

ELECTRICAL PATHWAY

Table of Contents

Requirements	2
Types of Licenses <ul style="list-style-type: none">• Journeyman Electrician• Master Electrician	3
Career and Technical Education (CTE) Centers with Electrician Programs <ul style="list-style-type: none">• High School Steps• Secondary Education• Post Secondary Education• Apprenticeship• Union Apprenticeship	5

Requirements

- Must be 18 years of age to enter an Apprenticeship, or 16 if entering a Youth Apprenticeship
- Must have High School Diploma or equivalent, unless entering a Youth Apprenticeship
 - [NH High School Equivalency Testing | Department of Education](#)
- GED
 - [How to Find Classes and Earn Your GED in New Hampshire](#)
- HiSet
 - [NH High School Equivalency Testing | Department of Education](#)
- General Math Skills
 - Most places are looking for a “C” or better
 - Some have programs in place to help you reach the Math Standards that are needed
 - Such as IBEW [IBEW Local 490 \(ibew490.org\)](#)
- Be in good physical condition
- Ability to lift and move heavy objects
- Have reliable Transportation.
 - Most employers are going to want you to have your own reliable transportation because so much of your job and training is going to be driving out to job sites
- Can work both alone and as a part of a team
- Must have good eyesight and see colors clearly
- Be able to work outside in all types of weather
- Not afraid of heights and comfortable in tight spaces
- Have a mechanical aptitude

Types of Licenses

Journeyman Electrician

- The specialties are generally going to fall into three categories:
 - Residential
 - These are going to be in people's homes
 - Commercial
 - These are going to be in businesses
 - Will be working on construction sites or with the business's service department
 - Industrial
 - These are going to be Manufacturing businesses
 - Will need to possess specialized expertise in installing and maintaining electrical systems with in various industrial settings
 - Employed by maintenance departments of factories, plants, mines, shipyards, oil and gas rigs
- Job responsibilities include:
 - Install and Maintain multi types of electrical systems found in Residential and Commercial Buildings
 - Install and Replace new lighting and lighting control systems, receptacles, motors and motor controlling equipment, heating equipment, building automation systems that control the operation of all facilities energy usage
- Licensing Requirements
 - Need to obtain a Certificate of Completion from the Office of Apprenticeship
 - Have completed at least 600 hours of Classroom Instruction
 - Have completed at least 8000 hours of OJT
 - 10 Hours of OSHA Training
 - Pay Fees
 - Pass the Test
 - With this test its not so much knowing the answer right away, but knowing where to find it in the current Code Book
 - You will be able to have the Code Book with you when you take the test
 - The test should take around 2-4 hours
 - It will be a mix of multiple choice questions and practical tasks
 - There are many Test Prep websites, books and programs
 - In New Hampshire you must pass the test with a 70% or better
 - If you don't pass you are able to retake as many times as needed within 1 year
 - <https://www.oplc.nh.gov/sites/g/files/ehbemt441/files/inline-documents/sonh/prov-exam-bulletin.pdf>

Master Electrician

- Job responsibilities include:
 - Journeyman responsibilities
 - Serve in a supervisory roles
 - Meeting with other contractors to determine the scope of projects
 - Coordinate projects with suppliers and permit offices
 - Schedule work assignments for both Apprentices and Journeyman
- There is additional training and education that is needed
 - It takes 2-5 years to gain this level
 - With a Bachelor's or Master's degree in a related field it will take some time off this requirement
- Licensing Requirements
 - Pass written and practical exams covering electrical competency
 - Show Mastery in Blueprint Creation, Understanding of Electrical equipment and complex electrical systems

Career and Technical Education (CTE) Centers with Electrician Programs

- Not going to earn you the License, but most will offer you hours towards your Classroom Hours that are required for your Apprenticeship
- Could shorten your time as an Apprentice
 - River Bend CTE-Bradford, VT
 - [Home - River Bend Career and Technical Center \(rbctc.org\)](http://rbctc.org)
 - Pinkerton Academy-Derry, NH
 - [Career & Technical Education at Pinkerton Academy | Pinkerton Academy](#)
 - Dover Regional Career Technical Center-Dover, NH
 - [Home – Programs – Dover Regional Career Technical Center](#)
 - Manchester School of Technology, MST-Manchester, NH
 - [Home | Manchester School of Technology \(mansd.org\)](http://mansd.org)
 - Nashua Technical Center-Nashua, NH
 - [Nashua Technology Center / About the Nashua Technology Center](#)
 - Windham Regional CTE-Brattleboro, VT
 - [Front Page - WRCC \(wrcvt.com\)](http://wrcvt.com)

