

Minnesota State College Southeast

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