoor Environment | 2 |
| 9 | Indoor Environment - Thermal Comfort | This lesson will introduce students to the most common causes of poor thermal comfort in buildings. Students will learn about the role that a building's envelope and HVAC system each plays in providing acceptable indoor thermal comfort conditions. | ▫ Explain how a building's envelope should stop convection, conduction, and radiation<br>▫ Summarize common problems with building envelope assemblies and HVAC systems that lead to occupant discomfort<br>▫ Explain the relationship between energy efficiency and occupant comfort | ▫ Perception of thermal comfort<br>▫ Building envelope impact on comfort<br>▫ HVAC system impact on comfort | Improvement to the Indoor Environment | 2 |
| 10 | Indoor Environment - Lead Paint | This lesson will explain the major components and requirements stemming from the EPA's Renovation, Repair, and Maintenance Program Final Rule (40 CFR Part 745) concerning the hazards of lead paint in residential buildings. | ▫ Explain why contractors should be concerned about lead paint<br>▫ Summarize steps for identifying hazards before renovation work begins<br>▫ Describe cleanup activities necessary when lead paint is found in a home | ▫ Overview of the hazards of lead paint<br>▫ EPA Lead Safe training<br>▫ Testing & Abatement Requirements | Improvement to the Indoor Environment | 2 |
| 11 | Public Outreach - Introduction to CALGreen | This lesson will introduce students to California's first-in-the-nation mandatory Green Building Standards Code (CALGRreen) requiring all new buildings in the state to be more energy efficient and environmentally responsible. | ▫ Summarize the relationship between CALGreen and LEED<br>▫ Paraphrase minimum energy efficiency requirements in CALGreen<br>▫ Explain water and resource management | ▫ History of CA Energy Code<br>▫ Overview of CA residential energy code<br>▫ Overview of CA commercial energy code<br>▫ CALGreen & LEED | Project Surrounding and Public Outreach | 2 |
| 12 | Water Efficiency - Indoor Strategies & Technologies | This lesson will provide students with an understanding of available technologies for reducing indoor water consumption in buildings. Students will perform sample calculations to demonstrate annual water savings. | ▫ Compute water savings calculations for sample projects<br>▫ Describe the advantages and disadvantages of low flow and waterless bathroom fixtures<br>▫ Contrast the advantages of water | ▫ Occupant behavior<br>▫ Pros & cons of waterless fixtures<br>▫ Greywater reuse<br>▫ On-site water treatment | Water Management | 2 |
| 13 | Innovation - Case Studies in Innovation Credits | This lesson will give students an opportunity to see how major organizations have successfully approached green building. | ▫ Summarize Philips' approach to low mercury lighting<br>▫ Discuss the advantages and challenges of knowledge sharing in the DOE's goal of achieving LEED Platinum<br>▫ Explain Lowes' approach to hurricane-proofing | ▫ Low mercury lighting<br>▫ DOE's approach to innovation<br>▫ Lowes: Energy efficiency and hurricane proofing | Stakeholder Involvement in Innovation | 2 |
| 14 | Climate Impact and Brownfield Redevelopment | This lessions will introduce students to the impacts of climate on building performance and design and introduce students basic brownfield remediation techniques | ▫ Summarize the impacts of climate on building design<br>▫ Explain the different climate zones in the United States<br>▫ Understand basic remediation techniques | ▫ Climate and building design<br>▫ Climate zones in the United States<br>▫ Basic remediation techniques | Project Site Factors | 2 |
| 15 | Intro to LEED ND | This lesson will introduce students to the US Green Building Council's newest rating system: LEED for Neighborhood Development. | ▫ Summarize the major components of the LEED ND rating system<br>▫ Explain the relationship between LEED ND and LEED for Homes<br>▫ Discuss the density challenges associated with LEED ND in the international market | ▫ Introduction to LEED ND<br>▫ Smart Location & Linkage<br>▫ Neighborhood Pattern & Design<br>▫ Green Infrastructure & Buildings | Project Site Factors | 2 |
| 16 | Water Efficiency - Outdoor Strategies & Technologies | This lesson will provide students with an understanding of available technologies for reducing outdoor water consumption in buildings. Students will perform sample calculations to demonstrate annual water savings. | ▫ Give examples of available technologies and strategies for reducing landscaping irrigation water consumption<br>▫ Compute water savings from alternative landscaping scenarios<br>▫ Discuss the cost savings and return on investment (ROI) from landscaping water use reductions | ▫ Water distribution systems<br>▫ Xeriscaping<br>▫ Rainwater harvesting<br>▫ Costs & benefits of water efficiency | Water Management | 2 |
| 17 | EO13514 - The Federal Government's Approach to Resource Management | This lesson will introduce students to the federal government's approach to sustainability and Presidential Executive Order 13514 mandating energy, resource, and water conservation for federal agencies. | ▫ Explain why the federal government's sustainability efforts are important to the private sector<br>▫ Summarize resource management requirements mandated in EO13514<br>▫ Understand the relationship between LEED and EO13514<br>▫ Restate the role of carbon accounting in EO13514 | ▫ History of EO13514<br>▫ Resource management requirements for federal agencies<br>▫ EO13514 and LEED | Acquisition, Installation, and Management of Project Materials | 2 |
| 18 | Material Efficient Framing Strategies | This lesson will give students an overview of traditional residential framing techniques and offer advanced techniques that can reduce cost, improve building energy efficiency, and increase occupant comfort. | ▫ Summarize the heat transfer properties of wood versus insulation<br>▫ Give examples of advanced framing techniques<br>▫ Discuss possible cost savings from efficient framing techniques | ▫ Heat transfer properties of wood<br>▫ Advanced framing techniques<br>▫ Cost savings from efficient framing | Acquisition, Installation, and Management of Project Materials | 2 |
| 19 | Energy Impacts - The ASHRAE Level I Walkthrough | This lesson will explain to students the major components of an ASHRAE Level I walkthrough of a commercial building. Students will learn how to assess energy bills and what major building systems should be reviewed during a site survey. | ▫ Assess a building's energy cost and efficiency by analyzing energy bills<br>▫ Summarize low-cost/no-cost measures most commonly available<br>▫ Summarize capital improvements most commonly available<br>▫ Understand how to provide a preliminary estimate of cost savings | ▫ Overview of ASHRAE Level I Walkthrough<br>▫ Heating systems<br>▫ Cooling systems<br>▫ Lighting systems<br>▫ Building envelope | Project Systems and Energy Impacts | 2 |