



- I. COURSE DESCRIPTION:** This course has been designed to show the students the manufactures maintenance and repair procedures for automatic transmissions and torque converters. Systematic diagnosis procedures will be outlined so the student can test and diagnose transmission control systems, pumps, gear sets, driving and holding devices. Students will trace power flows through an automatic transmission and perform pressure tests.

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

1. Describe the manufactures maintenance and repair procedures for automatic transmissions.  
Potential Elements of the Performance:
  - Explain the need for transmission fluid and filter replacement.
  - Outline band adjustment.
  - Describe the necessary steps required to overhaul an automatic transmission.
2. Explain the diagnostic tests used to verify proper component operation or failure.  
Potential Elements of the Performance:
  - Explain a stall test.
  - Outline the use of a scan tool to diagnose transmission operation.
  - Describe transmission pressure testing.
3. Disassemble automatic transmissions and trace power flows using manufacturers service information.  
Potential Elements of the Performance:
  - Disassemble an automatic transmission.
  - Follow power flow diagrams and apply to the transmission disassembled.
  - Explain how the holding devices make the desired gear ratios for proper operation.
4. Perform transmission preventative maintenance and pressure tests.  
Potential Elements of the Performance:
  - Change transmission fluid and filter.
  - Check fluid condition and level.
  - Perform a stall test.
  - Perform a transmission pump pressure test and compare to manufacturers specifications.

**III. TOPICS:**

1. Describe the manufactures maintenance and repair procedures for automatic transmissions.
2. Explain the diagnostic tests used to verify proper component operation or failure.
3. Disassemble automatic transmissions and trace power flows using manufacturers service information.
4. Perform transmission preventative maintenance and pressure tests.

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

Modern Automotive Technology – Text & Workbook

Pens, pencils, calculator, 3-ring binder

\*shop coat or coveralls

\*CSA approved steel toe boots (high top)

\*CSA approved safety glasses

\*these items mandatory for shop

**V. EVALUATION PROCESS/GRADING SYSTEM:**

The final grade for this course will be based on the results of classroom, assignments and shop evaluations weighed as indicated:

Classroom – 60% of the final grade is comprised of term tests

Assignments – 10% of the final grade is comprised of a number of technical reports

Shop – 30% of the final grade is comprised of attendance, punctuality, preparedness, student ability, work organization and general attitude

(Student will be given notice of test and assignment dates in advance)

The following semester grades will be assigned to students:

| <b>Grade</b> | <b><u>Definition</u></b> | <i>Grade Point Equivalent</i> |
|--------------|--------------------------|-------------------------------|
| A+           | 90 – 100%                | 4.00                          |
| A            | 80 – 89%                 | 3.00                          |
| B            | 70 - 79%                 | 2.00                          |
| C            | 60 - 69%                 | 1.00                          |
| D            | 50 – 59%                 | 0.00                          |
| F (Fail)     | 49% and below            |                               |

CR (Credit) Credit for diploma requirements has been awarded.

|    |  |
|----|--|
| S  | Satisfactory achievement in field /clinical placement or non-graded subject area.  |
| U  | Unsatisfactory achievement in field/clinical placement or non-graded subject area.   |
| X  | A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course. |
| NR | Grade not reported to Registrar's office.  |
| W  | Student has withdrawn from the course without academic penalty.  |

## VI. SPECIAL NOTES:

### Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 703 so that support services can be arranged for you.

### Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

### Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Rights and Responsibilities*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

### Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

*<include any other special notes appropriate to your course>*

**VII. PRIOR LEARNING ASSESSMENT:**

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

**VIII. DIRECT CREDIT TRANSFERS:**

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.