

Course discipline/number/title: AMT 1725: Electrical Lab

A. CATALOG DESCRIPTION

1. **Credits:** 4
2. **Hours/Week:** 8
3. **Prerequisites (Course discipline/number):** None
4. **Other requirements:** None
5. **MnTC Goals (if any):** NA

B. COURSE DESCRIPTION: This course covers the service, diagnosis and repair of automotive electrical systems including starting and charging systems and electrical accessories. This course also covers the service, diagnosis, and repair of basic ignition systems as well as the necessary maintenance to keep ignition systems in good working order.

C. DATE LAST REVISED (Month, year): February, 2023

D. OUTLINE OF MAJOR CONTENT AREAS:

1. Starting Systems
2. Charging Systems
3. Electrical Accessories
4. Inspection and service of ignition components
5. Scan Tool/Scope usage for ignition systems and related ignition sensors
6. Repair of ignition systems
7. Crankshaft Relearn Procedures

E. LEARNING OUTCOMES (GENERAL): The student will be able to:

1. Diagnose and repair automotive starting systems.
2. Diagnose and repair automotive charging systems.
3. Diagnose and repair electrical accessories.
4. Service and maintain basic ignition systems.
5. Diagnose faults in ignition systems.
6. Repair and replace parts as needed.
7. Evaluate ignition systems using various diagnostic tools/equipment.
8. Operate ignition equipment.

F. LEARNING OUTCOMES (MNTC): NA

G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:

1. Shop projects
2. Lab worksheets
3. Individual and team assignments

H. RCTC CORE OUTCOME(S). This course contributes to meeting the following RCTC Core Outcome(s):
Critical Thinking. Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.

I. SPECIAL INFORMATION (if any): None