



Course Outline

2026-2027 Catalog

AUT 52 - Automatic Transmissions/Transaxles Lecture

Catalog Description

Transfer Status: CSU

Prerequisite: AUT 3 (or concurrent enrollment)

Unit(s): 3.00

Lecture: 51.00 Contact hours/102.00 Out of class hours/153.00 Total hours/3.00 Unit(s)

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Course Description: This course provides theory and principles of operation in automatic transmissions/transaxles, to include diagnostic, testing and repair of each system.

Objectives

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

1. Perform tests on automatic transmissions and transaxles using pressure gauges and scan tools to identify external or internal transmission/transaxle problems.
2. Remove and replace both front and rear wheel drive automatic transmissions/transaxles.
3. Tear down and reassemble transmissions using industry specific publications and determine a "good" part from a "bad" part prior to reassembly.
4. Identify internal automatic transmission components using industry terminology and demonstrate an understanding of powerflow through the various planetary components.
5. Correctly identify transmission types and perform routine service procedures including fluid exchange and external adjustments.

Course Content

Topic Titles / Suggested Time Topic	
<u>Lecture</u>	
<u>Topics</u>	<u>Lec Hrs</u>
Identification	2.00
Removal and installation	3.00
Gearing	5.00
Apply devices	5.00
Torque converters	6.00
Shifting systems	6.00
Diagnostic and testing procedures	9.00
Repair procedures	8.00
Basic overhaul procedures	7.00
Total Hours: 51.00	

Methods of Instruction

- A. Discussion
- B. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- C. Instructor Demonstrations
- D. Lecture
- E. Problem-Solving Sessions

Methods of Evaluation

- A. Exams/Tests
- B. Quizzes
- C. Homework
- D. Class participation
- E. Final Examination

Examples of Assignments

Reading Assignments

1. In the "Classroom Manual", read the chapter concerning planetary gear sets and answer the end of chapter questions.

2. Using the assigned vehicle and Mitchell or All Data as a reference, locate the procedure for checking the transmission fluid level.

Writing Assignments

1. In the "Key Notes" work book supplied by the instructor, answer the questions and fill in the blanks for the planetary gear sets section.
2. After completing the required transmission flush lab assignment, write a story with at least 100 words, on the back of the repair order and demonstrate an understanding of 3 C's, Concern, Cause, and Correction.

Out-of-Class Assignments

1. Using Mitchell or Alldata, look up the procedure for automatic transmission flush and perform the procedure on the vehicle of your choice from our department vehicles.
2. Complete and score an 80% or better in the areas Mechanical Safety and Pollution Prevention and Control on the SP2 website. This must be completed prior to working in the lab.

Recommended Materials of Instruction

Erjavec, J., et al. (2025). Today's Technician: Automatic Transmissions and Transaxles Classroom Manual and Shop Manual. *Cengage, 8th*. 9780357935040.

Minimum Qualifications

Automotive Technology

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