A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 3
Lab Hours/Week: 2
OJT Hours/Week: *.*

Prerequisites:
This course requires the following prerequisite
MGEM 1601 - Basic Engine Principles I (Number of Years Valid: 5)

Corequisites: None
MnTC Goals: None

Learners study theory of electricity and magnetism. Also included are units on wiring, circuitry, and troubleshooting, ignition systems, charging systems, and their application. This is a basic electricity course, which is built on throughout the program. The course introduces the learner to electrical theory, wiring schematics, symbols, and the basic tools used to test electrical components.

B. COURSE EFFECTIVE DATES: 04/26/2021 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Define electrical theory.
2. Explain methods of generating electricity.
3. Apply Ohms Law to writing.
5. Describe ignition systems.
6. Describe starting systems.
7. Describe charging systems.
8. Demonstrate wire repairs as accepted in industry.
9. Describe basic electrical circuits.
10. Describe basic wiring schematics and symbols.
11. Explain electrical test procedures.

D. LEARNING OUTCOMES (General)

1. Electrical Theory, OHMs Law, DMM.
2. Ignition Systems.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted