



Program of Study (POS): ELECTRICAL CONSTRUCTION (EC)

Classification of Instructional Program (CIP): 46.0399

Topic	Information	Additional
Essential aptitudes and skills	Ability to read directions and procedures on Canvas independently. Strong math skills; the ability to memorize symbols and apply the symbols to equations in order to wire properly. Maintain tight grips repeatedly on high torque power tools and pliers, work at ground level and overhead, communicate effectively, and read schematics accurately <u>on your own</u> .	Students need to have good grip strength to make splices and to maintain a safe grip on high torque rotating drills and leg strength to bend conduit. Strong memorization skills in order to advance skill level constantly.
Midterm and/or final exams. Research papers	1 st and 3 rd nine weeks tests, midterm test and final. 1 to 2 research papers	www.residentialconstructionacademy.com ; www.nocti.org
Industry certification tests and costs*	Available to students who qualify and who complete at least 2 full years of instruction. <i>Pennsylvania Builders Association</i> : 80% or greater on all chapter tests and must pass both written and performance sections of the NOCTI exam (no cost); OSHA 10	www.pabuilders.org ; www.abcwpa.org OSHA
Number of books	5: National <i>Electrical Code</i> (NFPA), <i>House Wiring</i> (Fletcher), <i>Electricity I</i> (Kubala), <i>Electrical Principles</i> (Herman),	Students must read the NEC and textbooks on their own.
Direct instruction (%)	Up to 90% during the 1 st quarter; 60% during the 2 nd , 3 rd , and 4 th quarters. 1 st year students is mostly theory based.	All 3 levels of students, 10,11,12 are taught at the same time.
Cooperative education	Available to students who qualify. Second year seniors and juniors with one and a half years in the program.	Mrs. Stacey Caudill, Work-based Learning Coordinator:
Homework	A few times each 9 weeks	Visual inspections
Task list	Program of study task list for CIP 46.0399	www.education.pa.gov
Prerequisites	Algebra 1 recommended; completion of grade 9; strong interest in electrical trades. Strong independent learner.	
Reading levels	Students will be required to read technical manuals independently since there are 10 th , 11 th and 12 th in 1 class	Strong memorization and comprehension skills needed.
Math levels	Students will be required to calculate formulas independently since there are 10 th , 11 th and 12 th in 1 class	Solve equations, read tables and charts.
Program requirements and related costs (required and optional)	Work boots (steel toes <u>not</u> required), clean natural fiber pants or 12oz. denim, and a clean T-shirt (no sleeveless shirts); long sleeve fire rated shirts will be provided when necessary; approx. cost of work boots: \$40 - \$70	Hand tools at an approximate cost of \$150 to \$200
Articulation agreements	For third-year completers who qualify: Rosedale College and others listed on PDE's website.	PDE: www.education.pa.gov (search SOAR)
Classroom tests	Residential wiring: 1 to 2 quizzes, weekly and a chapter test every 12-15 days on average; electrical theory: weekly quizzes with 1 to 2 tests per nine weeks	www.residentialconstructionacademy.com ; www.nccer.org
Work environment	Danger of electrical shock, therefore no jewelry may be worn while working in the shop; Inclement weather conditions (hot/cold, wet/muddy, etc.) Tasks will be performed while standing, kneeling or laying on ground.	Follow OSHA rule/regs. No jewelry in the shop

*Detailed information may be provided upon acceptance to this program.