

Technical College of the Lowcountry
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BCT 240 **GREEN RESIDENTIAL CONSTRUCTION OVERVIEW**

COURSE DESCRIPTION

This course is a study of the techniques and methods of construction of residential projects. Emphasis is on the construction of one or two family wood framed residential buildings. The course includes a discussion of ground to roof construction including the interface between trades when constructing and equipping the homes with mechanical equipment.

3 Cr (3 lect/pres, 0 lab, 0 other)

COURSE FOCUS

The instructor will discuss characteristics of sustainable buildings, green buildings and high performance homes. The primary focus will be on LEED for Homes rating system.

Text and References

Green Building, Principles & Practices in Residential Construction by Abe Kruger and Carl Seville

Selected Title



Green Building: Principles and Practices in Residential Construction, 1st Edition

Abe Kruger, Carl Seville

Textbook ISBN-10: 1-111-13595-9

Textbook ISBN-13: 978-1-111-13595-9

Announcements for Class

Log on to Blackboard for class announcements and or visit you my.tcl.edu account. Both can be accessed through the tcl.edu web page.

COURSE GOALS

The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives. (*designates a CRUCIAL goal)

1. know Indoor Environmental Quality category
2. study LEED for Home rating system
3. explain heat island effect
4. lookup Resnet website
5. understand HERS index
6. hire green rater
7. hire HERS rater
8. define whole building approach
9. find basic services
10. know Awareness and Education category
11. identify drought tolerant plants
12. know Materials and Resources category
13. know Energy and Atmosphere category
14. know Water Efficiency category
15. know Sustainable Sites category
16. know the Location and Linkages category
17. know the Innovations and Design category
18. locate LEED for Homes provider
19. study Earthcraft Homes guidelines
20. study Energy Star for Indoor Air Package
21. study Energy Star for new homes
22. define sustainability as it pertains to residential construction
23. operate duct blaster tool
24. comprehend triple bottom line concept
25. describe energy usage in residential homes
26. describe net zero energy homes
27. control waste management during construction
28. choose energy star lighting
29. choose energy star appliances
30. examine energy policy act of 2005
31. examine energy policy act of 1992
32. identify storm water runoff
33. test air tightness of buildings
34. define shades of green
35. operate blower door tool
36. use environmentally preferable products
37. use salvaged materials
38. use reclaimed materials
39. use recycled materials
40. apply advanced framing techniques
41. discuss green roofs
42. develop infill lots
43. develop high density lot building
44. identify invasive plants
45. comprehend the thermal bypass checklist

STUDENT CONTRIBUTION

The student is expected to be prepared for class and to be in class on time.

Download the requirements from the USGBC the LEED for Homes rating system

(<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=2135>) and Download and study the Energy Star thermal bypass checklist (http://www.energystar.gov/index.cfm?c=new_homes.hm_index). Cell phones are not allowed to be used in the classroom. This includes texting.

COURSE EVALUATION

The grading scale is as follows:

90 - 100 = A

80 - 89 = B

70 - 79 = C

60 - 69 = D

Below 60 = F

COURSE SCHEDULE/OUTLINE

The class meets for 1 lecture/presentation hours per week for a total of 16 weeks during fall and spring semesters.

Approved by: *Kenneth Flick* Developed/Revised: 01/03/2017
Ken Flick, Division Dean for Business/Industrial Division

ADA STATEMENT

The Technical College of the Lowcountry provides access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation, contact the counselor for students with disabilities at (843) 525-8228 during the first ten business days of the academic term.

ACADEMIC MISCONDUCT

There is no tolerance at TCL for academic dishonesty and misconduct. The College expects all students to conduct themselves with dignity and to maintain high standards of responsible citizenship.

It is the student's responsibility to address any questions regarding what might constitute academic misconduct to the course instructor for further clarification.

The College adheres to the Student Code for the South Carolina Technical College System. Copies of the Student Code and Grievance Procedure are provided in the *TCL Student Handbook*, the Division Office, and the Learning Resources Center.

ATTENDANCE

The College's statement of policy indicates that students must attend ninety percent of total class hours or they will be in violation of the attendance policy.

- Students not physically attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.
- Students taking an online/internet class must sign in **and** communicate with the instructor within the first ten calendar days from the start of the semester to indicate attendance in the class. Students not attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.
- Reinstatement requires the signature of the division dean.

In the event it becomes necessary for a student to withdraw from the course OR if a student stops attending class, it is the student's responsibility to initiate and complete the necessary paperwork. Withdrawing from class may have consequences associated with financial aid and time to completion.

