AUTO 2166: Starting and Charging Systems

A. COURSE DESCRIPTION

Credits: 2
Lecture Hours/Week: 1
Lab Hours/Week: 2
OJT Hours/Week: *.*

Prerequisites:
This course requires all three of these prerequisites
AUTO 1000 - Orientation and Safety  
AUTO 1010 - General Automotive Service  
AUTO 1167 - Vehicle Electronics

Corequisites: AUTO 2005 and AUTO 2005

MnTC Goals: None

The description, operation, diagnosis, and service procedures related to automotive batteries will be addressed. The description, operation, diagnosis, and various service procedures related to automotive cranking motors and charging systems will be covered. Also included are descriptions of the various circuits used to control starter motor operation and charging system voltage regulation. Understanding and interpreting electrical system service information and schematics will also be addressed. (Prerequisites: AUTO 1000, AUTO 1010, and AUTO 1167)(1 credit lecture/1 credit lab)

B. COURSE EFFECTIVE DATES: 05/27/1998 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Automotive batteries
2. Automotive starting systems
3. Automotive charging systems

D. LEARNING OUTCOMES (General)

1. Explain the purpose, operation, and rating systems of automotive batteries.  
2. Inspect and test battery for internal and external defects.  
3. Describe the purpose, operation, and testing processes of the automotive starting system.  
4. Evaluate and diagnose starting system components and related circuitry issues.  
5. Explain the purpose, operation, and testing processes of the automotive charging system.  
6. Inspect and diagnose charging system components and related circuitry problems.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted