Course Information Form (CIF)

Course Code: AFM 233

Course Title: Automatic Transmissions

Department: Applied Sciences and Technologies
PCS Code: 1.2 - Occupational/Technical Instruction
CIP Code: 47.0604
Repeatability: 0

Effective Date: Summer 2026

Credit Hours

Catalog Notation: 4-3-5
Credit Hour Distribution:

Lecture: 4	Lab: 3	Clinical: 0	**Total: 5**

General Course Information

Catalog Description

Theory, diagnostic, and overhaul procedures for late-model Ford Motor Company automatic transmissions/trans-axles. Students who successfully complete this course may receive credit for Automatic Transmission/Transaxle Service and Automatic Transmission/Transaxle Advanced Diagnosis from Ford Motor Company.

General Course Objectives

Students will be able to understand the principles of operation of a typical automatic transmission, diagnose, and effect repairs on typical automatic transmissions.

Minimum Placement Levels

English	Reading	Math
Placement into ENG 098	Placement into CCS 098	Placement into MAT 060

Prerequisites

Credit in AFM 259

Methods of Evaluation

The minimum number of evaluation methods include: 3 quizzes, 38 lab exercises, 10 web courses, 2 lab practical exams, and 2 Ford certification exams.

Instructional Materials and Additional Supplies

- Global Fundamentals, Automatic Transmissions, Ford Motor Company
- Automotive Technology, Erjavec, Thompson Delmar Learning

Course Content

General Learning Outcomes (GLOs)

- Reasoning and Inquiry: Students will demonstrate the ability to solve problems using deductive reasoning and logic, quantitative reasoning, or the scientific method.
- Technology: Students will demonstrate the ability to evaluate, select, and appropriately use current and emerging tools.

Course Segments and Student Learning Outcomes

Course Segment	Learning Outcomes	Lecture Hours	Lab Hours	Clinical Hours
Planetary Gear Sets	1. Identify planetary gear components. 2. List different gear functions.	1	2	0
Torque Converters	1. Describe torque converter components and principles of operation.	1	0	0
Hydraulic Principles and Components	1. Identify hydraulic components within the transmission. 2. Describe the principles of operation of each component. 3. List various control systems. 4. Define the principles of operation.	9	2	0
Hydraulic Circuit Flow	1. Trace hydraulic circuit flow in various gear quadrant positions of the following transmissions: 6R60/80, 6F50, 6F35, and 10R80.	10	3	0
Seals and Gaskets	1. Describe uses, characteristics, and installation practices.	2	0	0
Troubleshooting and Diagnosis Procedures	1. List general procedures and specific procedures pertaining to particular models.	9	6	0
Overhaul and Testing Procedures	1. Describe general procedures. 2. List specific procedures pertaining to the following Ford transmissions: 6R60/80, 6F50, 6F35, and 10R80.	9	0	0
Ford Transmission Overhaul	1. Overhaul a Ford lab transmission. 2. Overhaul a Ford trans-axle 6F50 and 10R80.	10	25	0
Diagnose and Make Adjustments	1. Diagnose car transmission problems. 2. Effect minor repairs on a car (electrical and sensor malfunctions, seals and leaks, etc.).	5	3	0
Electronic Transmission Controls	1. Analyze the condition of the electronic transmission controls. 2. Diagnose electronic transmission concerns.	4	4	0

Total Contact Hours

Lecture Hours	Lab Hours	Clinical Hours
60	45	0