

ERE 596 – Green Building Rating
3 Credits (3 Lecture Hours)

Lecture – Meets in 145 Baker Hall, Tuesday and Thursdays 8:00-9:20AM

Instructor – Paul Crovella
219 Baker Laboratory
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Office hours – M,T,W 10-12

Optional Reference Text – Green Building Fundamentals. Montaya, Michael. Prentice Hall. 2010.

Description – The course will be an overview of how building rating systems for green construction have developed. The course will explore the process for development of individual standards, the different building certification systems that have been developed using these standards, and long-term development and code adoption of such certification systems.

Student outcomes:

1. The student will understand the procedure for development of standards by ANSI, ASTM, ISO, and groups such as USGBC, GBI, and NAHB.
2. Students will understand the integrated process used to design a building using a green approach.
3. Student will understand the use of tools for comparing the effect of green building options on a Life Cycle Assessment basis.
4. Student will be able to use a building rating system to evaluate an ongoing building project and determine the documentation requirements.
5. Student will be familiar with the requirements of each of the major green building rating systems

Attendance - Students are expected to attend all scheduled classes and laboratories. If special circumstances such as illness, religious holidays, travel difficulties, family emergencies or active participation in college-sponsored events make absence unavoidable you must see me to make up the work. No student will be allowed to complete graded work after that work has been returned to others in the class.

While in class, please keep cell phones turned off, this includes during tests (no cell phone calculators).

To maintain the proper classroom environment, computers may not be used during lecture without permission of the instructor. When in use they it should be strictly for class-related activity.

Academic Honesty – Honesty and integrity are major elements in professional behavior and are expected of each student. Any assignment (including those in electronic media) submitted by a student must be of the student's original authorship. Representation of another's work as the student's own shall constitute plagiarism. Cheating, in any form, is an unacceptable behavior within all college courses, and the college policy on academic integrity (as outlined in the handbook "Academic Integrity ESF" at <http://www.esf.edu/students/handbook/>) will be strictly adhered to.

Grading – The course grading will be a combination of grades earned on homework, quizzes, tests, group project work, class presentation, and the final exam.

The final grade will be based on these percentages

Homework	20%
Quizzes	20%
Rating Projects	20%
Class participation	20%
Final Exam	20%

Homework – Homework will be returned graded the following class. Any homework not turned in on-time needs to be discussed with me to determine if credit will be given. No late homework will be accepted after the assignment has been graded and returned to the rest of the class.

Course Outline:

Week 1	Overview of the history of code development, standards development, rating systems groups and types of certifications, accreditations, and labeling and methodology. Product Certifications – Forestry Sector FSC, SFI, ATF
Week 2	History of LEED development Intro to LEED for NC v2.2 – Sustainable Sites
Week 3	LEED for NC v2.2 – Sustainable Sites
Week 4	LEED for NC v2.2 – Water Efficiency
Week 5	LEED for NC v2.2 – Energy and Atmosphere

Week 6	LEED for NC v2.2 – Energy and Atmosphere
Week 7	LEED for NC v2.2 – Materials and Resources
Week 8	LEED for NC v2.2 – Indoor Environmental Quality
Week 9	LEED for NC v2.2 – Indoor Environmental Quality Submission of LEED EB Documentation for Baker Lab
Week 10	ICC 700, LEED for Homes, NAHB Model Green Home Building Guidelines , LCA
Week 11	Life Cycle Assessment – BEES model, Green Globes, Athena LCA calculator
Week 12	Multiple Attribute Product Certifications - Green Seal, Eco-label, Pharos, Environmentally Preferred Products
Week 13	Living Building Challenge, Energy Performance measures (Energy Star, HERS, EUI, CBECS)
Week 14	Reduced Energy certifications – Passive house, Zero Energy Buildings LEED for Homes vs. NAHB Model Green Home Building Guidelines comparison for Syracuse Habitat for Humanity

