

Technical College of the Lowcountry
921 Ribaut Road ~ PO Box 1288
Beaufort, SC 29901-1288

Timothy S Newsome
Industrial Technology Division
Building 16, Room 112
843- 525- 8290
tnewsome@tcl.edu



BCT 243 ENERGY EFFICIENT & WEATHERIZATION

Course Description

This course is an overview of the alternatives available in high efficiency mechanical systems for existing residential structures. Included are strategies for increasing building envelope effectiveness. Envelope testing and energy auditing techniques are used. 3 Cr.

Course Focus

This course will focus on the necessary skills need to become a Home Energy Auditor and general weatherization of existing homes. Student will learn Building Performance Institute standards and learn about combustion safety

Text and References

RESIDENTIAL ENERGY – COST SAVINGS AND COMFORT FOR EXISTING BUILDINGS by John Krigger and Chris Dorsi.

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. compile warehouse materials
2. know energy history
3. maintain combustion appliance safety
4. measure room pressure imbalances
5. locate air barrier
6. illustrate air and heat movement principles
7. perform duct testing
8. determine refrigeration energy usage
9. analyze utility bills
10. maintain light level
11. define key terms and concepts
12. maintain program standards
13. order materials
14. know building codes
15. understand work order
16. use safe practices
17. manage installation crew
18. comprehend air sealing principals

19. evaluate air leakage
20. complete home weatherization
21. learn blower door testing basics
22. install low level showerhead
23. illustrate zone pressure diagnostics
24. learn combustion safety
25. factor building heat loss
26. determine appliance input
27. resolve room pressure imbalances
28. illustrate code requirements
29. take blower door readings
30. determine air barrier effectiveness
31. compute ventilation rates
32. know code requirements
33. use energy audit DOE approved software
34. interpret the combustion process
35. demonstrate crew chief competencies
36. comprehend insulation related competencies
37. detect gas propane and fuel oil leaks
38. assess plumbing pipes and faucets
39. replace light bulbs
40. improve lighting levels
41. prepare work order
42. prioritize air sealing measures
43. estimate heating and cooling load
44. utilize inspection and measurement techniques
45. estimate annual energy consumption

Student Contributions

The student is expected to be prepared for class and to be in class on time. Cell phones are not allowed to be used in the classroom. This includes texting. All electronic devices including cell phones, pagers, computers, Ipods, Ipads must be turned off during class.

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 or spring semesters. Summer Classes meet for 10 weeks one day a week.

Approved by: *Kenneth Flick*

Ken Flick, Division Dean for Business/Industrial Division

Developed/Revised: 5/2013

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, WWVV 106.9, WLOW 107.9, WGZR 104.9, WFXH 1130 AM, WLVA 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 cancelations 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