

# Dakota County Technical College

## **ELEC 1240: Construction Skills and Introduction to Wiring Lab**

### **A. COURSE DESCRIPTION**

Credits: 6

Lecture Hours/Week: \*.\*

Lab Hours/Week: 6

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course covers lab experiences in material and design of residential wiring, wiring methods, selection of proper fastening devices, sizing of wire and boxes, branch circuit requirements, and use of blueprints.

Prerequisites: ELEC1110, ELEC1120, ELEC1130.

**B. COURSE EFFECTIVE DATES:** 08/21/2003 - Present

**C. OUTLINE OF MAJOR CONTENT AREAS**

#### **D. LEARNING OUTCOMES (General)**

1. Analysis uses of branch circuits
2. Apply NEC table 310-16
3. Apply the blueprints to residential wiring systems
4. Apply the symbols to blueprints
5. Compute wire size and type according the electrical load
6. Construct wiring systems used in residential wiring
7. Descript the tools used for residential wiring
8. Identify boxes used in residential wiring systems
9. Identify symbols used for blueprints
10. Identify types of residential branch circuits
11. Identify types of wires used the residential wiring
12. Illustrate wiring methods
13. Install U F wire
14. Install different types of residential branch circuits
15. Install electrical metallic tubing
16. Install the appropriate box for residential wiring
17. Install types of A. C. cable
18. Install types of romex
19. Install wiring methods used in residential wiring
20. Interpret the appropriate NEC code articles to the residential wiring
21. Observe the proper use of drills
22. Observe the proper use of ladders
23. Observe the proper use of miscellaneous tools used for residential wiring systems
24. Observe the proper use of wood saws
25. Observe wiring methods used in residential wiring
26. Operate drills safely
27. Operate saws safely
28. Operate tools used for residential wiring
29. Recognize the proper use of drills
30. Recognize the proper use of ladders
31. Recognize the proper use of saws
32. Recognize the proper use of tools used for residential wiring
33. Recognize types of boxes used in residential wiring systems
34. Recognize wiring methods used in residential wiring
35. Run wiring in the residential settings
36. Use ladders safely
37. Wire the residential according to the blueprints

#### **E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

None

#### **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

**G. SPECIAL INFORMATION**

None noted