

**COURSE – B**  
**BASIC INDUSTRIAL ELECTRICAL THEORY II**  
**( Level 2 )**

- TEXT BOOK:** Electrical Principles and Practices - Mazur/Zurlis  
(Same text as Course-A)
- TOOLS/MATERIALS:** Students should bring the following to class:  
- Calculator  
- Textbook listed above  
- Writing utensils and notepaper
- TIME FRAME:** Half-day session (4 Hours)
- PREREQUISITE(s):** Course-A, Basic Industrial Electrical Theory I (Level 1)

**General Sequence**

- **Introduction**
  
- Chapter 3 Ohm's Law and the Power Formula**
  
- Chapter 4 Electrical Safety**

**At the end of this training session, students should be able to.....**

**Chapter 3**

- Calculate voltage, current, and resistance using Ohm's Law.
- Explain the voltage/current/resistance relationship according to Ohm's Law.
- Describe common applications of Ohm's law for troubleshooting circuits.
- Calculate power, voltage, and current using the power formula.
- Explain the power/current/voltage relationship according to the power formula.
- Describe common applications of the power formula.
- Explain how Ohm's law and the power formula can be combined to create additional formulas.

**Chapter 4**

- Define electric arc and related arc terms.
- Describe electrical shock and freeze or let go current.
- Describe common procedures for lockout/tagout and common lockout devices.