

**RINKER SCHOOL OF CONSTRUCTION MANAGEMENT  
UNIVERSITY OF FLORIDA**

**GREEN BUILDING DELIVERY SYSTEMS**

**COURSE NUMBER:** ICM 6684

**NUMBER OF CREDIT HOURS:** 3

**INSTRUCTOR:** Charles J. Kibert ([ckibert@ufl.edu](mailto:ckibert@ufl.edu))

***COURSE OBJECTIVES***

- Become familiar with the concept of green building assessment and the major international assessment systems such as BREEAM, CASBEE, Green Star, and DGNB
- Become fluent in the use of the two major U.S. building assessment systems, LEED and Green Globes
- Become qualified to administer green building projects
- Be able to use major green building tools such as LCA, LCC, energy and water system modeling

***COURSE DESCRIPTION***

This course examines the major schools of thought in present day ecology to determine what can be applied either as model or metaphor for green buildings. The new discipline of Industrial Ecology, which applies ecology to industrial operations such as manufacturing, is examined for approaches that can be applied to Ecological Design. The work of architects attempting to apply ecology in their work will be examined to determine the state of environmentally friendly buildings being created using current approaches. Throughout the course subsidiary issues of materials, energy, water, land use, and the integration of the natural and built environments will be examined.

***PREREQUISITE KNOWLEDGE AND SKILLS:***

*Satisfactory standing as an ICM or BCN student*

***PURPOSE OF COURSE***

Upon completion of this course, the student will be conversant on the subject of high-performance green building design and delivery systems, the USGBC LEED suite of building assessment standards, and Green Globes.

***TEXTBOOKS***

**“Sustainable Construction: Green Building Design and Delivery, 4<sup>th</sup> Edition”** Charles Kibert, John Wiley & Sons, 2016

**Environmental Building News**, electronic journal, available through UF e-Journals as [www.uflib.ufl.edu](http://www.uflib.ufl.edu) or at [www.buildinggreen.com](http://www.buildinggreen.com) if using UF VPN.

### **COURSE LEARNING OUTCOMES:**

Upon completion of the course students will demonstrate their:

- understanding of the application of the sustainable development framework to the design and construction of the built environment
- ability to apply the principles of sustainable construction to decisions regarding the built environment.
- Knowledge of life cycle costing, life cycle assessment, net zero strategies, green building assessment systems, and the environmental impacts of the built environment.

## **COURSE POLICIES**

**Class Attendance.** Attendance at all class meetings is mandatory. Unexcused absences will result in a half letter grade reduction.

**Late Assignments.** Assignments are due to the instructor by the start of class on the due date. A 40% deduction will be imposed for assignments up to 24 hours late. Assignments more than 24 hours late will receive no credit.

**Disruptive Behavior Policy.** Students engaging in disruptive behavior will be asked to leave the classroom. Use of cell phones and computers without permission of the instructor is considered disruptive behavior.

**Honor Policy.** It is Rinker School policy that any incidence of cheating, copying, signing rosters for others, or other attempts to deceive will be penalized by course failure.

### **General Policies**

- There will be no substitutions for assignments
- Writing assignments will be checked using Turnitin software to identify any instance of plagiarism. Any student found guilty of plagiarism will be assigned an "F" for the course. NO appeal. Please make sure you understand what this means and how to avoid it.
- ASSIGNMENTS SUBMITTED AFTER CALLED FOR WILL BE ELIGIBLE FOR HALF CREDIT.
- If you have a conflict with an papers, projects, quiz, presentations, or class assignments, arrangements must be made with the instructor BEFORE the time of the event if there are to be alternate arrangements made (see Makeup Policy above).
- The professor reserves the right to adjust the grade scale. Under no circumstances will a student's grade be lowered by this adjustment.
- For exams and in-class assignments, students are responsible for all material presented in class, all reading assignments, guest lectures, site visits, and handouts distributed in class or via the class website. Questions on exams are not limited to things written on the board, shown as an overhead or part of a slide presentation.

## **UF POLICIES**

### **UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES**

Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to submitting assignments or taking the quizzes or exams.

Accommodations are not retroactive, therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

### **UNIVERSITY POLICY ON ACADEMIC MISCONDUCT**

Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>. Although joint work on assignments may be acceptable in some cases, duplication of an assignment, both manually or by computer will be considered an act of academic dishonesty and dealt with accordingly. On all work submitted for credit by students at the university, the following pledge is either required or implied: **"On my honor, I have neither given nor received unauthorized aid in doing this assignment."**

## **GETTING HELP**

For issues with technical difficulties for E-learning in Canvas, please contact the UF Help Desk at:

- [Learning-support@ufl.edu](mailto:Learning-support@ufl.edu)
- (352) 392-HELP - select option 2
- <https://lss.at.ufl.edu/help.shtml>

## **GRADING POLICIES**

The final student grade will be a letter grade based on the percentage of the Total Points Achievable. The grades based on the percentage are as follows: The grades based on the percentage rounded to the nearest whole number are as follows:

A: 95 and up, A-: 92-94.5 B+:88-91, B: 83-87, B-: 80-82, C+: 77-79, C: 73-76, C-: 70-72, D+: 67-69, D: 63-66, D-: 60-62, E: 59 or below.

**Course Requirements:** The requirements for this course are described below.

**A. Module Assignments: 100 points each (12 x 100 = 1200 points)**

**B. LEED Project: 200 points**

**C. Green Globes project: 200 points**

**D. Research Paper: 200 points**

**TOTAL: 1800 points**

## COURSE SCHEDULE

| <b>Module</b> | <b>Description</b>  |
|---------------|---|
| 1             | <i>Introduction to high-performance green buildings</i>           |
| 2             | <i>Green building assessment and tools + LEED</i>                 |
| 3             | <i>Green building process + Green Globes</i>                      |
| 4             | <i>Ecological design and the Living Building Challenge</i>        |
| 5             | <i>Site and landscape strategies</i>                              |
| 6             | <i>Building energy system strategies</i>                          |
| 7             | <i>Building hydrologic cycle strategies</i>                       |
| 8             | <i>Materials selection strategies</i>                             |
| 9             | <i>Indoor Environmental Quality (IEQ) analysis and strategies</i> |
| 10            | <i>Carbon accounting + mitigation</i>                             |
| 11            | <i>Construction team responsibilities and controls</i>            |
| 12            | <i>Green building codes, standards, specifications, economics</i> |

*LEED Project: due course midpoint*

*Green Globes Project: due course midpoint*

*Research Paper: due end of course*