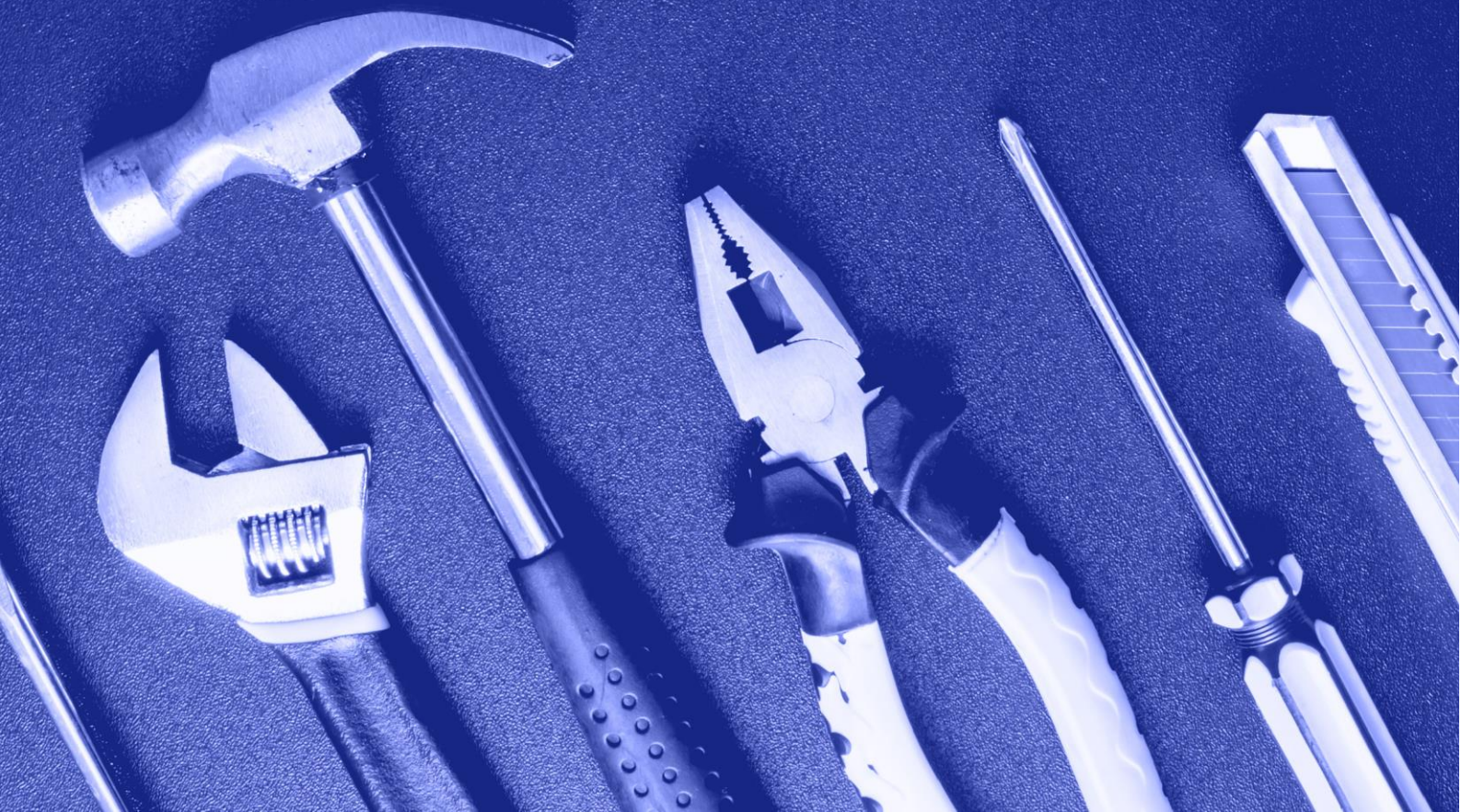


**ACCELERATED  
TRAINING INSTITUTE**



# Electrical 101 Course

Instruction Hours ..... 25  
Study Hours ..... 62.5  
Length ..... 1 to 12 Months  
Modality ..... **Self-paced, 100% online**





# Electrical 101 Course Description

The Electrical Course gives students a broad understanding of the electrical trade. Students will study everything from electrical theory and the National Electrical Code® to blueprint reading, residential wiring, electronic control systems, motor theory and application and much more. Foundational principles of electricity, such as electric current, Ohm's Law, and circuits are explained in detail. Students learn the tools of the trade and critical safety procedures. All common electrical components are demonstrated including such items as device boxes, raceways and fittings, fasteners and anchors, conductors and cables and more. The course also includes electrical device troubleshooting and repair. This course prepares students for non-licensed, entry-level work as an electrician's helper. Student's study and complete the course at a pace they control. Students must study with sufficient retention of the knowledge to pass their exams with a score of 80% or higher.

## Objectives

Upon successful completion, this course results in a Certificate of Completion in Electrical Theory. The knowledge and skills gained from completing the course prepares entry-level electrical trade workers, maintenance employees and do-it-yourself home and business owners. This Electrical Course prepares an individual to enter employment in positions involving Maintenance Electrician, Electrician Assistance and the electrical work involved in General Maintenance and Repair positions such as Maintenance Mechanic, Facilities Maintenance Technician, and Building Maintenance and Repair Technician. (See Standard Occupational Classifications 47-3013, 49-9042, 47-3019 and 49-9799 Idaho Department of Labor.)

1. This course is NOT intended to lead to becoming a Licensed Electrician.
2. General Maintenance and Repair (SOC 49-9042 Idaho Department of Labor, SOC 49-9071 US Department of Labor), is a non-licensure occupational classification as are various trade assistant jobs in electrical, including but not limited to (47-3031, Helpers-Pipelayers, Plumbers, Pipefitters, Steamfitters [US Department of Labor]). For more occupational information on these and related SOC's go to: [www.onetonline.org](http://www.onetonline.org).
3. Only employees working on their employer's premises, or individuals working on their own residence, may perform electrical work without a Journeyman or Contractor's License. A self-employed individual may not perform any electrical work (except on their own residence) without an Electrical Contractor's License. Additionally, maintenance employees are prohibited from certain types of electrical work without a license (e.g., electrical tasks such as adding new circuits or installing additional switches). Permissible tasks are repairing and replacing of existing electrical systems, operating electrical systems, and working directly with licensed Electrical Journeymen.
4. Certificates of this School do not qualify an individual to work as a licensed Electrician, or as a licensed Contractor.
5. Students are prohibited from doing any electrical work outside of their own residence unless the student is concurrently employed in maintenance, engaging in repair and maintenance of existing electrical work on the employer's premises. When installing new electrical systems, the student must be working under the constant supervision of a licensed Journeyman Electrician or Electrical Contractor.



6. To become a licensed Electrician, an individual must be at least 16 years of age, register as an apprentice electrician, be employed by a licensed Electrical Contractor, complete work under constant supervision of a licensed Electrician Journeyman or Master employed by the Electrical Contractor, and be enrolled in or have completed a four-year training program at an approved school. To become a licensed Journeyman Electrician, an individual must have completed 8,000 hours of qualified electrical work as a registered apprentice under the constant supervision of a licensed Journeyman or Master Electrician and passed the licensure exam.
  
7. For more information, visit <http://dbs.idaho.gov>.

**Equipment and materials used in this course include:** An internet-capable computer, internet connection, web browser, online examinations.

**Instructional Mode:** Distance education not in real time. All instruction is provided via pre-recorded video lessons and online examinations. Lessons occur at a time and location determined by the student.

**Method of Instruction:** This course is taught in pre-recorded video instruction; however, the students can access instructors whenever they have technical questions or need assistance with completing the coursework. Students submit their questions by email to [faculty@atitradeschools.com](mailto:faculty@atitradeschools.com), after which they will receive an email reply and/or a telephone call from a Student Support Specialist.

**Testing and Certificate Requirements:** When you complete the video instruction in the Electrical Course, you will take an online examination to test your knowledge. You may optionally complete an end-of-chapter quiz. Quizzes are optional study tools to support passing your final exam. Exams are online, not timed, and are open book, open video. Once started, an online exam may be suspended but must be completed within 60 days. When you pass your final exam with a score of 80% or higher, you will receive an Electrical Theory Certificate.

**Grading System:** Students are graded on a pass/fail basis.

**Passing Grade:** A passing grade is given to a student who achieves a score of 80% or higher on all examinations in the Electrical Course.

**Failing Grade:** A failing grade is given to a student who has failed to achieve a score of 80% or higher on all examinations in the Electrical Course.

## Electrical 101 Course Outline

Lesson	Title
Lesson 1	Introduction
Lesson 2	Safety
Lesson 3	Tools
Lesson 4	The National Electrical Code (NEC)
Lesson 5	Electrical Boxes
Lesson 6	Conduit
Lesson 7	Raceways
Lesson 8	Fasteners and Anchors
Lesson 9	Conduit Boxes
Lesson 10	Wiring
Lesson 11	Theory
Lesson 12	Magnetism
Lesson 13	A.C. Theory
Lesson 14	Inductors and Capacitors
Lesson 15	Electrical Blueprint
Lesson 16	Residential Wiring
Lesson 17	Fundamental Concepts
Lesson 18	Re-configuring an Electrical Panel
Lesson 19	Installing an Extra Outlet
Lesson 20	Electrical Maintenance and Troubleshooting
Lesson 21	Review and Summary