

# ELECTRICAL POWER TRANSMISSION (ELPT)

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## **ELPT-1215. Electric Calculations I. (2 Credits)**

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. Introduction to mathematical applications utilized to solve problems in the electrical field. Topics include fractions, decimals, percentages, simple equations, ratio and proportion, unit conversions, and applied geometry.

## **ELPT-1221. Introduction to Electrical Safety and Tools. (2 Credits)**

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. Safety rules and regulations. Includes the selection, inspection, use, and maintenance of common tools for electricians.

## **ELPT-1225. National Electrical Code I. (2 Credits)**

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. An introductory study of the National Electric Code (NEC) for those employed in fields requiring knowledge of the Code. Emphasis on wiring design, protection, methods and materials; equipment for general use and basic calculations.

## **ELPT-1311. Basic Electrical Theory. (3 Credits)**

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. Basic theory and practice of electrical circuits. Includes calculations as applied to alternating and direct current. Lab fee.

## **ELPT-1341. Motor Control. (3 Credits)**

This course is taken for academic credit. Students will earn an A, B, C, D, F, or Operating principles of solid-state and conventional controls along with their practical applications. Includes braking, jogging, plugging, safety interlocks, wiring, and schematic diagram interpretations. Lab fee.

## **ELPT-1411. Basic Electrical Theory. (4 Credits)**

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. Basic theory and practice of electrical circuits. Includes calculations as applied to alternating and direct current.

## **ELPT-1429. Residential Wiring. (4 Credits)**

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. Wiring methods for single family and multi-family dwellings. Includes load calculations, service entrance sizing, proper grounding techniques, and associated safety procedures.

## **ELPT-1445. Commercial Wiring. (4 Credits)**

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. Commercial wiring methods. Includes overcurrent protection, raceway panel board installation, proper grounding techniques and associated safety procedures.

**ELPT-2239. Electrical Power Distribution. (2 Credits)**

This course is taken for academic credit. Students will earn an A, B, C, D, F, or W. Design operation, and technical details of modern power distribution systems including generating equipment, transmission lines, plant distribution, and protective devices. Includes calculations of fault current, system load analysis, rated, and power economics.