

COURSE – N  
**DIGITAL ELECTRONICS PRINCIPLES**  
**( Level 14 )**

- TEXT BOOK:** Electrical Principles and Practices - Mazur/Zurlis  
(supplied by Schaedler / YESCO Distribution)
- 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)  
Course-B, Basic Industrial Electrical Theory II (Level 2)

**General Sequence**

- Chapter 7    Numbering Systems and Codes**  
**Chapter 25    Digital Electronics Circuits**

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

Chapter 7

- Describe the function and operation of the decimal and binary number systems.
- Convert between binary numbers and decimal numbers.
- Describe the function and operation of the octal numbering system.
- Convert between binary numbers and octal numbers.
- Describe the function and operation of the hexadecimal numbering system.
- Convert between binary numbers and hexadecimal numbers.
- Describe the function and operation of the BCD system.
- Convert between binary numbers and BCD numbers.
- Describe the function and operation of Gray code.
- Describe the function and operation of color codes.

Chapter 25

- Describe the function and operation of digital electronic circuits.
- List and describe common methods for depicting digital electronic circuits.
- List and describe common types of logic gates.
- Describe the function pull-up and pull-down resistors.
- List and describe common types of logic families.