

# ELECTRICAL LINE TECHNOLOGY (ELLT)

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## **ELLT 1200 - Introduction To Power Safety (3 Credit Hours)**

This course will begin with a basic safety and fire prevention and an introduction to the systems and components that make up a basic electrical system, including generation, transmission and distribution. Prerequisite(s): None (2/1/3)

## **ELLT 1210 - Intro To The Power Industry (3 Credit Hours)**

This course will study the history behind electrical utility industry. Students will study how the electrical system in the United States was established and how Thomas Edison and George Westinghouse, Jr. influenced the development of electrical systems. Students will also learn how the electrical industry was first regulated and how regulation of the industry has changed as well as learning specific employability skills. Students will also gain knowledge of how the electrical industry is currently being "re-regulated" to encourage competition and gain knowledge of the system operations and marketing of electricity. Finally, this course will teach how the electrical industry is segmented into utility sectors, such as investor owned, Federal owned, publicly owned and cooperatively owned utilities. Prerequisite(s): None (2/1/3)

## **ELLT 1300 - Electric Line Safety (3 Credit Hours)**

Meets OSHA's requirements for a construction industry training program. This course provides employees with best practices for some of the most common and hazardous situations on the job site. Prerequisite(s): None (2/1/3)

## **ELLT 1310 - Pole Climbing (4 Credit Hours)**

This course is designed to provide instruction on climbing a utility pole safely using the latest OSHA fall resistant requirements. At the completion of this course, you will be able to safely ascend and descend a utility pole using gaffs. Prerequisite(s): None (1/3/4)

## **ELLT 1320 - Line Equipment Operation (4 Credit Hours)**

This course teaches the maintenance of a company's machinery and equipment. Topics include how to run samples to ensure conformity to quality assurance standards, set up machines for production runs, and resolve operating problems and defects in manufacturing processes. Prerequisite(s): ELLT 1310 (1/3/4)

## **ELLT 1330 - Underground Equipment (1 Credit Hour)**

This hands-on course prepares you to install a variety of underground system components on both 15 and 25 kV systems. Learn to install primary and secondary cable, in conduit systems as well as using direct burial methods in both single- and three-phase applications. Install underground system components, such as underground risers, transformers, switchgear and pedestals to facilitate the proper termination of both primary and secondary cable systems. Use cable preparation tools to prepare the cable for installation of termination kits, elbow and inline splicing sleeves to connect equipment to systems. Prerequisite(s): None (1/0/1)

## **ELLT 1410 - A/C Phase Cable & Conductor (3 Credit Hours)**

Students successfully completing this course will be able to correctly size circuit conductors and apply necessary temperature correction and derating factors. Students will also be shown the difference between continuous and non-continuous loads and the considerations that must be adhered to when working with them. Prerequisite(s): None (2/1/3)

## **ELLT 1430 - Distribution Line Maintenance (3 Credit Hours)**

The course exposes distribution linemen into advanced distribution lines construction maintenance system. The course covers theory and practical sessions in various lines construction & maintenance. Prerequisite(s): None (1/2/3)

## **ELLT 1510 - Live Line Work Clearanc/Switch (2 Credit Hours)**

This course is to establish clear and consistent guidelines for live-line work. The term live-line maintenance, as used in this manual, includes maintenance activities using the hotstick or the barehanded technique. Prerequisite(s): None (1/1/2)

## **ELLT 1520 - Three-Phase URD Systems (2 Credit Hours)**

Three-phase circuits and power flow, analysis of magnetic circuits, performance of single-phase and three-phase transformers, principles of electromechanical energy conversion, steady-state characteristics and performance of alternating current and direct current machinery. Prerequisite(s): None (1/1/2)

## **ELLT 1530 - System Protection (2 Credit Hours)**

This course is an introduction to power system components and power system protection. Topics include protection of generators and motors, protection of transformers and reactors, and protection of transmission lines. Prerequisite(s): None (1/1/2)

## **ELLT 1540 - Fundmen Skills For Crew Leader (1 Credit Hour)**

The course covers basic leadership skills and explains different leadership styles, communication, delegating, and problem solving. Job-site safety and the crew leader's role in safety are also discussed. Prerequisite(s): None (0/1/1)