Minnesota State College Southeast

INDS 1641: Advanced Small Engines & Systems

A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: 2
Lab Hours/Week: 2
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None

Advanced small engines & systems designed to further enhance the knowledge and understanding of engine-operated equipment. Areas of study include precision measuring equipment, overhaul techniques, electrical charging systems, and governor operations, oil pressure, filtration, and cooling systems. Hands on training in troubleshooting, failure analysis will deepen the students understanding in engine operation. (Prerequisite: INDS1640) (3 credits: 2 lecture/1 lab)

B. COURSE EFFECTIVE DATES: 03/18/2001 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

D. LEARNING OUTCOMES (General)
   1. Perform and describe safety and tools
   2. Perform engine condition diagnostics
   3. Disassemble two stroke engines
   4. Inspect and measure tolerances
   5. Reassemble to specification
   6. Disassemble four stroke engines
   7. Inspect and measure tolerances
   8. Recondition valve train
   9. Recondition cylinder
   10. Recondition engine, lower end
   11. Reassemble to specification
   12. Diagnose electrical systems
   13. Diagnose electric start systems
   14. Diagnose fuel injections systems
   15. Identify diesel engine operations
   16. Diagnose emission systems
   17. Identify product re-power procedure
   18. Performance testing of various products

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

None
F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted