AUMT 2332  
Automatic Transmissions and Transaxles II

Course description: Prerequisite AUMT 1307. This course is a study of the operation, electronic principles, and related circuits of modern automatic transmissions and transaxles. This course includes diagnosis, service, and repair procedures with the emphasis on the use of special tools and proper repair techniques. This class may be taught manufacturer specific.

Course focus: This course includes a substantial amount of hands-on learning activities, which cannot be rescheduled. Regular attendance and timely arrival are mandatory for successful completion of this course.

Attendance and Arrivals: An “Absence” consists of being either absent for the day or late to class greater than 30 minutes after the scheduled start time. A Late arrival consists of arriving to class no greater than 29 minutes after the scheduled start time. A total of three (3) absences will result in a failing grade for the course.- If you come you will be taught. I will make every attempt to have class every night that we are scheduled to meet, if not I personally will contact you via text or call.

Tools and Equipment: Each student is required to have access to a complete set of tools as described in the Brookhaven College Comprehensive Automotive Tool list. If during a laboratory assignment a group or individual does not access to the required tools; that group or individual will not be able to participate in any laboratory exercise. Groups are made in an attempt to optimize tool usage within that group. It is advised that no one is allowed to borrow tools from outside their group.

Cell phones, Texting, and other: We all lead important lives where we cannot be out of touch for Three hours a day. But, in this program we must. We take breaks throughout the course of a day and this provides the student time to text or talk. Please refrain from texting during class (lecture/lab). The widely used stealth method of “under the table” is highly detectable by the highly trained instructors.

Laptops: Laptops are welcome in class for class related work such as note taking; web based training (not during lecture), and service information.

Laboratory: The laboratory environment is created and controlled by rules that each and every student must follow. If you do not abide by the rules you will not receive credit for any of the activities (labs, exams, quizzes, etc.) for that day. The instructor and laboratory coordinator monitors your laboratory behavior, performance, and participation. Below is a list of a few infractions that if you are observed participating in will cause you to lose credit for the day.

- In the shop without safety glasses.
- Horseplay in the shop.
- Working without service information.
- Sleeping in the shop or vehicles.
- Harassing a fellow student.
- Throwing objects in the shop.

Above is an attempt to quantify poor student behavior. It is in no way a replacement for common sense and I hope we can all exercise common sense.
Texts and References:
Automotive Technology (Principles, Diagnosis, and Service) 5th Edition James D. Halderman
Automotive laboratory exercises
Selected Manufacturer specific Materials/Publications
Selected Internet and online resources
www.bhcasset.com

Course Goals:
The following is a list of goals, which will be addressed in the course. These goals are directly related to the performance objectives. (Each and every goal is crucial.)

1. locate necessary diagnostic, repair, and specifications information in factory service manuals
2. apply necessary service manual information
3. disassemble selected rear wheel drive transmissions
4. inspect selected rear wheel drive transmission components
5. assemble selected rear wheel drive transmissions (including transmission shaft endplay, clutch adjustment, and band adjustment)
6. disassemble selected front wheel drive transmissions
7. inspect selected front wheel drive transmission components
8. assemble selected front wheel drive transmissions (including transmission shaft endplay, clutch adjustment, and band adjustment)
9. analyze transmission and transaxle component wear
10. inspect hydraulic pump conditions
11. replace transmission and transaxle component seals
12. explain the operation of hydraulic control valves
13. identify/explain the basic types of hydraulic control valves
14. identify/explain the components of basic hydraulic control valves
15. identify/explain the operation of pressure regulating, throttle, governor, manual, shift, and kick-down valves
16. identify/explain the different types of governor control valves
17. identify/explain the different types of control pressures used in an automatic transmission
18. identify/explain hydraulic circuits using schematics provided
19. explain valve body service procedures
20. disassemble valve body
21. inspect valve body components
22. assemble valve body
23. explain proper techniques to diagnosing transmission concerns
24. perform hydraulic pressure tests
25. interpret hydraulic pressure test results
26. explain proper diagnostic test drive procedures
27. interpret diagnostic test drive results
28. explain module controlled transmission operation
29. explain module controlled transmission diagnosis
30. perform retrieval and analyze transmission related DTC’s
31. perform DTC related diagnosis
32. analyze module controlled transmission input/output data
33. diagnose module controlled transmission concerns
Other course requirements: This course will require the completion of various web based courses by a due date set by the instructor. The list of requirements and due dates will be given throughout the semester. Incomplete WBT courses are an immediate failure of the automotive course.

