



Clemson University
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Education & Training Plan **LEED Green Associate (GA) Certification Program with Externship**

Student Full Name: _____

Start Date: _____ End Date: _____

Program includes National Certification & an Externship Opportunity
Mentor Supported

Clemson University Program with Externship

Course Code: CLEM-B-LGA
Program Duration: 6 Months
Course Contact Hours: 375
Student Tuition: \$3,500.00

LEED Green Associate (GA)

In this program, Learners will be introduced to the components of building construction. This course will examine the five types of NFPA classifications for building construction. Loads, structural components, and how fire and other emergencies impact building design and construction will be explored. The components of building systems, their effects on building design and construction, and how structures act under fire and other emergency situations will be examined as well.

LEED Green Associate (GA) Program

This self-paced course introduces key concepts and terms to prepare learners to earn their Leadership in Energy and Environmental Design (LEED®) Green Associate v4™ accreditation. The course is divided into modules that explain LEED® process, LEED® certification, and the knowledge domains associated with the seven LEED® rating systems, in a simple and straightforward way that can be quickly and easily understood.

Throughout the course, comprehension and understanding of important topics will be tested through challenging exercises and interactive games. Quizzes and tests will also be employed to ensure that learners have a clear grasp of the critical details they'll need to know as LEED Green Associates™.

Education and National Certifications

- Students should have or be pursuing a high school diploma or GED.
- National Certification exam that is available to students who successfully complete this program:
 - **U.S. Green Building Council (USGBC) LEED® Green Associate (GA)**

Program Objectives

- Explain the importance of building construction as it relates to firefighter safety
- Analyze the properties of construction materials
- Analyze parts of a building plan
- Distinguish buildings by NFPA Classification
- Analyze building systems contained in building structures
- Analyze the mechanisms for building collapse
- Analyze the effect of fire loads and behavior on building structure fires
- Explain special considerations for fire safety in building construction
- Analyze green technology in building construction
- Understand the structure and requirements of the LEED Green Associate™ Exam
- Explain and apply the key concepts found in the LEED® rating systems
- Differentiate green building practices and their associated environmental, economic, and social benefits
- Begin your preparation to earn your LEED Green Associate™ accreditation with confidence

National Certification

Students who complete the Clemson University LEED Green Associate (GA) program will be prepared to sit for the U.S. Green Building Council (USGBC) LEED® Green Associate (GA) national certification exam(s). In order to work as a LEED Green Associate (GA), many states nationwide are requiring that learners achieve national certification prior to working in that state. Students who complete this program are encouraged to complete the practical/clinical externship option with their program. This comprehensive program is designed to prepare students to sit for U.S. Green Building Council (USGBC) LEED® Green Associate (GA) exam(s). Students who complete this program can and do sit for the U.S. Green Building Council (USGBC) LEED® Green Associate (GA) national certification exam(s) and are qualified, eligible and prepared to do so.

Externship / Hands on Training / Practicum

Although not a requirement, once students complete the program, they have the ability to participate in an externship and/or hands on practicum so as to practice the skills necessary to perform the job requirements of a professional in this field. Students will be assisted with completing a resume and/or other requirements necessary to work in this field. All students who complete this program are eligible to participate in an externship and will be placed with a participating organization near their location. The institution works with national organizations and has the ability to place students in externship opportunities nationwide.

Clemson University contact: If students have any questions regarding this program including national certification and externships, they should call **Salley Ouellette of Clemson University at | (864) 656-2200** or via email at palmer4@clemson.edu

Note : No refunds can be issued after the start date published in your Financial Award document.



About Clemson University!

Clemson Online, a unit reporting directly to the Provost, works closely with leadership teams across the University to develop, market, and deliver top-quality courses and programs in blended and online formats. The office provides vision, leadership, coordination, and expertise in support of faculty design, delivery, and evaluation of technology-enhanced, blended, and fully online courses and instructional materials. Dynamic, transformative, and unique eLearning opportunities characterize Clemson's approach to online teaching and learning.

Our Mission: Clemson Online provides strategic leadership for online education, emphasizing innovative teaching and superior learning outcomes to maximize student success in 21st-century academic and professional contexts.

Our Vision: Clemson Online will define the public web-grant university through measurable achievements in online education, research, and service. The office is committed to pursuing strategic opportunities, providing supportive resources, promoting superior educational quality, and ensuring faculty involvement and responsibility in shaping Clemson's online future.



Clemson University and Pearson Education

Clemson University's eLearning programs were developed in partnership with Pearson Education to produce the highest quality, best-in-class content and delivery necessary to enhance the overall student learning experience, boost understanding and ensure retention. Pearson Education is the premier content and learning company in North America offering solutions to the higher education and career training divisions of colleges and universities across the country aimed at driving quality education programs to ensure student success. Please visit us at www.pearson.com.

About Pearson Education

Welcome to Pearson. We have a simple mission: to help people make more of their lives through learning. We are the world's leading learning company, with 40,000 employees in more than 80 countries helping people of all ages to make measurable progress in their lives. We provide a range of education products and services to institutions, governments and direct to individual learners, that help people everywhere aim higher and fulfil their true potential. Our commitment to them requires a holistic approach to education. It begins by using research to understand what sort of learning works best, it continues by bringing together people and organizations to develop ideas, and it comes back round by measuring the outcomes of our products.

LEED Green Associate (GA) Program Detailed Student Objectives:

INTRODUCTION TO LEED PROCESS

- Explain the impact of the built environment.
- Summarize the intent of impact categories.
- Discuss the difference in costs between green building and conventional construction.
- Differentiate between life-cycle assessment and life-cycle costing.
- Define what is meant by a triple bottom line.
- Describe the concept of regenerative building.
- Compare integrative versus iterative processes.
- Explain feedback loops and open versus closed systems.

