

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: AUT 142

Credits: 4

Course Title: Auto Power Trains II (Automatic Transmissions)

Course Description (including lecture hours, lab hours, total contacts)

Presents operation, design, construction and repair of power train components, standard and automatic transmission. Includes clutches, propeller shaft, universal joints, rear axle assemblies, fluid couplings, torque converters, as well as 2, 3, and 4 speed standard, overdrive and automatic transmissions. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

General Course Purpose

To examine theory and functioning of automotive automatic transmissions, and perform diagnosis and repair of automatic transmissions. Safety will be emphasized.

Course Prerequisites/Corequisites (*Entry-level competencies **required** for enrollment*)

None

Course Objectives (Each item should complete the following sentence.)

Upon completing the course, the student will be able to:

- a. Describe the purpose and operating principles of the automotive automatic transmission
- b. Describe defects, their cause, and effect on automobile operation
- c. Describe diagnostic and troubleshooting methods
- d. Analyze automatic transmission defects and determine the extent of repairs and/or adjustments necessary to correct

Major Topics to be Included

- a. Hydraulic principles
- b. Torque converters
- c. Automatic transmission principles
- d. Troubleshooting and diagnosis
- e. Overhaul procedures

Effective Date of Course Content Summary (Month, Date Year): February 9, 2009