

El Paso Community College

Syllabus

Part II

Official Course Description

SUBJECT AREA	<u>Automotive Technology</u>
COURSE RUBRIC AND NUMBER	<u>AUMT 2325</u>
COURSE TITLE	<u>Automotive Automatic Transmission and Transaxle</u>
COURSE CREDIT HOURS	<u>3 2 : 4</u> Credits Lec Lab

I. Catalog Description

Studies the operation, hydraulic, circuits and electronic controls of modern automatic transmissions/transaxles. Includes diagnosis, disassembly, and assembly procedures with emphasis on the use of special tools and repair techniques. May be taught manufacturer specific. **(2:4). Lab fee.**

II. Course Objectives

- A. Unit I. Shop Safety
Comply with personal, interpersonal, and environmental safety practices associated with clothing, eye protection, hand tools, and power equipment plus handle, store, and dispose of chemicals in accordance with local, state, and federal safety and environmental regulations.
- B. Unit II. Transmission Diagnosis Computer and Non-Computer Shifted
1. Select and use appropriate tools and equipment.
 2. Interpret customer's concern; use appropriate reference manual, test drive, stall test, scan tool, voltmeter, pressure gauge, Technical Service Bulletins, and testing procedures; and observe safety procedures and precautions while working with the computer and electronic components. (ASE)
 3. Obtain repair information and specifications from manuals and computers.
 4. Use wiring diagrams while diagnosing electrical problems.
 5. Use a strategy-based diagnostic procedure while solving customer concerns.
 6. Document service or repair procedure on the Work Order or Lab Report.
 7. Compare actual time spent on a repair to flat rate time.
 8. Demonstrate efficiency from start to finish of the job.
 9. Identify proper tools and equipment for the job.
 10. Diagnose transmissions leaks
 11. Describe the operation of the Automatic Transmission
 12. Adjust/inspect linkages.
 13. Explain the relationship between engine components and transmission components that affect transmission operation.
 14. Determine correct service intervals
 15. Identify fluid types and transmissions models.
- C. Unit III. Transmission Disassembly
1. Select and use appropriate tools and equipment.
 2. Interpret customer's concern, use appropriate reference manual, and disassemble and inspect transmission components, including pressure checks, fluid condition, end play, clutches, bands, seals, and gaskets. (ASE)
- D. Unit IV. Planetary Gears and Hydraulic Circuit Operation
1. Select and use appropriate tools and equipment.

2. Interpret customer's concern, use appropriate reference manual, pressure test, measure clearance, and recommend repair procedures. (ASE)
- E. Unit V. Component Diagnosis and Service
 1. Select and use appropriate tools and equipment.
 2. Interpret customer's concern, use appropriate reference manual, disassemble, inspect parts, obtain replacement parts, reassemble, and test for proper operation. (ASE)
- F. Unit VI. Rebuilding Procedures
 1. Select and use appropriate tools and equipment.
 2. Use latest manufacture information and other appropriate reference materials to install, measure, and evaluate assemblies for proper placement and operation to include clearance checks, air checks, and freedom of movement of assemblies. (ASE)
- G. Unit VII. Installation and Operational Tests
 1. Select and use appropriate tools and equipment.
 2. Work with team members and use latest manufacture information and other appropriate reference materials to install, test, and evaluate transmission performance according to the manufacture specifications. (ASE)

III. THECB Learning Outcomes (WECM)

Diagnose, service, adjust, and repair automatic transmissions/transaxles.

IV. Evaluation

- A. Written work will be 40% of the final grade.
- B. Lab assignments will be 60% of the final grade.
- C. Grading Scale
 - 90 to 100 = A
 - 80 to 89 = B
 - 70 to 79 = C
 - 60 to 69 = D
- D. A student caught cheating on an exam will receive a grade of zero for that exam
- E. Make-up Exams

A student may retake any exam that they scored less than 60 points. They may retake these exams the day of the final.

V. Disability Statement (Americans with Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to

see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.