EEM 201  
ELECTRONIC DEVICES I

Course Description  
This course is the study of the fundamental principles of common electronic devices and circuits. Emphasis is placed on solid-state principles and applications.  
3.0 Credits

Text and References  
The textbook is downloadable as a PDF file.  

Course Goals  
The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives.

1. Study Power Transistor theory  
2. Review AC DC concepts  
3. Study Consumer Equalization specifications  
4. Study passive Audio Filter circuits  
5. Study Inductive Amplifier coupling circuits  
6. Study Capacitive Amplifier coupling  
7. Study current Power Amplifier specifications  
8. Study current Power Amplifier literature  
9. Learn performance characteristics of a tweeter  
10. Construct Power amplifier circuits  
11. Learn performance characteristics of a Woofer  
12. Study multi-stage transistor amplifiers  
13. Construct single stage small-signal transistor amplifier circuits  
14. Study discreet Transistor amplifier circuits  
15. Study discreet transistor switching circuits  
16. Review Oscilloscope test equipment  
17. Analyze Full-wave rectifier circuit  
18. Analyze Half-wave rectifier circuits  
19. Construct Full-wave rectifier circuits  
20. Construct Half-Wave Rectifier circuits  
21. Analyze diode component  
22. Analyze Power Amplifier circuits  
23. Learn performance characteristics of a class AB amplifier  
24. Learn the best professional audio manufacturers  
25. Learn the structure of retail pricing
26. Perform an amplifier frequency response test
27. Construct an electret microphone
28. Learn to Kit an amplifier kit
29. Read microphone frequency response charts
30. Learn Bode plot amplifier frequency response
31. Learn to evaluate speaker specifications
32. Study active Audio Filter circuits
33. Construct a push-pull amplifier
34. Anticipate Pro-audio equipment trends
35. Learn performance characteristics of a class C amplifier
36. Learn performance characteristics of a Class B amplifier
37. Learn performance characteristics of Class A amplifier
38. Learn performance characteristics of an Equalizer
39. Construct multi-stage Operational Amplifier circuits
40. Study multi-stage operational amplifier
41. Analyze electret microphone performance
42. Analyze dynamic microphone performance
43. Learn performance characteristics of a Dynamic microphone
44. Learn performance characteristics of a Condenser microphone
45. Learn to evaluate amplifier specifications

Student Contributions
Each student will spend approximately 2.5-5 hours per week preparing for class and completing assignments to turn in weekly.

Each week students will turn in assignments as specified.

Student Attendance Policy: See student handbook within the TCL Catalog.

Course Evaluation
There will be three cumulative exams, including the Final examination. The first two exams will be worth 100 points each. The Final exam will be worth 200 points.

Course Schedule
The class meets for 3 lecture/presentation hours per week.

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. Reinstatement requires the signature of the division dean.
- 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, WGLZ 104.9, WFXH 1130 AM, WLVH 101.1, WSOX 1230 AM, WAEV 97.3, WOTC 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. 

**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 Text Alert at TCL” and fill out the form or go to **www.tcl.edu/textalert.asp**