**Web Base Training:**

<table>
<thead>
<tr>
<th>Course #</th>
<th>Description</th>
<th>Due date</th>
<th>Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Student Contributions:**
The student will spend at least 15 hours per week preparing for class. Attendance and timely arrival are very critical in this class. Attention and participation is also critical in this class.

**Evaluation:**
Final grade will be of letter type:
- **A** = 100 to 90 points
- **B** = 89 to 80 points
- **C** = 79 to 70 points
- **F** = 69 to 0(zero) points
- **I** = Incomplete

**Student Learning Outcomes:**
- Identify and explain the operation of automatic transmission/transaxle components.
- Analyze and understand the operation of automatic transmissions/transaxles hydraulic, mechanical, and electronic systems.
- Troubleshoot and service computer controlled automatic transmission/transaxle system concerns in accordance with industry guidelines.

**Safety concerns and rules:** This course requires very close attention to safety.
- We may be handling heavy, sharp, and awkward components; so it is extremely important to wear only closed toed shoes, “steel toed” if possible. (No sandals or similar shoes.) If you come to class with improper foot wear you will be sent home and will receive no credit for the day or any of the activities scheduled.
- **Z-87 eye protection WILL be worn at all times.** (CLEAR LENSES ONLY)
- We will be working with vehicle electrical and electronic systems, some systems may operate at 130Vdc (lethal) be sure what the system you are servicing is capable of.
- We will be using many specialized tools and adapters you must ensure that the tools are properly. Using the service manuals or tool instructions will help to ensure correct tool usage. If you are not sure please ask the instructor. If you find a tool to be damaged please inform your instructor and the tool room attendant on staff.
Additional College/District Policies

Receiving Your Final Semester Grades:
The college will not mail end-of-semester grades to you.

INTERNET ACCESS TO GRADES
Go to the Dallas County Community College District website (http://www.dcccd.edu).
1. Click on eConnect, then select ‘Current Credit Student Menu’
2. Under the heading ‘My eConnect Account’, select Log In.
3. Enter your seven-digit student ID number (not your Social Security number.)
4. Enter your password or, if this is your first time to use the system, enter your date of birth.
5. Under the heading ‘My Personal Information’, select Check My Grades.
6. Select the term and grade type that you wish to review, then click on ‘Submit’

Americans with Disabilities Policy Statement
If you feel you may need an academic adjustment (such as help with taking notes, etc.) because of any type of physical disability or learning difference, please talk with your instructor during office hours or by appointment before the end of the first week of classes. You may also contact Disability Services at (972) 860-4673 for advisement and counseling.

Notification Of Absence Due To Religious holy day(s)
Absences for observance of a religious holy day are excused if you inform your instructor at the beginning of the course. A student whose absence is excused to observe a religious holy day is allowed to contract with the instructor to take a make-up examination or complete an assignment within a reasonable time after the absence.

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.

Drop Policy
If you do not wish to complete this course, you are responsible for withdrawing yourself from the class. If you are unable to complete this course you must withdraw from it by December 2, 2015. Withdrawing from this course is a formal procedure, which you must initiate. The instructor or instructional associate cannot do it for you. You may do this in admissions or counseling. If you stop attending and do not withdraw you will receive a performance grade, usually an "F".

STOP BEFORE YOU DROP
For students who enrolled in college level courses for the first time 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: http://www.dcccd.edu/Why/Reg/Registration/Pages/DropWithdraw.aspx
Repeating a Course
Effective for Fall Semester 2005, the Dallas County Community Colleges will charge additional tuition to students registering the third or subsequent time for a course. All third and subsequent attempts of the majority of credit and Continuing Education/Workforce Training courses will result in additional tuition to be charged. Developmental Studies and some other courses will not be charged a higher tuition rate. Third attempts include courses taken at any of the Dallas County Community Colleges since the Fall 2002 Semester. See Third Attempt to Enroll in a Course at http://www.dcccd.edu/pc/cost/3rdcrseattnpt/Pages/default.aspx

Academic dishonesty
Academic dishonesty is a violation of the Code of Student Conduct. Academic dishonesty includes, but is not limited to, cheating on a test, plagiarism, and collusion. As a college student, you are considered a responsible adult. Your enrollment indicates acceptance of the DCCCD Code of Student Conduct: https://www1.dcccd.edu/catalog/ss/code.cfm