

Washtenaw Community College Comprehensive Report

ATT 134 Automotive Transmissions Effective Term: Fall 2025

Course Cover

College: Advanced Technologies and Public Service Careers

Division: Advanced Technologies and Public Service Careers

Department: Transportation Technologies

Discipline: Automotive & Transportation Tech (new)

Course Number: 134

Org Number: 14100

Full Course Title: Automotive Transmissions

Transcript Title: Automotive Transmissions

Is Consultation with other department(s) required: No

Publish in the Following: College Catalog , Time Schedule , Web Page

Reason for Submission: Course Change

Change Information:

Consultation with all departments affected by this course is required.

Rationale: Update the course for the new discipline.

Proposed Start Semester: Fall 2024

Course Description: In this course, students will discover how automatic and manual drivetrain systems operate. In the lab, students will develop an understanding on how to service, diagnose and replace faulty internal transmission and drivetrain components. Topics will also include drivetrain function and differences in both 2 and 4-wheel drive vehicles as well as identification, diagnosis and repair of major driveline components that affect transmission operation. This course was previously ASV 134.

Course Credit Hours

Variable hours: No

Credits: 4

Lecture Hours: Instructor: 45 **Student:** 45

Lab: Instructor: 60 **Student:** 60

Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 105 **Student:** 105

Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

Prerequisite

ATT 130 minimum grade C

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Recognize, diagnose and repair a basic automatic transmission.

Assessment 1

Assessment Tool: Outcome-related exam questions

Assessment Date: Winter 2026

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Answer key

Standard of success to be used for this assessment: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental faculty

Assessment 2

Assessment Tool: Student competency checklist

Assessment Date: Winter 2026

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental faculty

2. Recognize, diagnose and repair a basic manual transmission.

Assessment 1

Assessment Tool: Outcome-related exam questions

Assessment Date: Winter 2026

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Answer key

Standard of success to be used for this assessment: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental faculty

Assessment 2

Assessment Tool: Student competency checklist

Assessment Date: Winter 2026

Assessment Cycle: Every Three Years

Course section(s)/other population: All

Number students to be assessed: All

How the assessment will be scored: Departmentally-developed rubric

Standard of success to be used for this assessment: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental faculty

Course Objectives

1. Identify components of an automatic transmission.
2. Recognize, diagnose and repair or replace transmission oil pumps and clutches.
3. Diagnose an automatic transmission.
4. Remove an automatic transmission.

5. Repair an automatic transmission.
6. Reinstall an automatic transmission.
7. Identify components of a manual transmission.
8. Recognize, diagnose and repair or replace universal joints (U-joints).
9. Recognize, diagnose and repair or replace constant velocity (CV) drive axles.
10. Recognize, diagnose and repair or replace rear axle differential.
11. Recognize, diagnose and repair or replace transfer cases.
12. Recognize, diagnose and repair or replace transmission shift solenoids as needed.
13. Diagnose transmission/transaxle diagnostic trouble codes using an OBD-II scan tool.

New Resources for Course

Course Textbooks/Resources

Textbooks

VanGelder, K., T.. *Fundamentals of Automotive Technology*, 2nd ed. Jones & Bartlett Learning, 2017, ISBN: 9781284109955.

Manuals

Periodicals

Software

Equipment/Facilities

Level III classroom

Computer workstations/lab

| <u>Reviewer</u> | <u>Action</u> | <u>Date</u> |
|---|---------------------------|---------------------|
| Faculty Preparer: <i>Rocky Roberts</i> | <i>Faculty Preparer</i> | <i>Mar 27, 2024</i> |
| Department Chair/Area Director: <i>Rocky Roberts</i> | <i>Recommend Approval</i> | <i>Mar 27, 2024</i> |
| Dean: <i>Eva Samulski</i> | <i>Recommend Approval</i> | <i>Apr 03, 2024</i> |
| Curriculum Committee Chair: <i>Randy Van Wagnen</i> | <i>Recommend Approval</i> | <i>Mar 20, 2025</i> |
| Assessment Committee Chair: <i>Jessica Hale</i> | <i>Recommend Approval</i> | <i>Mar 20, 2025</i> |
| Vice President for Instruction: <i>Brandon Tucker</i> | <i>Approve</i> | <i>Mar 21, 2025</i> |

