

LNWK 1231
Transformer Connections
Western Texas College

I. Basic Course Information

- A. Course Description: An introduction to basic transformer connections and theory (including basic alternating current (AC) theory) and their direct application to single phase and three phase transformers. Students will study and practice basic transformer connections and fundamentals.
- B. Prerequisites: None

II. Student Learning Outcomes

- A. Explain the theory and operation of distribution transformers including basic transformer polarity and impedance
- B. Demonstrate the ability to troubleshoot single-phase and three-phase transformer installations while following safety procedures

III. Major Course Requirements: The grade for this course will be determined as follows:

- A. Exams: 25%
- B. Quizzes/Daily Assignments: 25%
- C. Participation: 25%
- D. Attendance: 25%
- E. Grading scale:
 - A= (90-100%)
 - B= (80-89%)
 - C= (70-79%)
 - D= (60-69%)

IV. Information on Books and Other Course Materials

- A. The Program utilizes T & D Power Skills' Lineworker Apprentice Training Program.
- B. Lineman gear and all training materials are provided to students.

V. Other Policies, Procedures and important dates: Please refer to the WTC Course Catalog for the following:

- A. Campus Calendar
- B. Final exam schedule
- C. How to drop a class
- D. Withdrawal information
- E. Student Conduct/Academic Integrity
- F. Class Attendance
- G. Students with disabilities

VI. Course Sequence & Content

Week	Topic
Week 1	Introduction to Course. Discuss class syllabus, learning objectives, and classroom expectations.
Week 2	Alternating Current, Inductance, Capacitance Quiz 1
Week 3	AC Power, Single-Phase and Three-Phase Systems Quiz 2
Week 4	Transformer Basics, Primary Systems Quiz 3
Week 5	Single-Phase Transformer Connections Quiz 4
Week 6	Three-Phase Primary Connections Quiz 5
Week 7	Delta Secondary Connections Quiz 6
Week 8	Wye Secondary Connections Exam 1
Week 9	Three-Phase Banks Quiz 7
Week 10	Delta-Wye Connections, Wye-Delta Connections Quiz 7 & 8
Week 11-12	Alternative Connections Quiz 9

Week 13	Open Banks Quiz 10
Week 14	Additional Three-Phase Connections Quiz 11
Week 15	Course Review
Week 16	Final Exam

Disclaimer: Sequence & Content is subject to change at the instructor's discretion.