6 Step Study Plan for the LEED Green Associate Exam

Step 1: READ_ME_FIRST

This outline provides basic information to assist your understanding of how to begin studying for the LEED Green Associate exam: starting with the exam application process, selecting study materials, and then moving to brief descriptions for exam content such as, green building, USGBC, and LEED.

What would you think are the two most frequently asked questions by newcomers who consider sitting for the Green Associate exam? **What is the easiest way to get there and how long is this going to take me?**

Well, this isn’t a GPS system where you can simply plug in 2 coordinates and select the easiest or quickest path to the credential bin. Asking how long it will take to prepare for this exam is a question with many answers. What is your motivation for considering a LEED credential? A requirement of your employer, to enhance your resume for future employment or just a general overall interest in what this green thing is about? Or do you feel a need to gain knowledge in order to provide an intelligent counter-argument to green building and environmental stewardship? What is the extent of your experience in the design and construction industry? How familiar are you with green, sustainable terminology? How much time can you devote to quality studying?

Someone recently posted on the ARE forum they had studied for two weeks and passed the Green Associate and the BD+C specialty exams, while sitting for both simultaneously, and scored exceedingly well on each. And yet, for a variety of reasons, others require months to prepare for the Green Associate exam alone. So what does this mean? Nothing at all, as this is meaningless without knowing details such as the extent of the person’s experience, what materials they used to study, their study routine, and so on. For the average candidate, four weeks should be sufficient, it they have access to the proper materials and develop a proper study routine. Just beware whenever you ask advice for the fastest, easiest, most painless strategy to success, all too many will be more than happy to oblige you. If this credential is to have meaningful value, you must learn and understand. By whatever methods and time required, you should learn and then understand what you have learned. No trickery, no memorization, no trying to develop a complex matrix for determining the minimum number of randomly drawn, multiple choice, weighted questions you must answer correctly in order to pass. Learn and understand.

The LEED Green Associate exam requires a basic, non-technical understanding of green building, USGBC and the core concepts of sustainable strategies used in designing and constructing high performance green buildings. Aside from the fact the Green Associate exam is a requirement for advancing to any of the specialty exams, passing the Green Associate exam would be sufficient for professionals such as real estate agents and brokers, sales and manufacturer’s reps., attorneys, developer and contractor mid-level managers, and other professionals who have no need to know the technical details and processes necessary to design and build high performance green buildings. This degree of knowledge is generally left to professionals who make their living with green buildings, from inception thru birth, and even until end of life.

Step 2: Applying for the LEED Green Associate Exam

Beginning your study for the Green Associate exam will require you to collect reference and study materials appropriate for this exam. The LEED Green Associate Candidate Handbook, a free document available from the Green Building Certification Institute (GBCI), is the first reference material that should be read. All GBCI candidate handbooks are updated monthly and will lay out the details for successful exam application and registration, what requirements must be met in order to qualify for that exam, what sustainable areas need to be studied, and so on – for each exam type. Read this first to verify that you can qualify for the exam, and if not, what you can do in order to meet the qualification requirements.
LEED Green Associate Candidate Handbook

The LEED Green Associate Candidate Handbook consists of seven primary sections. Listed below are important items to focus on in each section:

1. **5 Things Every Candidate Should Know**
   a. Item number 1 is, perhaps, the most important piece of information, or warning, where you must take particular notice and keep in mind until the day you walk into the exam site; trust GBCI when they tell you if the name on your exam registration does not match exactly that on the required identification when checking in, you will not be permitted to test, forfeit your exam registration fee and be required to start the process over.

2. **Applying for Your Exam**
   a. Applying for an Exam: Straight forward set of directions here as this section walks you through the process of applying for the exam, starting with logging into My Credentials, and how to set-up this account if you don't have one; just follow the walk-thru instructions; you must first apply for the exam and receive authorization before you can register for the exam.
   b. Eligibility Requirements: To take the LEED Green Associate exam, you must have experience in the form of involvement on a LEED registered project, employment or previous employment in a sustainable field of work, or engagement in or completion of an education program that addresses green building principles; specific details are listed in explaining the different compliance paths available; only one of these criteria must be met; you must upload your supporting documentation during the application process, as GBCI verification is part of the authorization needed to go forward.
   c. Registering for an exam: Similar to applying for the exam in that you log into My Credentials and follow the instructions; first apply for the exam and receive authorization, then register for the exam when you have a better idea of how long it will take you to prepare; one positive aspect to registering is that it creates a date certain for you to be prepared.
   d. Understand what you are agreeing to when you receive your credential; read the Candidate Terms and Conditions, Disciplinary and Exam Appeals Policy and the Credential Maintenance Program (CMP); the CMP is a commitment you make for the lifetime of your credential.