US GREEN BUILDING COUNCIL (USGBC) & LEED

- Discuss how LEED® was developed.
- Describe LEED® structure.
- Differentiate between the various LEED® professional credentials.
- Explain the scope of LEED® ratings.
- Outline the project certification process.
- Summarize LEED® credits and Minimum Program Requirements.

LOCATION & TRANSPORTATION (LT)

- Discuss the intent of the Location & Transportation (LT) Category
- Explain the connection between infill development, walkability, and greenhouse gas reduction
- Identify various modes of alternative transportation
- Summarize the strategies utilized to promote smart growth
- Describe the relationship between site selection and various diverse uses

SUSTAINABLE SITE (SS)

- Discuss the intent of the Sustainable Sites (SS) Category
- Summarize rainwater management strategies
- Describe the heat island effect and various strategies utilized to reduce their impact
- Explain light pollution and the negative effects it has on the environment
- Discuss the importance of minimizing construction's impact on the surrounding environment
- Identify various site assessment and design strategies

WATER EFFICIENCY (WE)

- Discuss the intent of the Water Efficiency (WE) Category
- Differentiate different strategies to address water efficiency
- Explain the LEED® calculations for both indoor and outdoor water use
- Summarize how full-time equivalent (FTE) is used to calculate water usage
- Define the EPA Act of 1992 with regard to baseline water consumption
- Identify strategies used to achieve reduced levels of water consumption on a project level

ENERGY & ATMOSPHERE (EA)

- Discuss the intent of the Energy & Atmosphere (EA) Category
- Explore energy demand reduction strategies
- Describe the purpose of energy efficiency as it relates to LEED®
- Gain a general understanding of energy efficiency strategies
- Explain how fossil fuels produce the greenhouse gas carbon dioxide and how to install alternative energy production
- Evaluate the impact of refrigerants and how to employ refrigerant trade-off and refrigeration elimination strategies
- Discuss green power, renewable energy certificates, green e-certification programs, and carbon offsets

MATERIALS & RESOURCES (MR)

- Discuss the intent of the Materials & Resources (MR) Category
- Summarize the environmental impact of a product's life cycle
- Describe the role that Environmental Product Declarations (EPDs) have in the sourcing of environmentally preferable materials and products
- Identify strategies that can be used to source raw materials in an environmentally friendly and sustainable way
- Outline the importance of the use of environmentally preferable materials in green design
- Explain waste diversion and how it relates to the development of a waste management plan

INDOOR ENVIRONMENTAL QUALITY (EQ)

- Discuss the intent of the Indoor Environmental Quality (EQ) Category
- Summarize the strategies for improving the health and comfort of building occupants
- Identify the various environmental factors that impact indoor air quality
- Define volatile organic compounds (VOCs) and the testing methods used to determine VOC emissions levels
- Explain the strategies aimed at minimizing the exposure of building occupants to environmental tobacco smoke

Innovation (in) & regional priority (rp)

- Discuss the intents of the Innovation (IN) and Regional Priority (RP) Categories
- Explain what is meant by exemplary performance
- Describe the rationale behind the Regional Priority credit category
- Outline the strategies that may be used to earn Innovation credit points
- Identify how regions are determined in the Regional Priority (RP) credit category

Note: This program can be completed in 6 months. However, students will have online access to this program for a 24-month period.

MICROSOFT OFFICE

- Module Use an integrated software package, specifically the applications included in the Microsoft Office suite
- Demonstrate marketable skills for enhanced employment opportunities
- Describe proper computer techniques for designing and producing various types of documents
- Demonstrate the common commands & techniques used in Windows desktop
- List the meaning of basic PC acronyms like MHz, MB, KB, HD and RAM
- Use WordPad and MSWord to create various types of documents
- Create headings and titles with Word Art
- Create and format spreadsheets, including the use of mathematical formulas
- Demonstrate a working knowledge of computer database functions, including putting, processing, querying and outputting data
- Define computer terminology in definition matching quizzes
- Use the Windows Paint program to alter graphics
- Use a presentation application to create a presentation with both text and graphics
- Copy data from one MS Office application to another application in the suite
- Use e-mail and the Internet to send Word and Excel file attachments
- Demonstrate how to use the Windows Taskbar and Windows Tooltips
- Explain how copyright laws pertain to data and graphics posted on the Internet
- Take the college computer competency test after course completion
- Follow oral and written directions and complete assignments when working under time limitations

Note: Although the Microsoft Office Module is not required to successfully complete this program, students interested in pursuing free Microsoft MOS certification may want to consider completing this Microsoft Office Module at no additional cost.

System Requirements:

Windows Users:

- Windows 8, 7, XP or Vista
- 56K modem or higher
- Soundcard & Speakers
- Firefox, Chrome or Microsoft Internet Explorer

Mac OS User:

- Mac OS X or higher (in classic mode)
- 56K modem or higher
- Soundcard & Speakers
- Apple Safari

iPad Users:

- Due to Flash limitations, eLearning programs are NOT compatible with iPads

Screen Resolution:

- We recommend setting your screen resolution to 1024 x 768 pixels.

Browser Requirements:

- System will support the two latest releases of each browser. When using older versions of a browser, users risk running into problems with the course software.
- Windows Users: Mozilla Firefox, Google Chrome, Microsoft Internet Explorer
- Mac OS Users: Safari, Google Chrome, Mozilla Firefox

Suggested Plug-ins:

- Flash Player
- Real Player
- Adobe Reader
- Java