

COURSE – C
INDUSTRIAL ELECTRICAL MATH
(Level 3)

TEXT BOOK: Electrical Principles and Practices - Mazur/Zurlis
(Same text as previous Courses)

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): (None)

General Sequence

Chapter 5 Math Principles

Chapter 6 Math Applications

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

Chapter 5

- List and describe common types of numbers used in mathematics.
- Demonstrate how to reduce, add, subtract, multiply, and divide fractions.
- Convert fractions to decimals and convert decimals to fractions.
- Demonstrate how to round numbers.
- Convert percentages to decimal and convert decimals to percentage.
- Demonstrate how to raise base numbers to powers.
- List and describe common types of roots.
- Describe common systems of measurement and measurement conversion.
- List and describe common ways to show relationships between numbers.

Chapter 6

- Calculate the amount of actual power delivered by an electric heating element.
- Calculate energy usage.
- Calculate approximate allowable length a conductor can be run.
- Calculate conductor resistance.
- Calculate voltage per hertz (V/Hz) ratio.
- Calculate energy-efficient motor savings.
- Calculate motor operating speed at a different frequency.
- Convert RMS voltage to peak voltage and convert peak voltage to RMS voltage.