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Northeast Wisconsin Technical College

## 31-413-335 022714 Line Electrician-Construction Standards

### Course Outcome Summary

#### Course Information

**Description** 31-413-335 LINE ELECTRICIAN-CONSTRUCTION STANDARDS ...[This](#) course teaches students distribution standards for overhead, underground, primary, secondary, clearances, code requirements, map/diagram reading and safe work practices.

**Total Credits** 1

**Total Hours** 36

#### Course History

**Last Revision Date** 3/16/2017

#### Employability Skills

1. Communicate Effectively
2. Demonstrate Community and Global Accountability
3. Demonstrate Personal Accountability
4. Solve Problems Effectively
5. Think Critically and Creatively
6. Value Individual Differences and Abilities
7. Work Cooperatively and Professionally

#### Program Outcomes

1. TSA1 - Apply electrical theory
2. TSA2 - Construct overhead electrical distribution systems
3. TSA3 - Disassemble overhead electrical distribution systems
4. TSA4 - Construct underground electrical distribution systems

5. TSA5 - Disassemble underground electrical distribution systems
6. TSA7 - Disassemble overhead electrical transmission system
7. TSA8 - Maintain electrical systems

## Course Competencies

### 1. Determine proper construction standards for Line Electricians

#### Assessment Strategies

by determining proper construction standards for Line Electricians.

#### Learning Objectives

- 1.a. Navigate through Construction Standards manual.
- 1.b. Recognize basic overhead primary construction.
- 1.c. Recognize basic overhead secondary and service construction.

#### Criteria

*Your performance will be successful when:*

- 1.1. you verify standards in Construction Standards Manual used with Line Electricians.
- 1.2. you apply construction standards.

### 2. Determine proper construction standards for electrical equipment.

#### Assessment Strategies

by determining proper construction standards for electrical equipment.

#### Learning Objectives

- 2.a. Navigate through Construction Standards manual.
- 2.b. Recognize basic construction of single phase transformer hook-ups.
- 2.c. Recognize basic construction of three phase transformer hook-ups.
- 2.d. Explain operating procedures for reclosers to place in and out of service.
- 2.e. Explain operating procedures for capacitors to place in and out of service.
- 2.f. Explain operating procedures for regulators to place in and out of service.

#### Criteria

*Your performance will be successful when:*

- 2.1. you verify standards in Construction Standards Manual used with electrical equipment.
- 2.2. you apply construction standards.

### 3. Draw transformer diagrams.

#### Assessment Strategies

by drawing transformer diagrams.

#### Learning Objectives

- 3.a. Recognize how transformer diagrams work.
- 3.b. Recognize all the components involved with transformer diagrams.
- 3.c. Recognize all the different voltages that could be used with transformer diagrams.

#### Criteria

*Your performance will be successful when:*

- 3.1. you label components properly.
- 3.2. you include transformers.
- 3.3. you include cut outs.
- 3.4. you include arrestors.
- 3.5. you include primary hookups.
- 3.6. you include secondary hookups.
- 3.7. you include tank grounds.
- 3.8. you include ground wire connections.
- 3.9. you include primary bushings.

- 3.10. you include secondary bushings.
- 3.11. you include primary windings.
- 3.12. you include secondary windings.
- 3.13. you include primary phase wires.
- 3.14. you include secondary phase wires.
- 3.15. you include all proper voltages.