

Course Objectives: ELAP 1540, Electrical Apprenticeship 4

Program Description:

The Electrical Apprentice program (ELAP) consists of eight courses, spanning a four year (8,000 hour) working apprenticeship. The ELAP program meets classroom training requirements for Apprentice Electricians registered with the Wyoming State Fire Marshal's Office. The program (student) outcomes are as follows:

1. Utilize the National Electrical Code (NEC) for electrical design and installation
2. Interpret electrical drawings
3. Design motor control circuits
4. Apply electrical theory to practical electrical problems

Each student completes one course per semester (Fall and Spring) for four years while employed as an apprentice electrician. The program is designed to assist apprentices in obtaining the skills and knowledge needed to pass the licensing exam at the end of their apprenticeship and to be successful as licensed Journeymen.

Course Purpose:

ELAP 1540 Electrical Apprenticeship 4 is the fourth in a series of eight ELAP classes. Topics include cable trays, conductor terminations, grounding, controls and over current protection. The application of the National Electric Code (NEC) is incorporated throughout the course.

Course Outcomes:

Upon completion of ELAP 1540 Electrical Apprenticeship 4, the student will:

1. Identify electrical materials and systems including cable trays, conductor terminations, grounding, and overcurrent protection.
2. Describe the operational theory of circuit breakers, fuses, and control systems.
3. Draw simple control schematics
4. Apply the NEC with respect to cable trays, conductor terminations, grounding, and overcurrent protection.

Program Outcomes (targeted in this course):

1. Utilize the National Electrical code for electrical design and installation
2. Design motor control circuits