3. **Preparing for Your Exam**
   a. Specifications: One of the two most important parts of this section; provides an outline description of the content areas for this exam.
   b. References: The second most important part of this section; the primary sources for the development of the LEED professional exams are the LEED Rating Systems, but the reference materials listed in this section provide additional sources used for exam content; the titles provide direct links to the sources and most are available as free downloads.
   c. Sample Questions: A few samples are given to provide a feel for the types and formatting of the exam questions.

4. **Scheduling for Your Exam**
   a. Straightforward information on scheduling, rescheduling, confirmation, cancellation, failure to appear.

5. **Pre-Exam Checklist**
   a. Are You Ready: A checklist of items to review one month and one week before your exam.
6. The Day of Your Exam
   a. Identification Requirements: Lists types of approved forms of ID required the day of your exam
   b. Identification Requirements: Not enough can be said about fully understanding what is required for compliance; it’s sad when you get calls from friends who were turned away at the door; registering under Mike Jones and providing ID as Michael Jones is cause for rejection (per the LEED Green Associate Candidate Handbook, February 2011 edition)
   c. The remaining parts to this section refer to computer based testing, test security, what to expect at the test center, test center regulations, grounds for dismissal at the test center

7. After your Exam
   a. Passing your exam: your credential, certificate and information on the Credential Maintenance Program (CMP)
   b. Failing your exam: details for retaking the exam
   c. Earning the LEED AP after the LEED Green Associate: if you earn one of the LEED specialty credentials, the LEED Green Associate credential will expire and be replaced with the appropriate AP credential
   d. Requirements for retesting, appealing exam content, test score confidentiality

8. Contact Information
   a. How to contact Prometric and Green Building Certification Institute

Now that you have read the LEED Green Associate Candidate Handbook, understood what you’ve read and decided to go forward, the next step, after verifying you can meet the eligibility requirement, is to apply for the LEED Green Associate exam and receive GBCI authorization, then begin the actual study process.

GBCI candidate handbooks:

http://www.gbci.org/main-nav/professional-credentials/resources/candidate-handbooks.aspx

step-by-step process: eligibility, application, registration, scheduling, preparation, exam day, after exam:

http://www.gbci.org/main-nav/professional-credentials/exam-guide/application/how-to.aspx

The following link is to a USGBC online course that will qualify you for the LEED Green Associate exam; it is only 3 pages, take a test at the end where you will need to get 8 of 10 right - but don’t worry - even if you fail you can try again until you get 8 right, at the end you get a certificate which you upload with your application - simple as that.

(h/t to ARE forum member swank)
https://www.usgbc.org/CourseCatalog/coursedetail.aspx?ID=9004028

Step 3: Selecting Your Study Materials

Selecting the appropriate study materials can be confusing, as everyone wants to be certain they’ve made the correct decisions. The types of study tools include study guides, online computer tests, flash cards, mp3 files, LEED study classes or study groups. USGBC provides a sufficient quantity of study materials and other tools (i.e. webcasts) specifically for the Green Associate exam. Additionally, there are excellent third party sources selling study materials, as well as others offering free resources.

At a minimum, what is recommended are the LEED Green Associate Candidate Handbook and associated reference materials from GBCI, a USGBC or third party LEED Green Associate Study Guide and a subscription to one of the third party sources that offer online test simulators. The best online tests do a good job replicating the actual exam experience, complete with nuances embedded in the actual exam questions. You learn a lot more than just the correct answers to questions.
A few comments about study materials and the exam: First, be careful and do not collect everything you can get your hands on. Too much data can be cause for confusion and mental overload. Second, try and understand the advice you hear or read concerning how good or bad this or that study material may be. People assimilate information and data differently. What worked well for one person may not be as effective for someone else. Consider what was it about a particular study guide that caused someone to have a positive or negative opinion? Do you prefer storytelling, or bulleted lists? Are you a visual person and respond more readily to images? Third, for each type of LEED exam (e.g.; Green Associate, BD+C, Homes, etc), questions are randomly selected to establish a number of exam sets. When someone reports their exam contained a lot of calculations, or questions about refrigerants, or whatever, the odds of you getting that exam set is pretty remote. The solution is to be well prepared to answer the 100 multiple choice questions within the 2 hours allotted.

Apply for the exam, then collect and review your study materials. After you’ve become somewhat familiar with these materials, you should be able to more accurately assess the amount of time you will need for exam preparation. When you feel comfortable that it will take 4 weeks, 4 months, or whatever, schedule your exam. Scheduling your exam will create a target date for you to put your house in order and develop a good study routine.

**Free Resources:**

The LEED section of the ARE forum offers advice and direction to aspiring LEED exam candidates [http://www.areforum.org/forums/index.php](http://www.areforum.org/forums/index.php)

Sean Canning’s website GreenLearner offers a free online exam simulator (ARE forum member Skies46) [http://www.greenlearner.com/](http://www.greenlearner.com/)

Allison Beer McKenzie’s website Building My Life Green offers free tests (ARE forum member beerae) [http://www.buildingmygreenlife.com/](http://www.buildingmygreenlife.com/)

Vani Bahl’s website Green Exam Guide offers many free study resources (ARE forum member vanibahl) [http://greenexamguide.com/](http://greenexamguide.com/)

**Step 4: Green Building**

The driving force behind green building today is the U.S. Green Building Council. Learning first about green building will help you better understand the underpinnings of USGBC, et al. and their structures.

The following list includes important aspects related to green building:

- **The argument for green building**
  - Conventional building methods should be generally regarded as unfriendly assaults on the environment, our natural resources and our quality of life and are not sustainable
  - Green building principles improves on conventional design and construction processes
  - Green building principles reduces the negative impact on the environment with respect to water & energy consumption, carbon dioxide emissions, raw material use, waste output

- **Green Building Costs**
  - Hard Costs
  - Soft Costs
  - Life Cycle Costs
• Green Building Benefits
  o Health and Community Benefits
  o Environmental Benefits
  o Economic Benefits
• The sustainable parts of green design
  o Sustainable Sites
  o Water Efficiency
  o Energy & Atmosphere
  o Materials & Resources
  o Indoor Environmental Quality
• Life Cycle Assessment and Life Cycle Cost:
  o Life Cycle Assessment (LCA) is a cradle-to-grave analysis that examines the building along with its materials and components
  o Life Cycle Cost (LCC) assesses the total cost of ownership, taking into account all costs related to design and construction, ownership, operations and the eventual disposal of a building and its parts
• Integrated Design Approach
  o Architects, engineers, contractors and other stakeholders traditionally work separately of each other, with minimal coordination and communication between the team members. In an integrated design approach, all stakeholders are brought into the project at the onset to discuss the project goals and requirements. Integrated design allows the stakeholders and design team to coordinate the design process so that each member is aware of all decisions made
• The Integrated Process
  o The project team players (stakeholders)
  o Timeline for design and construction phase activities
• The Building Program
  o Determining the Owner’s project requirements
  o Planning an environmental vision for the project
• Credit Interactions
  o An integrated project team working together can determine early how the decision of one team member can affect the performance of the work from other team members
  o Issues and conflicts are discovered during early design rather than during installation

Reference documents:
• Sustainable Building Technical Manual – Part II: 17 pages and an excellent complement to this section as well as the following section (USGBC)
• Cost of Green Revisited: although this is a 25 page document, for this section read only to page 12; the remainder is an excellent, credit-by-credit analysis that we can put to better use later

Step 5: U.S. Green Building Council

The command and control center for LEED professional accreditation and project certification is the U.S. Green Building Council (USGBC), and its associated support entities, the Green Building Certification Institute (GBCI) and the Leadership in Energy and Environmental Design (LEED) Rating Systems. The following outline lists the major players and the roles each contributes to the overall structure, policies and processes.
- **USGBC**
  - Develops LEED Green Building Rating Systems
  - Provides and develops LEED based education and research projects

- **GBCI**
  - Provides third party LEED professional credentials
  - Provides third party LEED project certification

