

---

## SYLLABUS

**DIVISION:** Workforce Services

**REVISED:** 5/13/2013

**CURRICULUM:** Electrical Electronics Engineering Technology

**COURSE NUMBER AND TITLE:** ELE 217-Electric Power Utilities

**CREDIT HOURS:** 2

**HOURS/WEEK LECTURE:** 2

**HOURS/WEEK LAB:** 0

**LECTURE/LAB COMBINATION:** 2

---

**I. CATALOG DESCRIPTION:**

Provides an introduction to the electric power utilities field. Examines the generation, transmission and distribution of electrical energy.

**II. RELATIONSHIP OF THE COURSE TO CURRICULUM OBJECTIVES:**

Teaches the principles of electrical energy.

**III. REQUIRED BACKGROUND/PREREQUISITES/COREQUISITES:**

The student must have completed ELE 113 and ELE 114 or have the instructor's permission.

**IV. COURSE CONTENT:**

1. Introduction to Electrical Power Utilities Field
2. Safety
3. Terms
4. Types of construction
5. Generation
6. Transmission
7. Distribution
8. Substations
9. Protective equipment
10. Communications

**V. LEARNER OUTCOMES :****VII. EVALUATION:**

Demonstrate an understanding of safety and its importance in the electric power utilities.	Written quizzes and tests Oral and written reports Homework and projects
Demonstrate a basic knowledge of the components that comprise an electric utility.	
Demonstrate the ability to relate electrical theory to electric power systems.	
Demonstrate a basic knowledge of power distribution terms and definitions, and basic power calculations.	
Demonstrate a knowledge of the distribution substations.	
Identify the major sources of generation used by the industry.	
Identify sources of renewable energy, how it can be used and how it will affect the future of the industry.	
Understand the importance of preventive maintenance as it pertains to the electric power utilities.	

**VII. The course supports the following general education goals/objectives:**DCC Educational Objectives

- Communication
- Critical Thinking
- Information Literacy
- Quantitative Reasoning