Course Prefix and Number: ARC 242  
Course Title: Building Electrical Systems  
Credits: 3

Course Description: Studies components and design for lighting and electrical systems, security, fire, and smoke alarms. Lecture 3 hours per week.

General Course Purpose: Course introduces students to the principles of design and functions of electrical systems to buildings, including lighting, communications, security systems, and emergency backup systems.

Course Prerequisites and Co-requisites: None

Course Objectives:  
Upon completing the course, the student will be able to  
a. Understand the principles of electrical power service to a typical residential and commercial structure;  
b. Understand the necessity of proper switch, outlet, and fixture location;  
c. Understand the requirements of appliance wiring and panel locations; and  
d. Apply the knowledge to draw complete and accurate electrical drawings for residential construction.

Major Topics to Be Included:  
a. Blueprint reading  
b. Circuit calculations  
c. Circuit requirements  
d. GFCI requirements  
e. Outlet installation  
f. Switch and fixture installation  
g. Appliances and their impact on power requirements in a building design

Effective Date of Course Content Summary: August, 2008