- **LEED**
  - There are two (2) parts to the LEED environment
    - the _accreditation of professionals_ who possess knowledge in the field of sustainability
    - the _certification of sustainable projects_ as defined by the various LEED Rating Systems

**LEED Professional Accreditation**

- Tier I: LEED Green Associate who demonstrates a basic knowledge and skill in practicing green design, construction and development (LEED Green Associate)
- Tier II: LEED Accredited Professional with Specialty for those who have an extraordinary depth of knowledge in green building practices and specialization in a specific field (LEED AP BD+C, LEED AP ID+C, LEED AP O&M, LEED AP ND, LEED Homes)
- Tier III: reserved for the LEED AP Fellow, a LEED AP with specialty who has held the LEED AP credential for eight cumulative years and must document a total of at least 10 years of experience in the green building field (LEED Fellow)

**LEED Project Certification**

- **LEED Reference Guides**
  - LEED Reference Guide for Green Building Design and Construction
  - LEED Reference Guide for Green Interior Design and Construction
  - LEED Reference Guide for Green Building Operations and Maintenance
  - LEED Reference Guide for Green Neighborhood Development
  - LEED for Homes Reference Guide

- **LEED Rating Systems**
  - LEED for New Construction and Major Renovations (NC)
  - LEED for Existing Buildings: Operation and Maintenance (EB O+M)
  - LEED for Commercial Interiors (CI)
  - LEED for Core and Shell (CS)
  - LEED for Retail
  - LEED for Homes
  - LEED for Schools
  - LEED for Healthcare
  - LEED for Neighborhood Development (ND)

- **LEED Rating System Categories** (* indicates rating system specific category)
  - Sustainable Sites (SS)
  - Water Efficiency (WE)
  - Energy & Atmosphere (EA)
  - Materials & Resources (MR)
  - Indoor Environmental Quality (IEQ)
  - Innovation in Design (ID)/Innovation in Operations (IO)
  - Regional Priority (RP)
  - * Location and Linkages (LL); LEED for Homes
  - * Awareness and Education (AE); LEED for Homes
• LEED Rating System Category Structure
  o Each category is comprised of a series of mandatory prerequisites and optional credits
  o Each prerequisite and credit defines the intent and requirement of the prerequisite/credit (this information is available as a free download from USGBC and referred to as the Rating Systems, not to be confused with the Reference Guides) (USGBC issues quarterly addenda for both the Reference Guides and Rating Systems and it is important to note that in case of discrepancies, the Rating System will take precedent over the corresponding Reference Guide)
  o Each prerequisite and credit is comprised of 13 components (e.g.: related credits, referenced standards, exemplary points, definitions, etc.)
  o To achieve certification, every project must comply with each and every prerequisite and meet a minimum number of optional credits

• LEED Certification Levels
  o Certified (40 – 49 points)
  o Silver (50 – 59 points)
  o Gold (60 – 79 points)
  o Platinum (80+ points)

LEED Online
  o LEED Online is an online tool used to document and certify registered projects
  

Miscellaneous Items of Note

• Credit Interpretation Request (CIRs)
  o Occasionally during the process of analyzing prerequisite or credit compliance requirements, the Project Team may encounter instances where they are unclear whether their strategy for achieving the credit is appropriate. The project Credit Interpretation Request (CIR) and ruling process is designed to allow Project Teams to obtain technical and administrative guidance on how LEED requirements, including Minimum Program Requirements, Prerequisites, and Credits, pertain to their projects

• Minimum Program Requirements (MPRs)
  o Minimum Program Requirements (MPRs) are a set of 7 mandatory requirements that the project must comply with, similar to prerequisites, in order to achieve certification

• Credit Harmonization
  o Credits and prerequisites from all LEED 2009 commercial and institutional rating systems have been consolidated and aligned, allowing credits and prerequisites to be consistent across all LEED 2009 rating systems

• Credit Weightings
  o LEED 2009 credits are assigned point values based on their ability to impact various environmental and human health issues

• Carbon Overlay
  o Carbon overlay addresses global warming by establishing the project’s carbon footprint

• Regionalization
  o LEED 2009 has created the Regional Priority category that acknowledges the fact environmental priorities may differ between different geographical regions in the U.S.
• The Who and What of it
  o PEOPLE are **accredited**
  o BUILDINGS are **certified**
  o PRODUCTS are **neither accredited nor certified**
  o USGBC National membership is available only to **organizations, corporations and institutions**
  o USGBC Chapter membership is available only to **individuals**
  o It is LEED, not Leed nor Leeds nor anything but **LEED**

