



SUSTAINABILITY AND THE BUILT ENVIRONMENT

ONLINE LEARNING

Integrated design for sustainable living

UC Davis Extension's online *Sustainability and the Built Environment Certificate Program* expands upon the highly successful *Green Building and Sustainable Design* classroom program. This certificate offers a comprehensive curriculum on how to plan, design, construct and manage communities from a more sustainable perspective. Learn about the latest planning approaches and policy/regulatory requirements; green architecture, sustainable site design and landscapes; renewable energy and energy efficiency; sustainable water resources management; green infrastructure; and the skills necessary to integrate sustainable design principles into long-range visions and the day-to-day development and management of the built environment.

Gain practical knowledge that matters

- Examine principles of sustainable communities, how to measure them, and how to incorporate these ideas into community plans, neighborhood designs, site, building and landscape plans, climate action plans and more
- Stay apprised of the latest sustainable technologies and how to incorporate them into site design, building construction, landscapes and infrastructure
- Discover new regulations, polices and requirements driving sustainable communities today
- Prepare for LEED accreditation and related "green" certifications
- Learn to apply specific skills, techniques, models and methods to your plan or project immediately with hands-on design and analytical exercises, interactive webinars, online "studios," and personalized evaluation sessions
- Learn conveniently from your home or office

Designed for professionals like you

This certificate is designed for working professionals in land use planning, environmental and energy policy, architecture, landscape architecture, engineering, transportation, administration, business, consulting, law, construction and development. It is also applicable to any professional requiring skill and knowledge in sustainability.

For more information

For more information about the *Sustainability and the Built Environment Certificate Program* or open enrollment courses, please call (800) 752-0881, email extension@ucdavis.edu or visit our website.

www.extension.ucdavis.edu/design



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Course descriptions and schedule are on the other side.

UC DAVIS
EXTENSION
LAND USE AND
NATURAL RESOURCES



CONTINUING AND PROFESSIONAL EDUCATION

The Sustainability and the Built Environment Certificate Program is comprised of eight required courses.



Sustainability in the Built Environment: An Overview

1 quarter units academic credit, X421.16.

This overview of sustainability examines the built environment, from the economic, environmental and social-equity development perspectives. Learn how researchers and analysts define sustainability and how they measure and track progress. Explore historical precursors of the current sustainability movement, and how it translates into planning, engineering, architecture, landscape architecture, construction and other fields. Examine planning, design and building problems holistically, and learn about life-cycle analyses. Analyze case studies and specific technologies.

Sustainable Planning, Environmental Site Design and Development

2 quarter units academic credit, X421.2.

Learn about fundamental planning issues and sustainability processes as they apply to community planning and design situations. Discover how to identify key challenges when incorporating sustainability into planning strategies, policies and site design, and examine technical and environmental factors of site design. Practice site design methods with high-level professional critique.

Sustainable Water Resources Management in Site Design and Landscaping

2 quarter units academic credit, X421.3.

Incorporate a sustainable water resources approach into urban development and its related infrastructure at the planning, design and construction stages. Explore water use/demand, water conservation, water quality and wastewater treatment, use of recycled water and storm water drainage as they relate to the planning and design of urban communities and project sites. Learn to apply sustainability principles to natural or impacted sites, and gain a fundamental understanding of water resources policy issues and hydrologic processes as they apply to community design situations. Practice these skills including sustainable landscape design.

Green Architecture

2 quarter units academic credit, X421.4.

This course explores the issues, challenges and opportunities associated with green building. Examine innovative residential, commercial, industrial, mixed-use, and low- and high-density specialty buildings, and evaluate the micro- and macro-economic issues associated with green buildings. Focus on the holistic, large geometric aspects of green design, and discuss how comprehensive building design can respond to the needs of occupants and environmental circumstances. Look at specific building technologies and how to use them.

Green Building Materials and Construction Methods

2 quarter units academic credit, X421.5.

Learn how to implement green building practices into your home and business by utilizing materials and techniques that promote healthy, durable and environmentally responsible construction. Discover the latest and best green construction methods that are changing the landscape of the building industry, and examine existing sustainable construction methods in relation to their energy and environmental impacts and benefits.

Building Efficiencies: Low Carbon and Renewable Energies

2 quarter units academic credit, X421.17.

Examine the energy issue from the macro perspective of the built environment to the micro approach of how heat flows throughout a building. Using the “whole building” perspective, discover some of the natural and mechanical means of heating, cooling and ventilation for improved indoor air quality and cost savings. Learn to analyze energy use as an effective strategy for promoting energy conservation in the built environment.

LEED Building Certification

2 quarter units academic credit, X421.8.

Gain an in-depth understanding of the new LEED BD&C rating systems, the process to document and obtain certification and prepare to take accreditation exams. Learn the process of registering, documenting and certifying LEED BD&C projects. Review case studies, local project examples and tour at least one local LEED-certified building.

The Business of Sustainability

2 quarter units academic credit, X421.18.

Acquire the tools and inspiration to create a culture of sustainability in your organization and community. Explore ways to improve resource efficiency and build broad public and institutional support by focusing on integrated approaches to sustainability planning within cities and businesses and the need for public/private partnerships. Discussions include innovative technologies and what to expect in the future, the ever-changing world of sustainability and leading international practices.

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Take as individual courses or as part of the Sustainability and the Built Environment Certificate Program.

SCHEDULE OF COURSES	UNITS
REQUIRED COURSES (15 units)	
Sustainability in the Built Environment: An Overview	1
Sustainable Planning, Environmental Site Design and Development	2
Sustainable Water Resources Management in Site Design and Landscaping	2
Green Architecture	2
Green Building Materials and Construction Methods	2
Building Efficiencies: Low Carbon and Renewable Energies	2
LEED Building Certification	2
The Business of Sustainability	2
Check our website for the latest schedule and course information: www.extension.ucdavis.edu . or call (800) 752-0881.	