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# Overview

## Course Description

Welcome to *Introduction to Green Buildings: Principles & Concepts.* This course is intended to give real property appraisers a firm foundation in green building principles and methods for this emerging building type. Green building concepts apply to commercial and residential property types.

According to Dodge Data & Analytics Smart Market Brief 2020[1]:

- One-third or more of single family builders (33%) and multifamily builders/ remodelers (35%) report doing 50% or more of their projects green.
- 42% of single-family builders and 31% of multifamily builders/remodelers report doing no green building at all by the definition above.

The two facts above show that while there is some green construction in the new residential market, there is also still a notable opportunity to increase future engagement. Only 17% of single-family remodelers do more than half of their projects green, and 50% of remodelers did not do any green projects in 2018. This low engagement may be in part due to the restrictions of the definition, which may require green activities beyond the scope of some renovation projects.

| Top 10 States for LEED Green Building in 2019[2] | | |
|---|---|---|
| **Ranking** | **State** | **Gross Sq. Ft. per Capita, Certified** |
| 1 | Colorado | 4.76 |
| 2 | Illinois | 3.85 |
| 3 | New York | 3.76 |
| 4 | Massachusetts | 3.74 |
| 5 | Hawaii | 3.00 |
| 6 | Maryland | 2.64 |
| 7 | Virginia | 2.50 |
| 8 | Minnesota | 2.40 |
| 9 | Oregon | 2.30 |
| 10 | California | 2.17 |
| If Washington, DC were a state, it would lead with 52.86 gross square feet per capita, certified. | | |

1. https://www.nahb.org/news-and-economics/industry-news/press-releases/2020/01/High-Performance-Building-Practices-Prevalent-in-the-Residential-Home-Building-Market
2. https://www.cpexecutive.com/post/top-10-states-for-leed-certification-2019/

As a result of growth in the industry, appraisers are being asked more often to appraise green buildings. But what is significant about these buildings, and how do they differ from conventional buildings? The answers to these questions form the basis of this course.

The class begins with a discussion of the principles of green building, which are covered in detail before moving into the particular construction methods and materials used in them. This course structure ensures that appraisers will be able to understand the underlying green building concepts as well as the construction methods and materials they may encounter in the field.

Next, the course provides an overview of green building certification programs and introduces the subject of reporting appraisals of green buildings. It then examines how the principles of green building apply to highest and best use analysis. The final portions of the course address the three approaches to value in the context of the principles and elements of green building. At the end of the course, participants should have a firm understanding of the elements of green buildings as well as how they differ from conventional buildings and should be able to identify the principal certification programs.

The field of green building is vast, and it is impossible to cover all of it in any one course. For this reason, the end of the course is the jumping off point for further coursework in residential and general (commercial) appraisal methods.

**Note.** *Introduction to Green Buildings: Principles & Concepts* is approved by GBCI for 7.5 CE hours.

## Professional Development Program

This course is one of four courses that make up the Appraisal Institute's Valuation of Sustainable Buildings Professional Development Program. The other courses include *Case Studies in Appraising Green Residential Buildings, Residential and Commercial Valuation of Solar,* and *Case Studies in Appraising Green Commercial Buildings*. The Valuation of Sustainable Buildings Professional Development Program has a residential path and a commercial path. For more information, please see www.appraisalinstitute.org/education/your-career/professional-development-programs

## Learning Enhancements

The course has been designed with a variety of elements to enhance your learning experience.

- ***Preview.*** To give you a taste of what is to come, each part begins with a preview page, which includes a brief overview of the content, learning objectives to consider as you move through the content, and learning tips that will assist you in understanding the information you're about to cover.

- ***Learning Objectives.*** Each learning objective covers information required for understanding the concepts in the course. Look them over before the part begins so that you have a frame of reference as you move through the material. At the end of each part, reread the objectives. Are you able to do what is stated? If not, this is the time to ask your instructor for help or review the concepts that you do not understand.
- ***Examples & Discussion Questions.*** To supplement the discussions, we've included examples and discussion questions to help you apply what you are learning.
- ***Fill-in-the-Blanks.*** When you write something down, you are more apt to remember it. The course handbook includes discussion questions that ask you to write down your responses before proceeding to an open discussion with others in the class.
- ***Discussion.*** This course provides opportunities to learn through discussion with other professionals. Green building is an emerging field, and we are not all at the same level of understanding, so please take this opportunity to engage with your peers in order to get the most out of the course.
- ***Review.*** Each part concludes with a review, which includes the learning objectives and key terms and concepts that have been covered.
- ***Review Quizzes.*** Quizzes are included at key points in the course. The multiple-choice questions are similar to the types of questions you might find on the exam. Answering the fill-in-the-blank and multiple-choice questions will help you assess whether or not you really know the information that was covered.
- ***Green Resources.*** Tap a variety of online green resources from our website at www.appraisalinstitute.org/education/education-resources/green-building-resources and click on *More Green Resources* under Downloads.

  Topics are expanded regularly and include legislation, national and state government sites and programs, databases, design, and solar energy. This free benefit is available only to class participants: Appraisal Institute Designated members, Candidates for Designation, Practicing Affiliates, and Affiliates receive indefinite access; all other class participants are granted two-year admittance.

  A Green Building Registry exists but has limited data in many markets. It is still worth visiting at https://us.greenbuildingregistry.com/ to research certified homes in your market area.

## Classroom Guidelines

To make the course a positive experience for everyone attending, we have some guidelines for your consideration:

- 100% attendance is required. No exceptions.
- Limit use of laptops to classroom projects.

- Communicate with business associates during break time instead of class time.
- Put away reading materials such as newspapers and books that are not used in class.
- Silence cell phones and other communication devices.
- Use recording devices only if prior permission has been granted.
- Refrain from ongoing conversations with those seated near you and other distracting behavior.

## General Information

- ***Calculators.*** A calculator is not required for the course or the exam. **Important note.** Cellular phones, tablets, iPads, and other devices that can store data or connect to the Internet are ***NOT*** permitted during the exam. In addition, all watches, wallets, bags, and purses must be removed and stored out of reach prior to taking the exam.
- ***Breaks.*** There will be two 10-minute breaks during the morning session and two 10-minute breaks during the afternoon session unless noted otherwise by the course sponsor. The lunch break is one hour.
- ***Attendance sheets*** will be distributed during class to verify your attendance during the morning and afternoon sessions.
- ***Certificates of completion*** may be downloaded after completion of the course, and attendance during the entire course is required.

## Recommended Texts

- *The Appraisal of Real Estate*, 15th ed. Chicago: Appraisal Institute, 2020.
- *The Dictionary of Real Estate Appraisal*, 6th ed. Chicago: Appraisal Institute, 2015.
- *Appraising Residential Properties*, 4th ed. Chicago: Appraisal Institute, 2007.
- The Green Guide for Appraisers—available for free download at: www.appraiserresearch.org/research-results/green-guide.html
- Simmons, Alan F., SRPA, LEED® AP, *An Introduction to Green Homes*. Chicago: Appraisal Institute, 2010.
- Adomatis, Sandra K., SRA, LEED® Green Associate, *Residential Green Valuation Tools*. Chicago: Appraisal Institute, 2015.
- Runde, Timothy P., MAI, LEED® AP, and Thoyre, Stacey L., WELL AP, *The Valuation of Green Commercial Real Estate*. Chicago: Appraisal Institute, 2017.

## USPAP References in This Course

All references to the Uniform Standards of Professional Appraisal Practice (USPAP) are taken from the 2020–2021 edition (Washington, D.C.: The Appraisal Foundation).