BCT 139
Advanced Residential Wiring

Course Description
This course is the study and application of residential wiring including wire size, circuits, and components and testing.  Lec. 3 Lab. 0 Cr. 3

Course Focus
This course will focus on the necessary skills need to complete wiring after the drywall has been installed in residential construction.

Text and References

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.  install appropriate size service conductors
2.  apply definitions for residential electrician
3.  identify underground feeder cables
4.  identify service entrance cables
5.  identify EMT conduit
6.  identify LFNC conduit
7.  identify LFCM conduit
8.  select appropriate raceways
9.  establish temporary power pole
10.  install appropriate equipment
11.  calculate voltage drops
12.  determine minimum number of branches
13.  complete whole house load calculations
14.  install feeder cables
15. install ground service
16. install over current protection
17. select appropriate size of panel boards
18. interpret electrical symbols
19. follow blueprints and specifications
20. use wire tables
21. apply basic requirements for installations
22. install 240 volt circuits
23. maintain personal protection equipment
24. drill holes for service entrance cable
25. strip service entrance cable
26. cut service entrance cable
27. mount meter socket
28. use the standard or optional method to determine residential loads
29. calculate the minimum conductor size for residential service
30. calculate the minimum size feeder conductors
31. understand grounding and bonding of circuits
32. complete wire size calculations
33. define common residential service entrance terms
34. remove knockouts in equipment
35. respond to worksite emergencies
36. check continuity of circuits
37. check voltage of circuits
38. check current of circuit
39. execute fall protection
40. use appropriate tools
41. follow safety requirement
42. identify hazardous conditions
43. maintain OSHA requirements
44. use multimeters for troubleshooting
45. understand overhead and underground service entrance

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 devises including cell phones, pagers, computers, Ipods, I pads must be turned off during class.

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 withdrawal 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, WLHV 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

BROADCAST LEARNING FORMAT: This class is being taught in a broadcast learning format. Images and word of class participants may be transmitted live or on a delayed basis to other locations. Classes may be rebroadcast due to extenuating circumstance.

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.

Developed/Revised: January 7, 2011