STEERING SYSTEMS — HCEM 2256

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

This course provides students with basic understanding of steering systems used on heavy equipment. The course begins with mechanical systems followed by intensive overview of hydraulic-assisted systems used on crawlers, articulated loaders, motor graders, and backhoes. Students study principles of operation, components, repair procedures, and adjustments.

B. Course Effective Dates: 1/10/11 – Present

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

D. Learning Outcomes
   1. check to adjust caster/camber and toe-in
   2. demonstrate shop safety
   3. explain abnormal tire wear
   4. explain steering booster valve operation
   5. explain various types of steering systems used in heavy equipment
   6. identify steering components
   7. perform testing and adjusting procedures
   8. use specialized tooling

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

F. Learner Outcomes Assessment
   As noted on course syllabus

G. Special Information
   None noted