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Northeast Wisconsin Technical College

31-413-332 022712 Line Electrician Field Training 3

Course Outcome Summary

Course Information

Description	31-413-332 LINE ELECTRICIAN FIELD TRAINING 3 ...This course provides training in transmission, substation operations and maintenance, customer metering, low voltage construction, street lighting, and use of tree trimming methods and tools. (Prerequisite: 31-413-337, Line Electrician Field Training 2-B)
Total Credits	5
Total Hours	180

Course History

Last Revision Date	3/16/2017
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Employability Skills

- Communicate Effectively
- Demonstrate Community and Global Accountability
- Demonstrate Personal Accountability
- Solve Problems Effectively
- Think Critically and Creatively
- Value Individual Differences and Abilities
- Work Cooperatively and Professionally

Program Outcomes

- TSA3 - Disassemble overhead electrical distribution systems
- TSA6 - Construct overhead electrical transmission system
- TSA7 - Disassemble overhead electrical transmission system
- TSA8 - Maintain electrical systems

Course Competencies

1. Perform proper pole climbing.

Assessment Strategies

by properly climbing poles

Learning Objectives

- 1.a. Utilize Personal Protective Equipment (PPE)
- 1.b. Climb wood poles

Criteria

Your performance will be successful when:

you use a safety strap
you belt in and belt off of wood poles
you double belt wood poles
you ascend and descend free hand
you ascend and descend belted in
you coordinate hand and foot movement
you lengthen and shorten safety strap properly to perform work
you move around the pole free hand
you move around the pole belted in
you climb over cross arms and obstruction
you hang a hand line while on the pole
you perform work with two hands

2. Demonstrate rigging techniques

Assessment Strategies

by demonstrating proper rigging techniques

Learning Objectives

- 2.a. Utilize Personal Protective Equipment (PPE)
- 2.b. Demonstrate proper installation and removal of pole gins
- 2.c. Demonstrate proper installation and removal of baker boards
- 2.d. Demonstrate proper rigging techniques

Criteria

Your performance will be successful when:

you demonstrate proper use of slings
you make-up blocks
you inspect blocks
you properly handle blocks and rigging equipment
you install pole gin in desired location per specific pole gin
you remove pole gin with proper technique per specific pole gin
you install baker boards in desired location per specific baker board
you remove baker boards with proper technique per specific baker boards

3. Demonstrate proper procedures for working on secondary systems

Assessment Strategies

by demonstrating replacing a service without interruption of service to the customer

Learning Objectives

- 3.a. Check voltage between two services
- 3.b. Demonstrate temporary or permanent connections of wire
- 3.c. Remove old service
- 3.d. Utilize Personal Protective Equipment (PPE)

Criteria

Your performance will be successful when:

you verify there is correct voltage before replacing service
you determine proper location for installing new service
you cover wires with proper rubber gear to isolate wire being worked on.
you determine how to run the wire depending on location on pole.

you phase wire together to same potential
you cover up each connection properly
you remove lower wires prior to higher wires as appropriate

4. Identify different types of watt hours meters

Assessment Strategies

by identifying different types of watt hours meters

Learning Objectives

- 4.a. Identify types of meters
- 4.b. Utilize Personal Protective Equipment (PPE)

Criteria

Your performance will be successful when:

you differentiate between installation and repair meters
you identify the type of meters (different types of amperage) depending on the customer (residential/commercial customers)
you perform proper voltage checks prior to installation
you identify the consequences of installing the wrong meter

5. Perform proper truck operation.

Assessment Strategies

by performing proper truck operation

Learning Objectives

- 5.a. Utilize Personal Protective Equipment (PPE)
- 5.b. Demonstrate signals for boom operations
- 5.c. Operate digger derrick truck
- 5.d. Operate bucket truck

Criteria

Your performance will be successful when:

you perform DOT inspection of vehicle.
you start engine.
you position truck for work, check soil, road, and shoulder.
you properly guard the work site.
you engage PTO.
you operate lower controls.
you perform inspection of digger derrick/bucket truck prior to use.
you raise and cradle the boom.
you raise outriggers.
you disengage PTO.
you attach trailer, detach trailer and park trailer.
you back vehicle and trailer.
you use hand signals.
you locate and operate pedestal override controls.

6. Use hand and power tools.

Assessment Strategies

by using hand and power tools

Learning Objectives

- 6.a. Utilize Personal Protective Equipment (PPE).
- 6.b. Display proper use of hand tools.
- 6.c. Display proper use of power tools.

Criteria

Your performance will be successful when:

you select correct tools.
you inspect tools.

you adjust tools before and during each use.
you clean and inspect tools.
you store tools in correct location.

7. Perform pole top rescue.

Assessment Strategies

by performing pole top rescue.

Learning Objectives

- 7.a. Utilize Personal Protective Equipment (PPE)
- 7.b. Display proper pole top rescue
- 7.c. Be aware of hazards in pole top rescue.

