

**LNWK 1301**  
**ORIENTATION AND LINE SKILL FUNDAMENTALS**

**Western Texas College**

- I. Course Description
  - A. Examination of utility company operations. Topics include company structure, safety and distribution handbook, lineman's tools, vocabulary, and work procedures. Discussion of basic electrical systems including the history of power generation and distribution with emphasis on generating plants and substations.
- II. Basic Program Requirements
  - A. Safety glasses
  - B. Work boots
  - C. Leather work gloves
  - D. Long sleeve shirt
  - E. Notebook and pen
  - F. Proof of personal health/accident insurance is required.
  - G. Possible background check
  - H. Random drug testing will be performed on all Electrical Lineman Technology students.
- III. Course Objectives
  - A. Upon completion of the class each student will be able to:
    - Effectively use critical thinking skills regarding safety and procedures
    - Know a majority of the terms used in the field of Electrical Distribution Systems
    - Know the history of power generation and distribution
    - Know the history and current practice of generating plants and substations
    - Assist in determining the nature of problems, based on existing conditions
    - Identify appropriate resources in other organizations within the electrical lineman field
    - Use the problem-solving approach as the basis for decision making in the field
    - Use effective organizational skills in planning electrical lineman duties
    - Show respect for the dignity of individuals as customers and co-workers
    - Evaluate the safety and make necessary adjustments
    - Demonstrate accountability for lineman responsibilities
    - Assume responsibility for analyzing one's own potential and select appropriate goals for continuing education and career mobility
    - Demonstrate promptness and reliability
    - Participate in all duties as a lineman

- B. Student Learning Outcomes
  - Describe financial operations of a typical power company
  - Explain customer relations
  - Identify electrical systems, lineman's tools, and work procedures
  - Illustrate system operation and design
  - List safe and proper handling of all equipment.
- IV. Outcome Assessment Methods
  - A. Written examinations, worksheets, scenarios, and group discussions
- V. Grading
  - A. Standard grading system is as follows:
    - A 90-100 Superior Achievement
    - B 80-89 Excellent Achievement
    - C 70-79 Average Achievement
    - D 60-69 Passing Achievement
    - F Below 60 Failing
  - B. There will be several exams spaced throughout the semester. The exam questions may include any combination of the following:
    - True/False
    - Multiple choice
    - Fill in the blank
    - Short answer
- VI. Student Attendance
  - A. Class roll will be taken since regular and punctual attendance is expected for all designated class meeting time
  - B. The attendance policy established by the College and set out in the current catalog will be applied in determining student attendance. *This includes the reporting of three hours of unexcused absences to the Counseling Center by the instructor, and an administrative drop for repeated attendance policy violations.*
  - C. Students are encouraged to coordinate anticipated absences with the instructor and/or to advise the Counseling Center of any anticipated longer-term absences from class
  - D. Please keep in mind that this course contains a significant number of graded assignments
  - E. Excessive absences will result in the failure to complete one or more of these activities and therefore result in the loss of credit as described above.
  - F. PLEASE NOTE:
    - Every three unexcused absences will result in the loss (drop) of a letter grade, regardless of a student's course average.
    - Tardies will be treated the same, with five tardies being equivalent to a loss (drop) in a letter grade.
- VII. Conduct and Academic Dishonesty
  - A. This course will be taught in a college classroom environment. Students will come to class prepared to participate in the learning process and that part of this preparation will include the demonstration of mature and

purposeful behavior. Therefore, activities such as sleeping in class, interruptive talking with fellow students (including cell phones), rudeness to fellow students, overt tobacco use or other types of inappropriate behavior (including cheating and plagiarism) will not be tolerated, and may be dealt with by instructor-initiated student withdrawal from class. College policy prohibits the consumption of drinks and snacks in the classroom.

VIII. Additional Requirements

- A. Complete all course work with at least a score of 85, and pass 50% of the scheduled tests.
- B. Complete each level with a passing evaluation.

IX. Required Books (Please note that these books will be used in several different classes.)

TITLE	AUTHOR
Lineman's + Cableman's Handbook	ISBN 978-0-07-146789-6
Basic Electric Power Distribution	Alexander Publishing
SPECIFICATIONS AND DRAWINGS FOR 12.47/7.2 KV LINE CONSTRUCTION	Alexander Publishing
TRANSFORMATION FOR LINEWORKERS	Alexander Publishing
Distribution Transformer Handbook	Alexander Publishing
Pocket Guide to Watthour Meters	Alexander Publishing

X. Course Schedule

Course Content
<u>Topic:</u> Introduction, lecture and discussion of utility company history and operations. Lab 1: Introduction to Outside Lab
<u>Topic:</u> Company Structure and Related Topics Lab 2: Outside lab
<u>Topic:</u> Company Structure, (continued) with financial and related organizational systems Lab 3: Outside lab
<u>Topic:</u> History and Practice of Generating Plants and Substations Lab 4: Outside lab
<u>Topic:</u> Safety and Distributions/Handbook Review Lab 5: Outside lab
<u>Topic:</u> Safety and Distributions (continued) Lab 6: Outside lab

Topic: Organizational Skills in Planning Electrical Lineman Duties Lab 7: Outside lab
Topic: Determination of Problems Based on Existing Conditions Lab 8: Outside lab
Topic: Electrical Systems Lab #10 Outside lab
Topic: Electrical Systems Safety Lab #11 Outside lab
Topic: Customer Service Skills Lab #12 Outside lab
Topic: Problem-Solving Approach to all Safety and Distribution Issues and Conditions Lab #13 Outside lab
Topic: Problem-Solving Approach to all Safety and Distribution Issues and Conditions (continued) Lab #14 Outside lab
Topic: Course Review Intensive Lab 15: Lab Review Intensive

Last Modified: August 24, 2016