Course Objectives/Course Outline
Spokane Community College

Course Title: ELECTRICAL THEORY FOR ENGINEERING
Prefix and Course Number: CAD 262

Course Learning Outcomes:
By the end of this course, a student should be able to:

- understand alternating and direct current
- apply formulas used in electrical design

Course Outline:

I. Introduction
II. Direct Current Electricity
   A. Terminology
   B. Units of Measurement
   C. Ohm’s Law
III. Electric Current Flow
    B. Types of Circuits
IV. Effects of Electric Current
    A. Thermal
    B. Chemical
    C. Magnetic
V. D-C Measuring Instruments
VI. Alternating Current Electricity
    A. Induced Current
    B. Generator
VII. Characteristics of A-C
    A. Phase
    B. Power Factor
VIII. A-C Factors
    A. Resistance
    B. Inductance and Reactance
    C. Capacitance
    D. Circuits
IX. Measuring instruments
X. Types of Generators
XI. Practical Applications
XII. Electronics
    A. Electron Tube
    B. Semiconductors