

Certificate of Achievement: Sustainable Design and Development

Sustainably designed (Green) buildings continue to be the fastest-growing sector of the construction industry in the United States. This growth can be attributed, in part, to third-party voluntary certification systems such as LEED (Leadership in Energy and Environmental Design), which have gained tremendous momentum over the past decade. Similarly, the California Green Building Code (CALGreen), first adopted statewide in 2009, now mandates that a significant portion of commercial and residential construction in California be designed and constructed to meet a new range of sustainable and energy saving measures. In addition, post occupancy energy consumption mandated reviews are now required. Updated versions of the CALGreen code will be adopted by the state on a three year cycle (<http://www.bsc.ca.gov/Home/CALGreen.aspx>).

The design and construction of Green Buildings address the following environmental issues:

- Climate Change
- Resource Depletion
- Water Consumption
- Degradation of ecosystems/habitat
- Indoor Environmental Quality
- Occupant Comfort and Productivity

As a result of the rapidly growing market for green building sector certifications and code compliance documentation, educational resources must adapt to meet the needs of the marketplace and to keep pace with these new sustainable technologies and advancements.

This certificate provides training related to both CalGreen and LEED Certification, thus preparing students to sit for the LEED Green Associate Examination (LEED GA)

Certificate Student Learning Outcome:

Students will be able to demonstrate the knowledge and skills required to work in the green building industry.

Program Requirements:

Units Required: 18.5

	Units:
ARCHT-085 Introduction to the LEED Rating System	0.5
ARCHT-086 Project Site Factors	0.5
ARCHT-087 Sustainable Materials and Indoor Environmental Quality	0.5
ARCHT-088 Innovation in Design and Regional Priorities	0.5
ARCHT-089 Green Building Economics	0.5
ARCHT-090 LEED Online Documentation and Processing	0.5
ARCHT-091 Green Building Control Systems and Resource Efficiency	1.0
ARCHT-095 LEED Green Associate (GA) Test Preparation	0.5
ARCHT-200A Sustainable Development and Environmental Design	3.0

Plus a minimum of eleven units from the following courses:

ARCHT-110 Architectural Drafting	3.0
ARCHT-140 Materials and Methods of Construction	3.0
ARCHT-160 2-D CAD for Architecture and Interior Design	3.0
ARCHT-180 Codes and Zoning Regulations	3.0
ARCHT-200B Design III - Environmental Design Lab	3.0

CONST-102	Construction Management Principles	3.0
CONST-103	Blue Print Reading for Construction	3.0
CONST-105	Construction Estimating Principles	3.0
WE-186ID	Cooperative Work Experience Education Interior Design	1.0 - 4.0
ID-111	Kitchen and Bath Design	3.0
ID-113	Interior Design Materials and Specifications	3.0
SPAN-150	Beginning Conversational Spanish	3.0
WATER-120	Introduction to Water Systems Technology	3.0
WATER-132	Water Supply	3.0
WATER-135	Water Quality	3.0