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GREEN BUILDING SPECIALIST
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LEED GREEN ASSOCIATE EXAM
REFRESHER
ONLINE TRAINING BY KRISHNAJI PAWAR
LEED AP(BD+C),GSAS CGP,GCP,ISO 14001
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MODULE 7

Getting a LEED Green Associate Credential

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LEED GREEN ASSOCIATE EXAM REFRESHER

The LEED Green Associate will enhance your professional credentials, open doors to new job opportunities and help advance your career in the green building industry. The LEED Green Associate is a valuable credential for anyone interested in making a positive impact on the environment.

Learning Objectives

- Introduction and Course Outline
- Knowing the Process of LEED Credentialing
- Basic Concepts of Sustainable Design
- Organizational Fundamentals
- LEED Green Building Rating System
- LEED Certification Process
- Getting a LEED Green Associate Credential
- Integrative Strategies
- Location and Transportation
- Sustainable Sites

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INTRODUCTION

- LEED standards are studied by professionals for an accreditation exam.
- Passing the exam results in a LEED Green Associate or a LEED Accredited Professional (AP) credential.
- LEED Accredited Professionals enhance careers in construction, design, operations, and facility management.
- LEED Green Associate is a foundational credential for understanding current green building principles and practices.
- It's often the first step before earning advanced credentials like the LEED AP with specialty.

REASONS TO BECOME LEED ACCREDITED

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- LEED certification is the industry standard for green design verification, increasing 1.85 million square feet per day.
- LEED AP designation signifies expert status in sustainable design, gaining trust from potential clients.
- LEED accreditation is increasingly sought after by clients due to its value in green building acceptance.
- LEED buildings lease for more due to lower operating costs, environmental benefits, and increased productivity.



REASONS TO BECOME LEED ACCREDITED +

- LEED certified buildings have greater tenant rates, with 92% of space occupied in these buildings.
- LEED design reduces operating costs through innovative design, technology, and materials.
- LEED buildings positively impact the environment and water security.
- LEED buildings enhance neighborhoods by promoting a car-free lifestyle.
- LEED certification provides a competitive advantage in the job market, with employers having a wide range of candidates.
- LEED certification is internationally recognized, with certification in China, India, and the Middle East.



TOP REASONS TO INVEST IN LEED CERTIFICATION

- Reduced Energy Use and Carbon Emissions: LEED-certified buildings contribute 50% fewer greenhouse gases (GHGs) than conventionally constructed buildings.
- Accountability: USGBC stands for accountability through the LEED third-party certification process.
- Higher Resale Value and Faster Lease-up Rates: LEED-certified buildings consistently outperform noncertified spaces in terms of rent and vacancy.



TOP REASONS TO INVEST IN LEED CERTIFICATION+

- Lower Utility Costs: LEED buildings use 25% less energy than conventional buildings.
- Less Waste: By 2030, LEED projects will divert over 540 million tons of waste from landfills.
- Improved Employee Retention: LEED-certified buildings attract talented employees and increase worker satisfaction, decreasing turnover.
- Ability to Meet ESG Goals: LEED provides a robust and globally recognized green building framework to measure and manage real estate performance.



TOP REASONS TO INVEST IN LEED CERTIFICATION++

- Tax Benefits: LEED certification may qualify for tax breaks, especially in special economic growth zones.
- Solid Data on Asset Performance: LEED measures operating performance through the LEED for Existing Buildings: Operations and Maintenance rating system.
- Knowledge of LEED Works: Over 100,000 projects use LEED to meet their goals.



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LEED GREEN ASSOCIATE EXAM SPECIFICATION

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1. **LEED Process (16 Questions)**
    A. Organization fundamentals (e.g., mission/vision; non-profit; role of USGBC/GBCI)
    B. Structure of LEED rating systems (e.g., credit categories; prerequisites; credits and/ or Minimum Program Requirements for LEED certification)
    C. Scope of each LEED rating system (e.g., rating system selection; rating system families [BD+C, ID+C, O+M, ND, Homes])
    D. LEED development process (e.g., consensus-based; stakeholder and volunteer involvement; rating system updates/evolution)
    E. Credit categories (e.g., goals and objectives of each [LT, SS, WE, EA, MR, EQ, IN, RP]; synergies)
    F. Impact categories (e.g., what should a LEED project accomplish?)
    G. LEED certification process (e.g., certification levels [Certified, Silver, Gold, Platinum]; LEED Scorecard; third party verification; role of documentation submission; LEED Interpretations; Addenda; awareness of different system versions [e.g., LEED Online]; components of LEED Online and Project Registration)
    H. Other rating systems (e.g., in general, what other rating systems are out there?)