Washtenaw Community College Comprehensive Report

ASV 134 Automotive Transmissions Effective Term: Winter 2022

Course Cover

College: Advanced Technologies and Public Service Careers
Division: Advanced Technologies and Public Service Careers
Department: Transportation Technologies
Discipline: Auto Services (new)
Course Number: 134
Org Number: 14100
Full Course Title: Automotive Transmissions
Transcript Title: Automotive Transmissions
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: Three Year Review / Assessment Report
Change Information:
 Course description
 Outcomes/Assessment
 Objectives/Evaluation

Rationale: Master syllabus update after assessing the course.

Proposed Start Semester: Fall 2021

Course Description: In this course, students will discover how automatic and manual drivetrain systems operate. In the lab, students will develop an understanding on how to service, diagnose and replace faulty internal transmission and drivetrain components. Topics will also include drivetrain function and differences in both 2 and 4-wheel drive vehicles as well as identification, diagnosis and repair of major driveline components that affect transmission operation.

Course Credit Hours

Variable hours: No

Credits: 4

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Repeatable for Credit: NO

Grading Methods: Letter Grades

Audit

Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing

College-level Reading & Writing

College-Level Math

Requisites

Prerequisite minimum grade "C"
ASV130

General Education

Request Course Transfer

Proposed For:

Student Learning Outcomes

1. Recognize, diagnose and repair a basic automatic transmission.

Assessment 1

Assessment Tool: Outcome-related exam questions

Assessment Date: Fall 2023

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students

How the assessment will be scored: Common departmental exam will be scored using an answer sheet.

Standard of success to be used for this assessment: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental faculty

Assessment 2

Assessment Tool: Student competency checklist

Assessment Date: Fall 2023

Assessment Cycle: Every Three Years

Course section(s)/other population: All sections

Number students to be assessed: All students

How the assessment will be scored: The student competency checklist will be scored using a departmentally-developed rubric.

Standard of success to be used for this assessment: 70% of the students will score 70% or higher.

Who will score and analyze the data: Departmental faculty

2. Recognize, diagnose and repair a basic manual transmission.

Assessment 1

Assessment Tool: Outcome-related exam questions

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5. Repair an automatic transmission.
6. Reinstall an automatic transmission.
7. Identify components of a manual transmission.
8. Recognize, diagnose and repair or replace U-joints.
9. Recognize, diagnose and repair or replace drive axles.
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11. Recognize, diagnose and repair or replace transfer cases.
12. Recognize, diagnose and repair or replace transmission shift solenoids as needed.

New Resources for Course

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| <u>Reviewer</u> | <u>Action</u> | <u>Date</u> |
|---|---------------------------|---------------------|
| Faculty Preparer: <i>Rocky Roberts</i> | <i>Faculty Preparer</i> | <i>Jul 12, 2021</i> |
| Department Chair/Area Director: <i>Rocky Roberts</i> | <i>Recommend Approval</i> | <i>Jul 12, 2021</i> |
| Dean: <i>Jimmie Baber</i> | <i>Recommend Approval</i> | <i>Jul 14, 2021</i> |
| Curriculum Committee Chair: <i>Randy Van Wagnen</i> | <i>Recommend Approval</i> | <i>Sep 23, 2021</i> |
| Assessment Committee Chair: <i>Shawn Deron</i> | <i>Recommend Approval</i> | <i>Oct 01, 2021</i> |
| Vice President for Instruction: <i>Kimberly Hurns</i> | <i>Approve</i> | <i>Oct 10, 2021</i> |