High School Steps

- Talk with your school counselor or ELO coordinator about shadowing an electrician as they work for a day
- Interview an electrician and ask them about what they like about the job
- Pass Algebra with at least a “C”
- Enroll in a CTE Electrical Program
- Youth Apprenticeship
 - [Earn As You Learn, Hire Skilled Workers | ApprenticeshipNH](#)
 - You can start your Apprenticeship in High School
 - It will mostly be completed during School Breaks, after school, and during the school day
 - This schedule will be worked out to meet the needs of both the Student and the Sponsor
 - In 12th grade you would interview to Transition into a Registered Apprenticeship
 - This path allows you to get started on your career with little to no student loan debt

Secondary Education

- Alvirne High School CTE
 - Serves as a Host site for the Classroom part of the Apprenticeship

- Tuition is \$1450 each year, for 4 years
- Should have a Sponsor and be working towards their OJT Hours

- Dover School of Technology
 - Offers extended hours
 - Tuition is \$1450 each year, for 4 years
 - Should have a Sponsor and be working towards their OJT Hours

Post Secondary Education

- Manchester Community College
 - Manchester, NH
 - Electrical Lineworker Certificate
 - It is in partnership with Eversource and International Brotherhood of Electrical Line Workers (IBEW) 104 and 1837
 - This will prepare you to work in the electrical-power-utility industry
 - Can transfer credits to the MCC Electrical Technology or Technical Studies
- [Electrical Lineworker, Cert. - Manchester Community College NH \(mccnh.edu\)](http://mccnh.edu)
 - Electrical Technology Certificate
 - This Certificate Program is streamlined to meet the State of NH Requirements for Licensure.
 - This is also a building block for the Electrical Technology Degree.
- [Electrical Technology, Cert. - Manchester Community College NH \(mccnh.edu\)](http://mccnh.edu)
 - Electrical Technology, A.A.S.
 - This program will provide you with the opportunity to get your Apprentice Card
 - This program is held during the day and if you do it at night it will take you 4 years to complete instead of 2 years
 - This program will teach you what you need to know to work in the Electrical Industry
- [Electrical Technology, A.A.S. - Manchester Community College NH \(mccnh.edu\)](http://mccnh.edu)

- Lakes Region Community College
 - Laconia, NH
 - The Electrical Power and Control Technologies (EPCT) Degree
 - This program will fulfill all the educational requirements for license
 - This can be an Associates or a Certificate Pathway
- [Electrical Power and Control Technologies - Lakes Region Community College \(lrcc.edu\)](http://lrcc.edu)
- Electrical Systems Installation and Maintenance (ESIM)
 - This program will provide the skills and education needed to work in the Electrical Field in either Residential, Commercial, or Industrial settings
 - This can be an Associates or a Certificate Pathway

- NH Mechanical Trade School

- Manchester, NH
- [HOME \(nhtradeschool.com\)](http://nhtradeschool.com)
 - They offer Electrical Apprentice Courses
 - You would need to find your own sponsor to gain your OJT Hours
 - They offer an Electrical 101 course that is considered a Pre-Apprentice course
 - Taking this course will provide students with the skills and knowledge to advance in the application and interview process
 - You will get an in-depth understanding of electrical theory, math work that will be used daily in your electrical career
 - You will spend time in their “Hands-On” Lab for instruction on the installation of electrical circuits
 - This class will not count towards your Apprenticeship Classroom Hours, but you will have a greater understanding of what is needed for a career as an Electrician.
 - This is also a good time to take your OSHA 10 Course that is required.
 - Books and materials are included with the cost of tuition.
 - You may need to purchase tools to complete certain projects, but the instructor will go over what is needed.

