

ELPT - ELECTRICAL TECHNOLOGY

ELPT 1025 National Electrical Code I 3.2-6.4 Credit Hours (32 to 64 Lec)

ELPT 1281 Cooperative Education - Electrical and Power Transmission Installation/Installer General 2 Credit Hours (1 Lec, 8 Lab)

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and the student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. Prerequisite: Students need to have completed 1st year.

Course Type: Cooperative Course, Technical/Vocational Course

ELPT 1311 Basic Electrical Theory 3 Credit Hours (2 Lec, 4 Lab)

Basic theory and practice of electrical circuits. Includes calculations as applied to alternating and direct current.

Course Type: Technical/Vocational Course

ELPT 1315 Electrical Calculations I 3 Credit Hours (3 Lec)

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.

Course Type: Technical/Vocational Course

ELPT 1319 Fundamentals of Electricity I 3 Credit Hours (2 Lec, 4 Lab)

An introduction to basic direct current (DC) theory including electron theory and direct current applications. Prerequisite: N/A

Course Type: Technical/Vocational Course

ELPT 1320 Fundamentals of Electricity II 3 Credit Hours (2 Lec, 4 Lab)

Introduces alternating current (AC). Includes AC voltage, frequency, mechanical and electrical degrees, waveforms, resistors, capacitors, and inductors. Prerequisite: ELPT 1319

Course Type: Technical/Vocational Course

ELPT 1321 Introduction to Electrical Safety and Tools 3 Credit Hours (3 Lec, 1 Lab)

Safety rules and regulations. Includes the selection, inspection, use, and maintenance of common tools for electricians. Prerequisite: N/A

Course Type: Technical/Vocational Course

ELPT 1325 National Electrical Code I 3 Credit Hours (3 Lec)

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. Prerequisite: N/A

Course Type: Technical/Vocational Course

ELPT 1329 Residential Wiring 3 Credit Hours (2 Lec, 4 Lab)

Wiring methods for single family and multi-family dwellings. Includes load calculations, service entrance sizing, proper grounding techniques, and associated safety procedures. Prerequisite: N/A

Course Type: Technical/Vocational Course

ELPT 1331 Survey of the National Electrical Code 3 Credit Hours (3 Lec)

Content, format, rules, and calculations in the National Electrical Code (NEC). Prerequisite: ELPT 1325

Course Type: Technical/Vocational Course

ELPT 1341 Motor Control 3 Credit Hours (2 Lec, 4 Lab)

Operating principles of solid-state and conventional controls along with their practical applications. Includes braking, jogging, plugging, safety interlocks, wiring, and schematic diagram interpretations. Prerequisite: Students need to have completed 1st year.

Course Type: Technical/Vocational Course

ELPT 1345 Commercial Wiring 3 Credit Hours (2 Lec, 4 Lab)

Commercial wiring methods. Includes over-current protection, raceway panel board installation, proper grounding techniques, and associated safety procedures. Prerequisite: ELPT 1325

Course Type: Technical/Vocational Course

ELPT 1351 Electrical Machines 3 Credit Hours (2 Lec, 4 Lab)

Direct current (DC) motors, single-phase and poly-phase alternating current (AC) motors, generators, and alternators. Emphasis on construction, characteristics, efficiencies, starting, and speed control. Prerequisite: Students need to have completed 1st year.

Course Type: Technical/Vocational Course

ELPT 1357 Industrial Wiring 3 Credit Hours (2 Lec, 4 Lab)

Wiring methods used for industrial installations. Includes motor circuits, raceway and bus way installations, proper grounding techniques, and associated safety procedures. Prerequisite: Students need to have completed 1st year.

Course Type: Technical/Vocational Course

ELPT 1429 Residential Wiring 4 Credit Hours (2 Lec, 4 Lab)

Wiring methods for single family and multi-family dwellings. Includes load calculations, service entrance sizing, proper grounding techniques, and associated safety procedures. Prerequisite: N/A

Course Type: Technical/Vocational Course

ELPT 1457 Industrial Wiring 4 Credit Hours (2 Lec, 4 Lab)

Wiring methods used for industrial installations. Includes motor circuits, raceway and bus way installations, proper grounding techniques, and associated safety procedures. Prerequisite: Students need to have completed 1st year.

Course Type: Technical/Vocational Course

ELPT 2000 Professional Development Electrical Licensing Regulations and National Electrical Code Review 0.4 Credit Hours (4 Lec)

ELPT 2215 Electrical Calculations II 2 Credit Hours (2 Lec)

Mathematical applications used to solve problems in the electrical field. Includes fractions, decimals, ratio and proportion, applied geometry, and utilization of right triangles to calculate electrical values. Prerequisite: Students need to have completed 1st year.

Course Type: Technical/Vocational Course

ELPT 2301 Journeyman Electrician Exam Review 3 Credit Hours (3 Lec)

Preparation for journeyman electrician licensure with emphasis on calculations and the National Electrical Code (NEC.) Prerequisite: Students need to have completed 1st year.

Course Type: Technical/Vocational Course

ELPT 2305 Motors and Transformers 3 Credit Hours (2 Lec, 4 Lab)

Operation of single- and three-phase motors and transformers. Includes transformer banking, power factor correction, and protective devices. Prerequisite: Students need to have completed 1st year.

Course Type: Technical/Vocational Course

ELPT 2337 Electrical Planning and Estimating 3 Credit Hours (2 Lec, 4 Lab)

Planning and estimating for residential, commercial, and industrial wiring systems. Includes a variety of electrical techniques. Prerequisite: Students need to have completed 1st year.
Course Type: Technical/Vocational Course

ELPT 2350 Maintenance Electrician Exam Review 3 Credit Hours (3 Lec)

General requirements and fundamentals of electrical maintenance with emphasis on wiring methods and electrical theory. Prerequisite: Students need to have completed 1st year.
Course Type: Technical/Vocational Course