When a student exceeds the allowed absences, the student is in violation of the attendance policy. The instructor MUST withdraw the student with a grade of "W", "WP", or "WF" depending on the date the student exceeded the allowed absences and the student's progress up to the last date of attendance

or

under extenuating circumstances and at the discretion of the faculty member teaching the class, allow the student to continue in the class and make-up the work. This exception must be documented at the time the allowed absences are exceeded.

Absences are counted from the first day of class. There are no "excused" absences. All absences are counted, regardless of the reason for the absence.

- A student must take the final exam or be excused from the final exam in order to earn a non-withdrawal grade.

A copy of TCL's **STATEMENT OF POLICY NUMBER: 3-1-307 CLASS ATTENDANCE (WITHDRAWAL)** is on file in the Division Office and in the Learning Resources Center.

HAZARDOUS WEATHER

In case weather conditions are so severe that operation of the College may clearly pose a hardship on students and staff traveling to the College, notification of closing will be made through the following radio and television stations: WYKZ 98.7, WGCO 98.3, WGZO 103.1, WFXH 106.1, WWVW 106.9, WLOW 107.9, WGZR 104.9, WFXH 1130 AM, WLVH 101.1, WSOK 1230 AM, WAEV 97.3, WTOC TV, WTGS TV, WJWJ TV, and WSAV TV. Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System. www.tcl.edu/textalert.asp

EMERGENCY TEXT MESSAGE ALERT

Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System. Participants receive immediate notification of emergency events and weather cancellations via text messaging on their cell phones. Participants can also opt in to receive non-emergency news and announcements. Go to www.tcl.edu. On the homepage, click on "emergency TextAlert at TCL" and fill out the form or go to www.tcl.edu/textalert.asp

Syllabus Safety Addendum

Purpose

The purpose of this safety addendum is to provide each student with safety guidelines during an incident, emergency, or disaster at TCL. In addition, it provides students guidelines for lockdown procedures, evacuation procedures, and active shooter.

Definition

An incident is any event, potential or actual, that may impact normal operations but has no immediate health or life threatening consideration or serious effect on the overall functional capacity of the College. An event of this nature should be reported to the Office of the Vice President for Administrative Services. Also notify the off-site campus administrator if applicable.

An emergency is any incident, potential or actual, which may endanger life or health or which affects an entire building or buildings, and will disrupt the overall operations of the College. Outside emergency services will probably be required, as well as major efforts from campus support services. Major policy considerations and decisions will usually be required from the college administration during times of crises. An emergency should be reported immediately by directly using **911** if life or health/injury considerations exist and then to the Office of the President or Vice President for Administrative Services as quickly as possible. Also notify the off-site campus administrator if applicable.

A disaster is any event or occurrence that has taken place and has seriously impaired or halted the operations of the College. In some cases, mass personnel casualties and severe property damage may be sustained. A coordinated effort of all campus-wide resources is required to effectively control the situation. Outside emergency services will be essential. In all cases of disaster, an Emergency Control Center will be activated, and the appropriate support and operational plans will be executed. The disaster should be immediately reported, first by calling **911** and then to the Office of the President or Vice President for Administrative Services. Also notify the off-site campus administrator if applicable.

Types of Emergencies

- Hurricane
- Tornado
- Fire
- Biochemical or Radiation Spill
- Explosion/Bomb
- Downed Aircraft (crash which directly impacts campus operations)
- Utility Failures
- Violent or criminal behavior
- Psychological Crisis

Procedures

Active Shooter

Run/hide/fight (<http://www.fbi.gov/about-us/cirg/active-shooter-and-mass-casualty-incidents/run-hide-fight-video>)

Building Evacuation

1. Building evacuations occur when an alarm sounds and/or upon notification by Security or the Emergency Director.
2. When the building evacuation alarm is activated during an emergency, individuals should exit according to the building evacuation plan and alert others to do the same.
3. Once outside, individuals should proceed to a clear area that is at least 500 feet away from the affected building. Streets, fire lanes, hydrant areas and walkways should be kept clear for emergency vehicles and personnel.
4. Individuals should not return to an evacuated building unless told to do so by Security or the Emergency Director.
5. Individuals should assist persons with disabilities in exiting the building. Elevators are reserved for disabled persons

Campus Evacuation

1. A uniformed Security Guard, the Emergency Director, or an Emergency Resource Team member will announce evacuation of all or part of the campus grounds.
2. All persons (students and staff) are to immediately vacate the campus, or in the case of a partial evacuation relocate to another part of the campus grounds as directed.

Lockdown

1. Clear the halls
2. Report to the nearest classroom/office
3. Assist those needing special assistance
4. Ensure classroom/office doors are closed and locked
5. Turn off lights
6. Stay away from doors and windows (out of the line of sight)
7. BE QUIET and follow instructor's directions
8. Silence cell phones
9. Wait for the "All Clear" before leaving

Developed/Revised: January 9, 2017