

COURSE OUTLINE

Revised By: B. Hughes July, 2007

DEPARTMENT:	Automotive Technology
CURRICULUM:	Automotive Technology
COURSE TITLE:	Advanced Automatic Transmission Service
COURSE NUMBER:	AUT 120
TYPE OF COURSE:	Vocational Preparatory
COURSE LENGTH:	Normally 4 weeks
CREDIT HOURS:	6
LECTURE HOURS:	20
LAB HOURS:	80
CLASS SIZE:	20 maximum
PREREQUISITES:	MVM 100 (Introduction to Automotive Technology I), MVM 102 (Introduction to Automotive Technology II), AUT 100 (Introduction to Electricity), AUT 118 Automatic Transmission Diagnosis and Service), basic math skills, and 9 <sup>th</sup> grade or higher reading level (as evident by appropriate placement test scores), and/or instructor's permission.

COURSE DESCRIPTION:

Contents include: disassemble, clean, inspect, overhaul (this will include replacement of bands, clutches, bushings, seals and various other components to make the transmission serviceable); and reassemble of automatic transmission. In addition the function and construction of each component, as well as their diagnosis and service procedures will be covered. Instruction in safety, environmental awareness, human relations and leadership are taught as an integral part of this unit of study.

STUDENT LEARNING OUTCOMES ADDRESSED:

1. Critical Thinking - Use problem solving skills to diagnose and repair automatic transmission. (SLO 4.1)
2. Technology – Proper use and care of automatic transmission repair tools and equipment. (SLO 5.1)

PROGRAM OUTCOMES:

1. Inspect, diagnose, disassemble, repair, replace and service each of the major systems in various types of vehicles. (SLO 4.1)
2. Locate sources, make parts write-ups, calculate costs and explain repair or service. (SLO 2.1, 2.2 & 7.1)
3. Handle customer needs, complaints, questions and special challenges. (SLO 3.1 & 3.2)
4. Access and apply manufacturer's specifications in repair and replacement. (SLO 7.1)
5. Work safely and responsibly within all shop safety and environmental guidelines and standards. (SLO 6.4 & 6.5)
6. Rebuild and troubleshoot transmissions. (SLO 4.1 & 5.1)
7. Demonstrate ability to pass the ASE test required for NATEF certification. (SLO 1.1, 1.2 & 7.1)
8. Communicate and document service records. (SLO 2.1, 2.2 & 7.1)
9. Compute costs, time and measurements. (SLO 2.1)
10. Work independently and in groups to service, repair, test and maintain vehicles. (SLO 3.1 & 6.3)
11. Use technology to test vehicles. (SLO 5.1)
12. Work with accuracy, dependability, proficiency and in a timely manner, when servicing equipment. (SLO 6.3 & 6.4)

GENERAL COURSE OBJECTIVES:

At the end of the course the student will:

1. Explain and demonstrate safety as it applies to the automotive industry
2. Demonstrate how to use both measuring and special transmission tools
3. Demonstrate how to replace transmission seals
4. Demonstrate how to replace transmission frictions
5. Demonstrate how to overhaul an automatic transmission
6. Demonstrate how to remove and install automatic transmission
7. Demonstrate proficiency in NATEF competencies

TOPICAL OUTLINE:

APPROX. HOURS

I. Safety practices	5
II. Check converter clearances	5
III. Troubleshoot and diagnose automatic transmissions	15
IV. Overhauling automatic transmissions	<u>75</u>
Total	100