Criteria

Your performance will be successful when:

you identify the hazards.
you call emergency for help.
you install climbing gear.
you ascend the pole.
you position hand line for rescue.
you rig injured person.
you lower injured person.
you descend the pole.
you remove climbing gear.
you perform CPR on injured person.

8. Perform safe chainsaw operations.

Assessment Strategies

by performing safe chainsaw operations.

Learning Objectives

- 8.a. Utilize Personal Protective Equipment (PPE).
- 8.b. Display proper chainsaw operations.
- 8.c. Be aware of the hazards in chainsaw operations.

Criteria

Your performance will be successful when:

you inspect chainsaw before use.
you use proper safety equipment during use.
you sharpen and set chains.
you properly start saw.
you identify the hazards of chainsaw operations.
you properly operate the saw.

9. Perform protective grounding procedures on distribution systems.

Assessment Strategies

by performing protective grounding procedures on distribution systems.

Learning Objectives

- 9.a. Utilize Personal Protective Equipment (PPE).
- 9.b. Identify the use of personal protective grounding.
- 9.c. Be aware of the hazards of personal protective grounding.

Criteria

Your performance will be successful when:

you perform grounding procedures climbing a pole.
you perform grounding procedures using a bucket truck.
you perform grounding procedures on underground distribution.
you de energize the circuit.
you test the circuit.

you install the proper personal protective grounds.
you identify the hazards of personal protective grounding.

10. Perform protective grounding procedures on transmission systems.

Assessment Strategies

by performing protective grounding procedures on distribution systems.

Learning Objectives

- 10.a. Utilize Personal Protective Equipment (PPE).
- 10.b. Identify the purpose of personal protective grounding.
- 10.c. Be aware of the hazards of personal protective grounding.

Criteria

Your performance will be successful when:

you perform grounding procedures climbing a pole.
you perform grounding procedures using a bucket truck.
you de energize the circuit.
you test the circuit.
you install the proper personal protective grounds.
you identify the hazards of personal protective grounding.

11. Perform construction on transmission systems.

Assessment Strategies

by performing construction on transmission systems.

Learning Objectives

- 11.a. Utilize Personal Protective Equipment (PPE).
- 11.b. Demonstrate proper construction on transmission systems.
- 11.c. Be aware of the hazards of transmission construction.

Criteria

Your performance will be successful when:

you replace a transmission pole.
you replace a crossarm.
you replace insulators.
you identify the hazards involved with transmission construction.

12. Perform hot stick work.

Assessment Strategies

by performing hot stick work.

Learning Objectives

- 12.a. Utilize Personal Protective Equipment (PPE).
- 12.b. Properly perform hot work.
- 12.c. Be aware of hazards involved with hot stick work.

Criteria

Your performance will be successful when:

you select proper hot sticks.
you rig hot sticks.
you utilize a chicken ladder.

13. Use fire extinguishers.

Assessment Strategies

by using a fire extinguishers.

Learning Objectives

- 13.a. Utilize Personal Protective Equipment (PPE).
- 13.b. Identify all types of fires.
- 13.c. Identify all types of fire extinguishers.

Criteria

Your performance will be successful when:

- you identify Class A fire extinguishers.
- you identify Class B fire extinguishers.
- you identify Class C fire extinguishers.
- you identify Class D fire extinguishers.
- you identify Class K fire extinguishers.
- you identify what fire extinguishers should be used with what fire.
- you properly extinguish of fire using the PASS method.
- you locate where fire extinguishers are located.

14. Acquire interviewing skills.

Assessment Strategies

by acquiring interviewing skills.

Learning Objectives

- 14.a. Interview with confidence.
- 14.b. Assess your interview performance and make improvements.
- 14.c. Properly prepare yourself for the interview process.

Criteria

Your performance will be successful when:

- you practice answering interview questions
- you develop confidence in interviewing skills
- you analyze a variety of interview situation (one-on-one and panel)
- you provide feedback to peers regarding their interviewing skills
- you present yourself for an interview
- you research needs to be completed prior to an interview
- you utilize the services are available through the Career Center
- you have completed at least one mock interview
- you answer behavioral interview questions using the STAR technique
- you properly prepare for an interview: grooming, dress, company research

15. Tie knots and splice ropes.

Assessment Strategies

by tying knots and splicing rope.

Learning Objectives

- 15.a. Utilize Personal Protective Equipment (PPE).
- 15.b. Demonstrate how to tie knots.
- 15.c. Demonstrate how to splice rope.

Criteria

Your performance will be successful when:

- you tie a bowline.
- you tie a double bowline.
- you tie a bowline on a bight.
- you tie a triple (rescue) bowline.
- you tie a square knot.
- you tie a figure eight knot.
- you tie a sheepshank.
- you tie a overhand knot.
- you tie two half hitches.
- you tie a round turn and two half hitches.
- you tie a snubber.
- you tie a catspaw.
- you tie a timber hitch
- you make a crown knot and back splice.

you make a short splice.
you make an eye splice.

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