

Minnesota West Community and Technical College

Jackson Campus

INSTRUCTOR:

Program Advisor: Donald Craig 507-847-7962

don.craig@mnwest.edu

ELPL 1102 Pole Climbing and Equipment Operation 2

COURSE DESCRIPTION: This is a continuation of ELPL1100 - Pole Climbing and Equipment Operation. Covered are two of the techniques used by powerline workers to elevate themselves to a safe working position for the installation, maintenance or removal of electrical equipment on powerlines. The techniques are pole climbing and safe operations of digger and basket trucks. 4 Cr (1 lec/pres, 3 lab, 0 other)

COURSE FOCUS: Climbing techniques learned are free-hand and with a safety strap. Students will learn installation and removal of pole hardware, setup and safe operation of digger derrick, bucket trucks, hydraulic systems, and truck driving operations.

TEXT AND REFERENCES: Manufacture's recommendations and OSHA requirements will be provided in class. The Lineman Cablemans Handbook. REA Spec. Book

PREREQUISITES: ELPL1100 - Pole Climbing and Equipment Operation.

COURSE GOALS: The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives. All goals will be completed except if time does not allow.

1. describe pole climbing equipment
 - a. tool belt accessories
 - b. tool belt
 - c. climbers
 - d. shaping gaffs
 - e. demonstrate sharpening gaffs
 - f. fit climbers
2. describe hand and foot placement
3. describe tool belt safety strap placement
4. describe pole quadrant
5. describe STATE OSHA RULES as applied to ELECTRICAL
6. describe ANSI WORK RULES as applied to ELECTRICAL
7. describe FEDERAL OSHA RULES as applied to ELECTRICAL
8. demonstrate climbing pole freehand
 - a. hand and foot placement
 - b. tool belt safety strap placement
 - c. moving around the pole
9. demonstrate climbing pole safety strap method
 - a. hand and foot placement
 - b. tool belt safety strap placement
 - c. moving around the pole

10. describe sound testing pole
 - a. demonstrate sound testing pole
11. frame and retire single crossarm

TRUCKS

12. describe safety rules for both digger derricks and basket truck operation
 - a. positioning truck on inclines
 - b. stability extension cylinders
 - c. bucket control detent
 - d. control override
 - e. emergency operations
 - f. emergency procedures
 - g. boom lifting capabilities
 - h. truck ground and barrier
 - i. self-leveling bucket
 - j. bucket liner
 - k. AC minimum distances
13. fill out log sheet
 - a. check out truck chassis
 - b. perform before operation checks
14. describe hydraulic and overload protectors
 - a. identify hydraulic cylinders
 - b. identify control levers
15. describe cold weather start-up
16. name steps for digging hole
17. name steps for setting pole
18. Demonstrate digging hole and setting pole
 - a. check stability
 - b. engage PTO
 - c. set outriggers
 - d. use standard operating signals
 - e. pole crabber winch
 - f. pole claws
19. use pole trailer
20. use hydraulic pole puller
21. clean up job site

STUDENT CONTRIBUTIONS: Each student will spend at least 4 hours per week preparing for class. Attendance is critical in this class: Each class worth 15 points, late for class 10 points, call for absence 5 points, do not show up or notify –10 points. Excuse one absence.

COURSE EVALUATION: Your performance in this course will be converted to percent. A (100-94), A- (93-90), B+ (89 -87), B (86-84), B- (83-80), C+ (79 -76), C (75-72), C- (71-67), and F (below 67)

COURSE SCHEDULE: The class meets for 1 lecture hour and 6 lab hours per week.

To receive accommodations for a documented disability, please contact the campus Student Services Advisor as soon as possible. Students are also encouraged to notify the instructor.

This document can be made available in alternative format by contacting Student Services, the Campus CEOs or calling Minnesota Relay Service at 1-800-627-3529. Reasonable accommodations will be provided upon request for documented disabilities. An Affirmative Action Equal Opportunity Educator/Employer. ADA Accessible.

This information in this course outline is subject to revisions. Revised: Sept 30, 2008