2. **Integrative Strategies (8 Questions)**
    A. Integrative process (e.g., early analysis of the interrelationships among systems; systems thinking; charrettes)
    B. Integrative project team members (e.g., architect; engineer; landscape architect; civil engineer; contractor; facility manager, etc.)
    C. Standards that support LEED (e.g., breadth not depth of American Society of Heating, Refrigeration and Air-conditioning Engineers [ASHRAE]; Sheet Metal and Air Conditioning Contractors National Association [SMACNA] guidelines; Green Seal; ENERGY STAR®; HERs; Reference Standards listed in ACPs, etc.)

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3. **Location and Transportation (7 Questions)**
    A. Site selection (e.g., targeting sites in previously developed and brownfields/high- priority designation area; avoiding sensitive habitat; located in areas with existing infrastructure and nearby uses; reduction in parking footprint)
    B. Alternative transportation (e.g., type, access and quality; infrastructure and design)
4. **Sustainable Sites (7 Questions)**
    A. Site assessment (e.g., environmental assessment; human impact)
    B. Site design and development (e.g., construction activity pollution prevention; habitat conservation and restoration; exterior open space; rainwater management; exterior lighting; heat island reduction)
5. **Water Efficiency (9 Questions)**
    A. Outdoor water use (e.g., use of graywater/rainwater in irrigation; use of native and adaptive species)
    B. Indoor water use (e.g., concepts of low flow/waterless fixtures; water-efficient appliances; types and quality)
    C. Water performance management (e.g., measurement and monitoring)



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6. **Energy and Atmosphere (10 Questions)**
    A. Building loads (e.g., building components; space usage [private office, individual space, shared multi-occupant spaces])
    B. Energy efficiency (e.g., basic concepts of design; operational energy efficiency; commissioning; energy auditing)
    C. Alternative and renewable energy practices (e.g., demand response; renewable energy; green power; carbon offsets)
    D. Energy performance management (e.g., energy use measurement and monitoring; building automation controls/advanced energy metering; operations and management; benchmarking; ENERGY STAR)
    E. Environmental concerns (e.g., sources and energy resources; greenhouse gases; global warming potential; resource depletion; ozone depletion)
7. **Materials and Resources (9 Questions)**
    A. Reuse (e.g., building reuse; material reuse; interior reuse; furniture reuse)
    B. Life-cycle impacts (e.g., concept of life-cycle assessment; material attributes; human and ecological hea[illegible]esign for flexibility)
    C. Was[illegible] (e.g., construction and demolition; maintenance and renovation; operations and ongoing; waste management plan)
    D. Purchasing and declarations (e.g., purchasing policies and plans; environmental preferable purchasing (EPP); building product disclosure and optimization [i.e., raw materials sourcing, material ingredients, environmental product disclosure])



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8. **Indoor Environmental Quality (8 Questions)**
    A. Indoor air quality (e.g., ventilation levels; tobacco smoke control; management of and improvements to indoor air quality; low-emitting materials; green cleaning)
    B. Lighting (e.g., electric lighting quality; daylight)
    C. Sound (e.g., acoustics)
    D. Occupant comfort, health, and satisfaction (e.g., controllability of systems; thermal comfort design; quality of views: assessment/survey)
9. **Project Surroundings and Public Outreach (11 Questions)**
    A. Environmental impacts of the built environment (e.g., energy and resource use in conventional buildings; necessity of green buildings; environmental externalities; triple bottom line)
    B. Codes (e.g., relationship between LEED and codes [building, plumbing, electrical, mechanical, fire protection]; green building codes)
    C. Values of sustainable design (e.g., energy savings over time; healthier occupants; money-saving incentives; costs [hard costs, soft costs]; life cycle)
    D. Regional design (e.g., regional green design and construction measures as appropriate; regional emphasis should be placed in Sustainable Sites and Materials & Resources)



LEED GREEN ASSOCIATE EXAM OVERVIEW

- 100 multiple-choice questions delivered in a 2-hour period.
- Includes scored and unscored questions.
- Questions are randomly placed and candidates are not informed of their status.
- Unscored questions gather performance data for future exams.
- Exam is computer-based, with questions displayed on screen.
- Score ranges from 125 to 200, with 170 or higher required for passing.
- Exam score displayed at exam end and score report emailed post-exam session.



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