



## MASTER COURSE OUTLINE

Prepared By: Dick Wynder

Date: January 2016

### COURSE TITLE

Automatic Transmission Repair

### GENERAL COURSE INFORMATION

Dept.: AUT

Course Num: 212

(Formerly: )

CIP Code: 47.0604

Intent Code: 21

Program Code: 712

Credits: 9

Total Contact Hrs Per Qtr.: 132

Lecture Hrs: 66

Lab Hrs: 66

Other Hrs:

Distribution Designation:

### COURSE DESCRIPTION (as it will appear in the catalog)

This course covers the theory, operation, service, and repair of various automatic transmission and transaxle assemblies. Classroom and laboratory instruction provide in-depth training using modern test equipment in the diagnosis and repair of these complex systems. This course will prepare students for the ASE/NATEF Automatic Transmission Repair Test (A2).

### PREREQUISITES

AUT 115, AUT 121, AUT 131, AUT 132 or instructor approval

### TEXTBOOK GUIDELINES

Appropriate textbooks as chosen by Automotive Faculty (Example: Automatic Transmissions & Transaxles Classroom and Shop Manual 4<sup>th</sup> Edition 2004; James D. Halderman, Pearson Publishing; Task List for Automatic Transmission & Transaxle Repair prepared by Chuck Cox of Big Bend Community College)

### COURSE LEARNING OUTCOMES

*Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills:*

1. Perform automatic transmission/transaxle repairs safely
2. Accurately use and interpret automotive service and repair information obtained from manuals, technical service bulletins, and computerized service information databases
3. Diagnose and repair automatic transmissions/transaxles following accepted trade practices
4. Correctly use modern diagnostic test equipment when diagnosing and testing modern automatic transmission/transaxle assemblies
5. Pass the ASE/NATEF certification test for Automatic Transmission and Transaxle Repair (A2).

### INSTITUTIONAL OUTCOMES

IO3 **Human Relations/Workplace Skills:** Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

### COURSE CONTENT OUTLINE

1. Introduction to Automatic Transmissions and Transaxles
2. Gears & Gear sets

3. Hydraulic Fundamentals
4. Transmission Hydraulic Systems
5. Fluid Couplings and Torque Converters
6. Apply Devices
7. Transmission Fluids, Filters, And Coolers
8. Gaskets, Seal, Bushings, Bearings, Washers, and Snap Rings
9. Basic Computer & Electronic Controls
10. Electronic Control Systems
11. Preliminary Inspection, Testing and Diagnosis
12. Electronic Control Systems Diagnosis
13. Hydraulic System Diagnosis & Repair
14. In the laboratory, various transmission and transaxle assemblies will be disassembled, cleaned, inspected, and reassembled to manufacturer's specifications. Other laboratory assignments include on car servicing, testing adjustment and repair of modern hydraulic and electronic transmission/transaxle assemblies

**DEPARTMENTAL GUIDELINES** *(optional)*

---

**DIVISION CHAIR APPROVAL**

---

**DATE**