Apprenticeship

- An Apprenticeship is a program that will provide you with both Classroom and On-The-Job Training (OJT). You will be paid for your time on OJT
- You will need to get an Apprentice Card each year and submit hours and completion certificates to the NH Office of Professional Licensure and Certification (OPLC). You will be responsible for submitting your records.
 - Must get an Apprenticeship Card Every Year
 - [Electricians' Board Apprenticeship Requirements | NH Office of Professional Licensure and Certification](#)
 - [Applications for Electricians | NH Office of Professional Licensure and Certification](#)
- 4-5 years long
- 8000 hours in the Field as On the Job Training
- 150 Classroom Hours, per year
 - These hours do expire so it is important to stay on top of them.
- OSHA 10 Hour Construction Certificate
 - This expires every 5 years
 - [OSHA 10 Certification | How Long is OSHA 10 Good For?](#)
- Will take the Journeyman’s Exam at the end of the Apprenticeship
 - You will need to have a Completed Apprenticeship Agreement on file with the Office of Apprenticeship
 - [Partner: New Hampshire Apprenticeship Office | Apprenticeship.gov](#)
- You can do the Classroom part separate and have a Sponsor for the OJT
 - The Sponsor’s employer should be registered with the Office of Apprenticeship



Union Apprenticeship

- There are pros and cons to joining a Union and a Union Apprenticeship.

Union Apprenticeship Pros	Union Apprenticeship Cons
<ul style="list-style-type: none"> ▪ Salary and Benefits ▪ Will earn more through the apprenticeship and as a Journeyman ▪ Job Security <ul style="list-style-type: none"> ▪ If you are let go from a job the employer will need to provide documentation and a just reason as to why ▪ Safety <ul style="list-style-type: none"> • Union Journeyman and Apprentices adhere to strict and defined safety procedures ▪ Career Growth <ul style="list-style-type: none"> • Union Apprentices tend to have a quicker growth once they have gained their Journeyman’s License 	<ul style="list-style-type: none"> • Slow Application Process <ul style="list-style-type: none"> • The Application process can be very involved • Often involve interviews, tests and can include paper applications • They accept applications only during certain times of the month/year • Highly Competitive Applications • Often requiring multiple applications over Long Time Before Payoff • Takes 4-5 years to become a Journeyman • Can be limiting if your ambitious • If you are skilled or have ambitions to rise up quickly and learn the basics of running the business • months and possibly years

- IBEW 490
 - Will be enrolled in the IBEW 104 Joint Apprenticeship Training Committee (JATC) Training Program
 - Will work during the day on actual job sites
 - Working 40 hours a week
 - There is the chance that you will work overtime hours as well
 - You will be paid for the hours that you are on-the-job, not your classroom hours
 - Two nights a week will be classroom work
 - Classes run September-May
 - Requires 250 Classroom Hours
 - This is a 4 year program
- MUST have a Driver’s License and reliable transportation.
 - This is a Union Requirement for their Licensed Electricians as well.
- Pay for Apprentices starts around \$17/hour and will increase as they complete their Apprenticeship.
- Apprentices need to be 17 to apply and 18 to begin working and training
- Receive a minimum score on their National Standard Aptitude Test
 - There are practice tests available
- Be able to perform the work both mentally and physically.

- Requirements
 - High School Diploma or Equivalent, 2-year college Associate degree or higher
 - Official School Transcripts
 - Must show a completion of Algebra 1 with a “C” or better
 - Driver’s License
 - DD 214 if prior Military
 - Resume showing job history

- Application Process
 - Applications accepted year round
 - For the Fall Semester applications must be in by the end of May of the previous year
 - Must be filled out in person with a scheduled appointment or online
 - All Documents must be included to be a complete application
 - Will be scheduled to take the National Joint Apprenticeship Training Committee’s aptitude test
 - Will be scheduled for an interview with the committee, with a passing score
 - Applicants will be placed on a rank list and selected in the order which they are scored
 - Applicants will be selected into the program over the summer months
 - Post Interview Pre-Employment Applicants will need to take an 8-panel drug screening
 - [IBEW Local 490 \(ibew490.org\)](http://ibew490.org)
 - Apprentice Application
 - [IBEW Local 490 | BECOME AN APPRENTICE \(ibew490.org\)](http://ibew490.org)

Notice of Non-Discrimination: New Hampshire’s (NH) Career and Technical Education (CTE) Programs do not discriminate on the basis of race, color, national origin, sex, gender identity, sexual orientation, marital status, familial status, religion, disability, or age in their programs and activities. NH Secondary CTE Programs provide equal access to Scouts BSA and other designated youth groups.

For further information on non-discrimination policies and procedures, visit your local CTE Center website, visit <https://ocrcas.ed.gov/contact-ocr> for the address and phone number of the Civil Rights office that serves your area, or call 1-800-421-3481.