



OFFICE FOR ASSESSMENT OF PROFESSIONAL
AND WORKPLACE LEARNING

ACADEMIC PROGRAM REVIEW
of
LEED GREEN ASSOCIATE
LEED AP BD+C
LEED AP O+M

GREEN BUILDING CERTIFICATE INSTITUTE (GBCI)

REVIEW DATE:
JANUARY 22, 2013

Effective Dates:
July 1, 2009 – January 2018

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The Green Building Certification Institute (GBCI) Organizational Profile

(GBCI) is a third-party organization that provides independent oversight of professional credentialing and project certification programs related to green building. GBCI is committed to ensuring precision in the design, development, and implementation of measurement processes for green building performance (through project certification) and green building practice (through professional credentials and certificates).

Established in 2008 to administer certifications and professional designations within the framework of the U.S. Green Building Council's LEED Green Building Rating Systems, GBCI continues to develop new programs and offer the marketplace validation that building certifications and professional designations have met specific, rigorous criteria.

LEED Professional Exams:

GBCI develops and administers the ANSI 17024 accredited LEED Professional Credential exams, which include the LEED Green Associate and LEED AP with specialty credentials, as well as the LEED for Homes Green Rater and LEED Project Reviewer professional certificates.

A LEED Professional Credential signifies leadership and active participation in the green building movement. A LEED Professional also contributes expertise to the design, construction, operations and maintenance of buildings and neighborhoods that save energy, use fewer resources, reduce pollution, and contribute to healthier environments for their occupants and the community.

With new jobs specifying the need for expertise in LEED, the LEED Professional Credential helps professionals stand out by increasing opportunity for employment, job stability and promotion, while underscoring their value to LEED project teams and sustainability-focused organizations.

All LEED Professional Credentials require ongoing credential maintenance through continuing education on two-year cycles.

There are two tiers in the LEED Professional Credentialing program:

Tier 1: LEED Green Associate

Tier 2: LEED AP with specialty

LEED AP with specialty:

The LEED AP with specialty credential affirms advanced knowledge in green building as well as expertise in a particular LEED rating system.

To be eligible for the LEED AP with specialty credential a professional must have experience working on a LEED-registered project within the past three years.

The LEED AP exam is divided into two parts. The first part is the LEED Green Associate exam, which demonstrates general knowledge of green building practices. The second part is a specialty exam based on one of the LEED Rating Systems. Each part of the exam consists of 100 randomly

delivered multiple-choice questions and must be completed within two hours of the exam appointment. The exam session should take approximately 4.5 hours total, or 2.5 hours for LEED Professionals. A passing score is 170 or higher on a scale of 125 to 200.

The specialties are:

- LEED AP Building Design + Construction
- LEED AP Homes
- LEED AP Interior Design + Construction
- LEED AP Neighborhood Development
- LEED AP Operations + Maintenance

Source of Official Student Records: *(Fill in student contact information at organization and/or documentation or certificate needed)*

For further information about the review, contact: Office for Assessment of Professional and Workplace Learning, Thomas Edison State College, 101 West State Street; Trenton, New Jersey 08608-1176, (609) 633-6271; apr@tesc.edu.

GREEN BUILDING CERTIFICATE INSTITUTE (GBCI)

LEED CERTIFICATIONS

JANUARY 22, 2013

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Certification Sheet

Name of Credential: LEED Green Associate

Credential Description: The LEED Green Associate credential denotes basic knowledge of green design, construction and operations. Professions that may be interested in the LEED Green Associate include real estate, law, planning, manufacturing, marketing, leasing, sales, education and those new to green building.

Effective Dates: July 1, 2009 – January 2018

Learning Outcomes: Upon successful completion of this credential, the student will be able to:

- Demonstrate a fundamental knowledge of green buildings and their importance.
- Demonstrate knowledge of the overall green building design process, the role and practice of green building certification, and the part a practitioner plays in meeting green building job requirements.
- Recognize green building strategies on projects within major environmental categories (site/water, energy, material resources, and indoor air quality/health).
- Demonstrate an understanding of best green practices to projects.

Major topics:

- Synergistic Opportunities and LEED Application Process
- Project Site Factors
- Water Management
- Project Systems and Energy Impacts
- Acquisition, Installation, and Management of Project Materials
- Stakeholder Involvement in Innovation
- Project Surroundings and Public Outreach

Assessment criteria: Passing score on the LEED Green Associate accreditation examination. The LEED Green Associate exam is a statistically valid and reliable test instrument that is proven to measure the applicant's knowledge, skills, and abilities.

Credit Recommendation: In the upper division baccalaureate degree category, 3 credits in Sustainable Principles and Practices. To be eligible to receive credit, students must submit documentation of currency of this credential, based on the timeframe of the effective dates established by this Academic Program Review.

Credit Rationale: The exam elements reflect concepts taught in a 300 level course covering the fundamentals of green building design and practices based upon the LEED rating system.

Certification Sheet

Name of Credential: AP Operations and Maintenance

Credential Description: The LEED AP O+M credential distinguishes professionals implementing sustainable practices, improving performance, heightening efficiency and reducing environmental impact in existing buildings through enhanced operations and maintenance. The specialty denotes practical knowledge in the LEED for Existing Buildings: Operations and Maintenance rating system.

Effective Date: July 1, 2009 – January 2018

Learning Outcomes: Upon successful completion of this credential, the student will be able to:

- Demonstrate knowledge required to implement sustainable practices.
- Demonstrate knowledge required to benchmark performance and re-examine baselines for a building.
- Demonstrate knowledge required to heighten efficiency and reduce environmental impact in existing buildings through enhanced operations and maintenance processes.
- Establish sustainable policies and procedures for ongoing operations and maintenance.

Major Topics:

- Project Site Factors including green management and climate conditions
- Water Management including chemical management and water treatment
- Project Systems and Energy Impacts including building components, on-site renewable energy, third-party relationships, energy performance measurement and specialized equipment power needs
- Acquisition, Installation, and Management of Project Materials including building reuse, rapidly renewable materials for facilities alterations and additions, and chemical management policy and audit
- Improvements to the Indoor Environment including minimum ventilation requirement, air quality ventilation, lighting controls, and thermal controls
- Stakeholder Involvement in innovation
- Project Surroundings and Public Outreach

Assessment criteria: A passing score on the LEED AP exam which is a statistically valid and reliable test instrument that is proven to measure the applicant's knowledge skills and abilities.

Credit Recommendation: In the upper division baccalaureate degree category, 5 credits in Sustainable Building Technologies. To be eligible to receive credit, students must submit documentation of currency of this credential, based on the timeframe of the effective dates established by this Academic Program Review.

Credit Rationale: The successful completion of this AP includes actual real project experience with a LEED registered project. The required on-site LEED project participation is in essence a lab/project/practicum (usually offered for 2 credits at other institutions).

The materials and in-depth level of topics are approximately two times that of the Green Associate exam. The vast amount of topics covered on the specialty exams are found in several traditional courses. Exam elements reflect concepts taught in a 300 level course with the project covering sustainable building technologies from an operations and maintenance point of view.

Certification Sheet

Name of Credential: AP Building Design and Construction

Credential Description: The LEED AP BD+C credential suits professionals with expertise in the design and construction phases of new buildings and major renovations of green buildings serving the commercial, residential, education and healthcare sectors. The specialty denotes practical knowledge in the LEED for New Construction, LEED for Schools and LEED for Core and Shell rating systems.

Effective Date: July 1, 2009 – January 2018

Learning Outcomes: Upon successful completion of this accreditation, the student will be able to:

- Demonstrate knowledge required to facilitate the implementation of sustainable practices in new construction.
- Demonstrate knowledge required to maximize efficiency and minimize environmental impact of new buildings.
- Demonstrate an ability to facilitate the implementation of green building strategies on projects within major environmental categories (site/water, energy, material resources, and indoor air quality/health)

Major Topics:

- Project Site Factors including selection and climate conditions
- Water Management including storm water and irrigation
- Project Systems and Energy Impacts including building components, energy performance measurement, energy usage and tradeoffs
- Acquisition, Installation, and Management of Project Materials including building reuse and material acquisition
- Improvements to the Indoor Environment including ventilation, air quality, chemical and pollutant controls, thermal controls
- Stakeholder Involvement including zoning, transit and parking
- Project Surroundings and Public Outreach

Assessment criteria: Passing score on the LEED AP exam which is a statistically valid and reliable test instrument that is proven to measure the applicant's knowledge, skills, and abilities.

Credit Recommendation: In the upper division baccalaureate degree category, 5 credits in Green Building Design and Construction. To be eligible to receive credit, students must submit documentation of currency of this credential, based on the timeframe of the effective dates established by this Academic Program Review.

Credit Rationale: The successful completion of this AP includes actual real project experience with a LEED registered project. The required on-site LEED project participation is in essence a lab/project/practicum (usually offered for 2 credits at other institutions).

The materials and in-depth level of topics are approximately two times that of the Green Associate exam. The vast amount of topics covered on the specialty exams are found in several traditional courses. Exam elements reflect concepts taught in a 300 level course with the project covering sustainable building technologies from a building and construction point of view.

Review Summary:

The team includes the following comments based on their review of these three certifications:

To take the LEED AP exams, an applicant must have previous experience, within three years of the application submittal date, on a LEED-registered or certified project. This work experience must be documented through LEED Online or in the form of an attestation letter from a supervisor, client, or project manager and must describe involvement on the project as a consultant, public or private sector personnel who review projects pursuing LEED certification as part of an approval process, contracted worker, member of the LEED Project Team, LEED for Homes Provider, LEED Reviewer, LEED for Homes Green Rater, or staff member of a Certifying Body.