

Arch 600	Course Number	Semester	LEED for Designers
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Dates
(Hours)

This course will introduce USGBC's LEED® certification program and the ways in which using this program influences the design process and design performance. It will serve the student as a good preparation for taking the exams ("Green Associate" & "Accredited Professional") necessary to achieve the LEED® AP (Accredited Professional) credential.

The following topics will be presented, discussed and used in this course:

General Principles of Sustainable Design

Triple Bottom Line Thinking

US Green Building Council

LEEDv4 Rating Systems*

(Building Design and Construction, Interior Design and Construction, Operations and Maintenance, and Neighborhood Development)

*We will concentrate on Building Design and Construction

LEEDv4 Credit Categories

Integrative Process (IP)

Location and Transportation (LT)

Sustainable Sites (SS)

Water Efficiency (WE)

Energy and Atmosphere (EA)

Material Resources (MR)

Indoor Environmental Quality (EQ)

Innovation (IN)

Regional Priorities (RP)

LEEDv4 Certification Levels

Certified (40 – 49 credits)

Silver (50 – 59 credits)

Gold (60 – 79 credits)

Platinum (80+ credits)

LEED Goals

1. To reverse contribution to global **Climate Change**
2. To enhance individual **Human Health** and well-being
3. To protect and restore **Water Resources**
4. To protect, enhance, and restore **Biodiversity** and ecosystem services
5. To promote sustainable and regenerative **Material Resources** cycles
6. To build a **Greener Economy**
7. To enhance social equity, environmental justice, **Community** health, and quality of life

NAAB Student Performance Criteria addressed in this Course:

B. 3. Sustainability: Ability to design projects that optimize, conserve, or reuse natural and built resources, provide healthful environments for occupants/users, and reduce the environmental impacts of building construction and operations on future generations through means such as carbon-neutral design, bioclimatic design, and energy efficiency.

EDUCATIONAL GOAL:

KU's School of Architecture Design and Planning, in accordance with the "2010 Imperative" adopted by the ACSA, holds that "All projects shall be designed to engage the environment in a way that dramatically reduces or eliminates the need for fossil fuels."

Consistent with the above institutional mandate, the material covered in this course is intended to further inform students' design work while in school. It is also intended to prepare them for an increasingly important part of professional practice after graduation.

PEDAGOGICAL METHODS:

A combination of; Instructor Presentations, Readings, Class and Small Group Discussion, Practice Tests and an Applied Research Project will be used to learn the material. If time and circumstances permit, there may be a site visit.

GRADING CRITERIA:

Active participation in class site visits, class group support activity, research activity, group discussion is required. Full class attendance is required. More than 1 class absence during the 6 day class is considered a violation of this requirement and will result in a full letter grade deduction from the semester grade or an "incomplete" being assigned, depending on circumstances.

Grades will be assessed based upon class participation, the successful completion of your practice exams and the quality of your applied research project (see page 3 below).

OTHER POLICIES:

ACADEMIC MISCONDUCT:

Your attention is drawn to the University's Regulations regarding academic misconduct in the Timetable and School Regulations in the Undergraduate Catalog.

DISABILITY ACCOMODATION

"The Office of Disability Resources (DR), 22 Strong Hall, 785-864-2620 (v/tty), coordinates accommodations and services for KU students with disabilities. If you have a disability for which you may request accommodation in KU classes and have not contacted DR, please do so as soon as possible. Please also contact me privately in regard to this course."

RELIGIOUS HOLIDAYS

Any student in this course who plans to observe a religious holiday which conflicts with the course schedule or requirements should contact the instructor at the beginning of the semester to discuss alternate accommodations.

TEXTS:

In the Course Project Server:

USGBC, LEED Reference Guide for Building Design and Construction, v4, 2013

USGBC, LEED AP Building Design + Construction Study Guide, 2009 (or later edition when available)

USGBC, Green Associate Study Guide, 2009 (or later edition when available)

LEED Core Concepts, 3rd Ed., 2014

Various Presentations and Documents from BNIM

Various Presentations and Documents from USGBC & GBCI

OUTLINE SCHEDULE:

Course Introduction, Introduction to Sustainable Design, Introduction to USGBC, ID, TBL, and LEED

Introduction to LT, SS, and WE, Practice Test(s)

Strategies, Case Studies & Introduction to EA, Practice Test(s)

Strategies, Case Studies & Introduction to EQ and MR, Practice Test(s)

Practice Test(s) and Introduction to Research/Application Project

Student Research/Application

Student Presentations and survey

FINAL PROJECT REQUIREMENTS

In teams you are to complete an applied research project.

The objective of this project is to transform the generic speculative office building design provided (alternatives allowed if pre-approved by me) into a LEED Platinum project, using the requirements of LEEDv4 as your criteria.

Your team should produce a PPT presentation of your redesign that should include the following:

1) The LEED v4 Project Checklist indicating the prerequisites and the credits you have met in order to meet LEED Platinum requirements.

2) A slide (or possibly more) for each prerequisite and credit you propose to achieve. These slides should include the following:

a) Illustration(s) indicating the design strategy(ies) used to achieve the credit.

b) Illustration(s) of any existing projects/products/applications you have found that use or make possible your proposed design strategy.*

*(not required but encouraged)

c) The intended benefits of satisfying the requirements of the credit. (think TBL)

d) Related credits (according to the AP Study Guide and/or NC Reference Guide).

e) Required metrics (what are the units – lb.'s, \$'s, BTU's, KWhrs, etc.? and how are these to be documented?)

f) References to third party authorities recognized by the USGBC for purposes of satisfying the credit requirements.

You should use the materials that have been made available to you on the Project Server (Reference Guide, Study Guides, PPT presentations and other USGBC materials).

You should cite any reference you have used in your slide text or as a footnote on the slide.

Your presentation is to be made on *(fill in date)*.

A copy of your PPT should also be placed in the course Project Server folder titled "Final Student Projects".