ELEC 1245: Acoustics

A. COURSE DESCRIPTION

   Credits: 4
   Lecture Hours/Week: 2
   Lab Hours/Week: 4
   OJT Hours/Week: *.*
   Prerequisites: None
   Corequisites: None
   MnTC Goals: None

   This course introduces the student to the different subwoofer enclosure styles and the advantages and disadvantages of each. Active and passive crossovers will also be covered.
   (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 an active filter
   4. Identify a passive filter
   5. Identify a high-pass filter
   6. Operate Real Time Analyzer
   7. Calculate proper wire gauges
   8. Identify a band-pass filter
   9. Identify a low-pass filter
  10. Measure frequency response of a high-pass filter
  11. Measure frequency response of a low-pass filter
  12. Measure frequency response of a band-pass filter
  13. Measure sound pressure levels
  14. Design a high-pass filter
  15. Design a low-pass filter
  16. Design a band-pass filter
  17. Describe sub enclosure styles
  18. Compare sealed and ported sub enclosures
  19. Describe proper system set-up
  20. Describe proper sound stage set-up
  21. Calculate the standing wave of a car
  22. Identify wire routing problems
  23. Calculate system power requirements
  24. Identify amplifier signal clipping with an oscilloscope
  25. Describe proper system set-up
  26. Identify types of noise problems
  27. Locate sources 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