

## Master Syllabus

### AUT 1142 - Automotive Manual Transmission & Driveline

**Division:** Science, Mathematics and Engineering

**Department:** Automotive Technology

**Credit Hour Total:** 3.0

**Lecture Hrs:** 1.4 **Lab Hrs:** 4.8

**Date Revised:** October 2013

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#### Course Description:

Theory and operation of clutch, manual transmission and transaxle, rear axle, limited slip differential, drive shaft, universal joint, four-wheel drive/all-wheel drive, diagnosis and repair. Basic hand tools required. One classroom, six lab hours per week.

#### General Education Outcomes:

- Critical Thinking/Problem Solving Competency
- Information Literacy Competency

#### Course Outcomes:

##### Axles and Differentials

Identify components and proper procedures for axle and differential service and repair.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% correct responses on exam

##### Driveshafts and Universal Joints

Perform procedures for driveshaft and universal joint service and repair.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% correct responses on exam

##### Four Wheel Drive and All Wheel Drive

Perform service procedures for four wheel drive and all wheel drive service and repair.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% correct responses on exam

##### Clutches

Identify components and proper procedures for clutch service and repair.

**Assessment Method:** Locally developed exams

**Performance Criteria:** Score 70% correct on written exam

**Assessment Method:** Performance appraisals

**Performance Criteria:** Score at least 2 on a 4-point rubric

##### Manual Transmissions and Transaxles

Identify components and proper procedures for transmission and transaxle service and repair.

**Assessment Method:** Locally developed exams

**Performance Criteria:** 70% correct responses on a written exam

#### Outline:

Clutches  
Manual Transmissions/Transaxles  
Differentials  
Axles  
Driveshafts  
Universal Joints  
Four Wheel Drive/All Wheel Drive