Minnesota State College Southeast

ELEC 1248: Basic Installation

A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 2
Lab Hours/Week: 4
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None
The Student will learn the proper procedures to disassemble a vehicle, evaluate, and install a complete system. The course will follow the Mobile Electronics Certified Professional (MECP) guidelines. (Prerequisite: None) (4 credits: 2 lecture/2 lab)

B. COURSE EFFECTIVE DATES: 08/27/2004 - Present

C. OUTLINE OF MAJOR CONTENT AREAS
D. LEARNING OUTCOMES (General)
   1. Identify safe working conditions
   2. Demonstrate safety habits
   3. Identify electrical flow
   4. Describe electrical circuits
   5. Describe generation of electricity
   6. Operate digital meter
   7. Calculate proper wire gauge
   8. Identify electrical components
   9. Identify parallel circuits
  10. Measure voltage
  11. Measure current
  12. Measure resistance
  13. Determine voltage polarities
  14. Identify electrical symbols
  15. Describe electrical laws & formulas
  16. Identify open and closed circuits
  17. Describe electronic terms
  18. Compare conventional and electron current
  19. Describe factors affecting resistance & voltage drops
  20. Define proper relay operation
  21. Identify resistor values
  22. Identify proper routes for wires
  23. Calculate circuit values using Ohm's law
  24. Calculate resistor power dissipation
  25. Identify device limitations
  26. Identify series circuits
  27. Locate in series circuits shorts and opens
  28. Solve for parallel circuit parameters
  29. Locate in parallel circuits opens and shorts
  30. Identify series-parallel circuits
  31. Solve for series-parallel circuit parameters
  32. Identify filter response
  33. Identify types of noise problems

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted