Course Description

Prerequisite: AUMT 1307. Repair of automotive electrical subsystems, lighting, instrumentation, and accessories. Emphasis on accurate diagnosis and proper repair methods using various troubleshooting skills and techniques. May be taught with manufacturer specific instructions.

Course Focus

This course includes a substantial amount of hands-on learning activities, which cannot be rescheduled. Regular attendance is mandatory for successful completion of the course.

Text and References

Automotive Technology Principles, Diagnosis and Service 5th Edition: James D. Halderman
Automotive Laboratory Exercises: Donald W. Jones
Selected Manufacturer Specific Materials/Publications
Selected Internet and Online Resources (Melior Instructor ID: 634ih2b8um)
Class Website - http://myautoclass.com

Course Goals

The following list of course goals will be addressed in the course. Goals marked with a * must be completed to pass the course.

1. define electricity
2. define voltage
3. define amperage
4. define resistance
5. explain Ohm's law
6. demonstrate digital meter operation
7. measure voltage
8. measure current flow
9. measure resistance
10. explain series circuit operation
11. explain parallel circuit operation
12. explain series/parallel circuit operation
13. complete online MLR: Electrical course with a score of 70% or greater*
14. explain common electrical circuit failures
15. explain electrical diagnostic procedures
16. interpret electrical wiring diagrams
17. locate necessary service manual information
18. apply necessary service manual information
19. diagnose open electrical circuits
20. diagnose shorted electrical circuits
21. diagnose charging system concerns
22. diagnose starting system concerns
23. diagnose selected lighting and accessory system concerns
24. complete online Circuits & Meters III course with a score of 70% or greater*
25. remove and replace alternator
26. remove and replace starter motor
27. remove and replace power window motor/regulator
28. explain diode operation
29. explain transistor operation
30. explain computer operation
31. complete online Advanced Electronics I course with a score of 70% or greater*
32. demonstrate scan tool operation
33. diagnose selected computer controlled systems

**Student Learning Outcomes**

Upon successful completion of this course the student will be able to:

- Identify and explain the operation of automotive electrical/electronic system components
- Properly utilize common electrical diagnostic equipment on automotive electrical/electronic systems
- Analyze and explain the operation of automotive electrical/electronic circuits
- Troubleshoot and service automotive electrical/electronic system concerns in accordance with industry guidelines

**Course Evaluation**

Final Grade is composed of:  
20% - Attendance and Participation  
20% - Lab Grade  
20% - Quizzes and Homework  
20% - Exams (written and/or practical)  
20% - Final Exam (written and/or practical)  

Final grade will be of letter type:  
A = 90 to 100 points  
B = 80 to 89 points  
C = 70 to 79 points  
F = Below 70 points  
I = Incomplete
Financial Aid Statement

Students who are receiving any form of financial aid should check with the Financial Aid Office prior to withdrawing from classes. Withdrawals may affect your eligibility to receive further aid and could cause you to be in a position of repayment for the current semester. Students who fail to attend or participate after the drop date are also subject to this policy.

Receiving Your Grades

The college will not mail end-of-semester grades to you. To receive your grades use the following directions:

1. Go to the Dallas County Community College website (http://www.dcccd.edu)
2. Next, click on eConnect at the top of the page.
3. Now click on Credit student menu
4. Next click on My Personal Information (this will expand the menu)
5. Now click on My Grades
6. Enter your seven digit student ID (not your social security #)
7. Enter your password or if it is your first time to use the system enter your date of birth. (Example: Feb 16, 1965 = 021665)
8. Now select the term you wish to review
9. Next, select the grade type (CR-Credit Grades)
10. Click on submit, your grade(s) should then be displayed on your screen

Stop Before You Drop

For students who enrolled in college level courses for the first time beginning in the fall of 2007, Texas Education Code 51.907 limits the number of courses a student may drop. You may drop no more than 6 courses during your entire undergraduate career unless the drop qualifies as an exception. Your campus counseling/advising center will give you more information on the allowable exceptions. Remember that once you have accumulated 6 non-exempt drops, you cannot drop any other courses with a “W”. Therefore, please exercise caution when dropping courses in any Texas public institution of higher learning, including all seven of the Dallas County Community Colleges. For more information, you may access: https://www1.dcccd.edu/coursedrops
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<td>Green Pages Chapters 48, 49 and 56 through 59</td>
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<td>White lab manual pages through page 47 through 64 and repair orders due</td>
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