A. Course Description
   - Credits: 3.00
   - Lecture Hours/Week: 2.00
   - Lab Hours/Week: 1.00
   - OJT Hours/Week: 0
   - Prerequisites: None
   - Corequisites: None
   - MnTC Goals: None

This is an introduction to electricity as applied to heavy duty equipment covering electronic theory and magnetism. Emphasis is on theory and diagnosis and repair of the following areas: basic starting, charging, lighting, and ignition systems. This course prepares students for heavy duty electronics HCEM 1234 Through classroom instruction and lab practice.

B. Course Effective Dates: 8/21/03 – Present

C. Outline of Major Content Areas
   - As noted on course syllabus

D. Learning Outcomes
   1. Demonstrate shop safety.
   2. Demonstrate use of specialized equipment.
   3. Describe basic steps of trouble shooting electrical systems
   4. Explain and demonstrate Ohm's Law.
   5. Explain direct current electricity.
   6. Explain the fundamentals of magnetism.
   7. Identify wire gauge size.
   8. Troubleshoot starting circuits.

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

F. Learner Outcomes Assessment
   - As noted on course syllabus
G. Special Information

None noted