

Master Syllabus

EET 1155 - AC Circuits

Division: Science, Mathematics and Engineering

Department: Electronics Engineering Technology

Credit Hour Total: 3.0

Lecture Hrs: 2.0 **Lab Hrs:** 2.0

Prerequisite(s): EET 1150

Date Revised: February 2015

Course Description:

Sinusoidal wave properties, complex numbers and phasors, behavior of transformers, steady-state behavior of RC circuits under AC conditions, steady-state behavior of RL circuits under AC conditions, steady-state behavior of RLC circuits under AC conditions, analysis of basic filter circuits, AC network theorems such as superposition, Thevenin's and Norton's theorems, three phase and polyphase power and power factor analysis. Two classroom, two lab hours per week.

General Education Outcomes:

- Critical Thinking/Problem Solving Competency

Course Outcomes:

AC relationships

Apply knowledge of AC relationships and concepts when working in an AC environment.

Assessment Method: Locally developed exams

Performance Criteria:

Obtain 70% or better

Measurements

Use AC multimeter and oscilloscope to properly make measurements.

Assessment Method: Performance appraisals

Performance Criteria:

Score "17.5" or greater on a five by five rubric

Schematic and circuit relationships

Use the information on the schematic to identify and assess circuits and components.

Assessment Method: Locally developed exams

Performance Criteria:

Earn 70% or higher

Technical communication

Communicate technical information orally and in writing with peers and others.

Assessment Method: Performance appraisals

Performance Criteria:

Score "17.5" or greater on a five by five rubric

Outline:

Sinusoidal wave properties
Complex numbers and phasors
Steady-state behavior of RL, RC, and RLC AC circuits
Analysis of filters
Behavior of transformers
AC network theorems such as Superposition, Thevenin's and Norton's
Power factor analysis
Polyphase power
Magnetics and magnetic devices