

COURSE PREFIX /NO: **AUT 152**
COURSE TITLE: **AUTOMATIC TRANSMISSION AND TRANSAXLE**
LEC HRS/WEEK: **2.0**
LAB HRS/WEEK: **6.0**
CREDIT HRS/SEMESTER: **4.0**

[DL ATTENDANCE/VA STATEMENT](#)
[TEXTBOOK INFORMATION](#)

COURSE DESCRIPTION

This course is a basic study of power flow and hydraulics including torque converter operation.

COURSE COMPETENCIES

Upon successful completion of this course, the student should be competent to perform the following tasks:

Module 1. General Transmission and Transaxle Diagnosis

1. Identify and interpret transmission/transaxle concern; assure proper engine operation; determine necessary action.
2. Diagnose unusual fluid usage, level, and condition concerns; determine necessary action.
3. Perform pressure tests; determine necessary action.
4. Perform lock-up converter system tests; determine necessary action.
5. Diagnose electronic, mechanical, hydraulic, vacuum control system concerns; determine necessary action.
6. Diagnose noise and vibration concerns; determine necessary action.
7. Research applicable vehicle and service information, such as transmission/transaxle system operation, vehicle service history, service precautions, and technical service bulletins.
8. Locate and vehicle and major component identification numbers (VIN, vehicle certification labels, and calibration decals).
9. Perform stall test; determine necessary action.

10. Diagnose transmission/transaxle gear reduction/multiplication concerns.

Module 2. Transmission and Transaxle Maintenance and Adjustment

1. Inspect, adjust or replace throttle (TV) linkages or cables; manual shift linkages or cables; transmission range sensor; check gear select indicator (as applicable).
2. Service transmission; perform visual inspection; replace fluids and filters.

Module 3. In-Vehicle Transmission and Transaxle Repair

1. Inspect, adjust or replace (as applicable) vacuum modulator; inspect and repair or replace lines and hoses.
2. Inspect, repair, and replace governor assembly.
3. Inspect and replace external seals and gaskets.
4. Inspect extension housing, bushings and seals; perform necessary action.
5. Inspect, leak test, flush, and replace cooler, lines, and fittings.
6. Inspect and replace speedometer drive gear, driven gear, vehicle speed sensor (VSS), and retainers.
7. Diagnosis electronic transmission control systems using a scan tool; determine necessary action.
8. Inspect, replace, and align powertrain mounts.

COURSE REQUIREMENTS

Students are responsible for attaining competencies through completion of the following course requirements:

ATTENDANCE:

Students will be bound by the policies stated in the York Technical College Student Handbook. Students must attend 80% of the hours assigned the class for a semester to receive credit for the course. In case a student does miss a class, the student is responsible for obtaining the material that was covered during the absence. If a student is aware that a class will be missed, then the student should

notify the instructor at the earliest possible date. Students with unexcused absences during tests will be allowed to make up tests at the discretion of the instructor. The student has the burden to be sure that some arrangement has been made with the instructor for taking a make-up test.

ACADEMIC HONESTY

York Technical College adheres to the South Carolina Tech Student code, approved by the State Board for Technical and Comprehensive Education on March 13, 1974(revised last April, 25 1984). Copies of this code are available in the Library and from Student Services. Any student involved in cheating or any other academic dishonesty will be given a grade of zero and will be subject to further disciplinary action. See the student handbook section “Student Life” subheading “Student Conduct” for further details.

PARTICIPATION IN CLASS

Students will be expected to participate in class discussions, to demonstrate problem-solving techniques, to complete tests, homework, lab experiments, lab reports and other assigned work.

EVALUATION STRATEGIES / GRADING

The grading scale will be as follows:

Grade Points	
A	90-100
B	80-89
C	70-79
D	60-69
F	00-59

Evaluation Method

Tests may be written or oral and may contain questions that are true or false, short answer, multiple choice, fill in the blank and/or problems. Students should refer to the instructor for the number of tests to be given and the material to be covered on each test. Each test will be of equal weight unless otherwise indicated by the instructor. Lab grades will be based on the completion of the Course Competencies, team work, safety, class participation, and housekeeping.

Final Grade will be determined as follows:

Module 1	Tests	11.11%
Module 1	Lab	22.22%
Module 2	Tests	11.11%
Module 2	Lab	22.22%
Module 3	Tests	11.11%
Module 3	Lab	<u>22.22%</u>
Total Grade		100%

ENTRY LEVEL SKILLS

Students should demonstrate hand eye coordination, manual dexterity, and be able to work in an industrial environment

PREREQUISITES

None

CO-REQUISITES

None