Reference documents:

• LEED 2009 New Construction and Major Renovations Rating System
• LEED 2009 for Operations & Maintenance Rating System
• LEED for Homes Rating System
• Guidance on Innovation & Design (ID) credits
• Credit Interpretation Rulings
• LEED 2009 Minimum Program Requirements
• LEED 2009 MPR Supplemental Guidance, v1
• Sustainable Building Technical Manual – Part II
• Green Office Guide: Integrating LEED Into Your Leasing Process, Section 2.4

Step 6: The Sustainable Categories

This last step focuses on sustainable categories, the structural elements for implementing the sustainable paths a project will take in order to achieve some level of LEED certification. As outlined in Step 5, every sustainable category formed by a LEED Rating System has a consistent structural framework. And, within this framework, each sustainable category has its own unique focus for addressing specific environmental concerns.

• Sustainable Sites (SS)
  o Reduce the impact of development on land consumption, ecosystems, natural resources and energy use
• Water Efficiency (WE)
  o Reduce the amount of potable water consumed in buildings
• Energy & Atmosphere (EA)
  o Improve energy performance, manage refrigerants and use of renewable energy
• Materials & Resources (MR)
  o Sustainable materials selection, waste disposal and waste reduction
• Indoor Environmental Quality (IEQ)
  o Improve indoor environmental quality; occupant health, safety and comfort; energy consumption; air change effectiveness; air contaminant management
• Aside from these 5 sustainable categories, LEED Rating Systems offer additional categories, such as: Innovation in Design (ID) that rewards a project for innovative or exemplary performance, having a LEED AP affiliated with the project; Regional Priority (RP) that recognizes regional differences
• With sustainable categories, learn and understand how each meets the three important tenets of green building: The Triple Bottom Line – Environmental Stewardship, Social responsibility and Economic Prosperity – also referred to as PPP - People, Planet and Profit
Reference documents:

- LEED 2009 New Construction and Major Renovations Rating System
- The Treatment by LEED of the Environmental Impact of HVAC Refrigerants
- Guide to Purchasing Green Power
- Cost of Green Revisited

Summary

Two important questions you are likely left with after reading this guideline: What should I study? and What should I study?

The first What should I study? asks how to determine, from the myriad of available study guides, which one? Well, all the major resources, including the guides from USGBC, have the necessary information and directions for passing the LEED Green Associate exam. If they don't offer specific information on a topic, they will direct you to the appropriate source if and when necessary. The fact is everyone finds issues with their decisions, but few fail their exam because of their selection of study materials. I generally recommend steering clear of the street corner barkers proclaiming their materials to be the best. Investigate a little, make your decision and get on with it.

The second What should I study? is somewhat more complex. It focuses around that imaginary line in the sand that represents the knowledge break between the Green Associate and the Specialty exams. Technically, every document the LEED Green Associate Candidate Handbook references is fair game for questions asked on the exam. Fortunately, most are quick reads and easily understood. A decent study guide and online test simulator will properly prepare any candidate.

Final Tips:

- If you use one of the online test simulators, be sure to select the option for reviewing all the answers, and not just the incorrect answers. Often we select correct answers, but for the wrong reasons.
- There has been a lot of discussion about trick questions. If you are prepared and know the information, there is no such thing as a trick question. Read the question carefully, reread the question and read it once again to make certain you understand what the question is asking. See those words such as not included – this is not trickery. The online simulators will train you for this.
- On the actual exam, many candidates report the first several questions seemed like Greek to them. Don’t panic, this will work itself out as you settle down.
- The exam allows you to mark questions where you are uncertain as to the correct answers. You will have ample opportunity to return to these marked questions later. Quickly go through the exam and answer the questions you are certain about and mark the others. As you progress through the exam, certain questions will trigger the brain to recall information that will help answer many of the marked questions.
- Most multiple choice questions contain answers that are obviously not correct. Remove these first to limit the field possibilities.

Good luck with your exam. If the time draws near and you begin to question your readiness, consider the fact that a majority who pass these exams report they felt they were not properly prepared on the eve of their exam - only to be surprised when they saw the high passing score they received.