

Minnesota State College Southeast

ELEC 1204: Introduction to AC Electricity

A. COURSE DESCRIPTION

Credits: 2

Lecture Hours/Week: 1

Lab Hours/Week: 2

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course covers the general information, theory, and problem-solving techniques required for an analysis of AC circuits. Topics include: AC waveforms, oscilloscope operation, meter measurements, and AC vs. DC comparisons. (Prerequisites or Concurrent: ELEC1202, proficiency in basic math)
(2 credits: 1 lecture/1 lab)

B. COURSE EFFECTIVE DATES: 02/11/2004 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Analysis of AC circuits
2. Describe AC waveforms
3. Operate an Oscilloscope
4. Operate a signal generator
5. Describe transformer operation

D. LEARNING OUTCOMES (General)

1. Identify wave forms
2. Describe magnetism
3. Determine wave form period
4. Measure wave forms
5. Calculate wave form frequency
6. Operate an oscilloscope
7. Operate function generators
8. Test inductors
9. Convert wave form values
10. Test capacitors
11. Explain trigonometric functions
12. Identify relay circuit
13. Identify filter circuits
14. Apply safety practices
15. Determine phase relationship
16. Construct RC circuits
17. Define capacitance
18. Describe capacitor characteristics
19. Identify RC circuits
20. Describe inductor characteristics
21. Identify RL circuits
22. Calculate RL circuit parameters
23. Describe transformer operation
24. Describe types of filters

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted