



JOURNEYMAN LICENSE REQUIREMENTS & EXAMINATION CONTENT & DESCRIPTION

Electrical Journeyman – A person other than an Electrical Contractor who, as his or her principal occupation, is engaged in the practical installation or alteration of electric wiring. An Electrical Contractor or Master Electrician may also be an Electrical Journeyman.

Skilled Trades Regulation Act (PA 407 of 2016)

EFFECTIVE SEPTEMBER 1, 2010, ALL APPLICANTS FOR JOURNEYMAN ELECTRICIAN LICENSE ARE REQUIRED TO PARTICIPATE IN AN ELECTRICAL TRAINING PROGRAM APPROVED BY THE ELECTRICAL ADMINISTRATIVE BOARD AS STIPULATED IN [PA 407 OF 2016](#). FAILURE TO DO SO INVALIDATES THE APPRENTICE REGISTRATION(S). ANY HOURS ACCUMULATED ON AN INVALID REGISTRATION(S) WILL NOT BE CREDITED TOWARDS THE JOURNEYMAN ELECTRICIAN EXAMINATION.

- ✓ Must be at least 20 years of age.
- ✓ Must be a Detroit resident and show proof of residency
- ✓ Must complete a [Journeyman application form](#) and submit a letter of documentation from one or more employer(s) attesting to not less than 8,000 hours of practical experience obtained over a period of not less than 4 years related to electrical construction or maintenance of buildings or electrical wiring or equipment under the direct supervision of a person licensed by the City of Detroit, City of Grand Rapids, or the State of Michigan.
- ✓ Have a current Electrical Apprentice Registration on file in good standing. Applicants shall show proof of valid Apprentice Registrations coinciding with the required 8,000 hours of practical experience obtained over a 4-year period.

For additional information, please see the [Electrical Licensing Procedures Guide](#).

The Journeyman Examination consists of 80 multiple choice questions worth 1.25 points each with a 2½ hour time limit. This exam is based on:

- State of Michigan Skilled Trades Regulation Act of 2016 ([PA 407 of 2016](#))
- 2014 National Electrical Code
- [2014 Part 8 Rules](#)

Part I	Fundamentals and Practical Electricity	20 problems	25
Part II	Part 8 Rules	10 questions	12.5
Part III	National Electrical Code	50 questions	62.5
Total Points			100

All examinations are **open book**. A *National Electrical Code*® (NEC) book, [2014 Part 8 Rules](#), and [PA 407 of 2016](#) are available to all applicants for the examination. Applicants may bring an unmarked NEC book for use during the examination. Code books may include *NFPA 70* approved index tabs (**not homemade varieties**).

No markings will be allowed on or within the code book. This includes margin notes, test notes, highlighting, paper clips, or other testing aids. **Handbooks and/or Ugly's books are not allowed.** Applicants may bring a basic four function, non-programmable calculator that is silent, battery operated, does not have paper tape printing capabilities, and does not have a keyboard containing the alphabet.

Applicants are not allowed to have personal belongings in the exam room including, but not limited to: cell phones, recording devices, ear buds, headphones, Bluetooth devices, electronic watches, electronic devices, cameras, pagers, laptop computers, tablet computers, music players, smart watches, radios, electronic games, notebooks, reference or reading material, briefcases, backpacks, other writing devices, and good luck items.

Any applicant possessing prohibited items, giving or receiving assistance on an exam, and/or found with unauthorized materials in the examination room shall immediately surrender all examination materials, shall have his or her test results invalidated, and will be reported to the Board of Electrical Examiners.

Applicants for examination are required to bring picture identification to the examination site. (Current and valid Driver's License/State ID preferred) A score of 75% or better is required to pass the examination. If you do not pass, you **may not** review your exam.

EXAM RESULTS ARE NOT GIVEN OVER THE TELEPHONE.

The Electrical Journeyman examination covers entry-level knowledge of the electrical industry as outlined in all categories listed below:

Boxes, Cabinets, Panelboards, and Non-Raceway Enclosures

Application of the proper type, use and support of boxes and cabinets, etc. Includes calculation of proper size and rating.

Branch Circuits, Wire Connections, and Devices

Knowledge of circuit classifications, ratings, design, and use requirements. Knowledge and calculation of branch circuit loads. Application of code rules covering electrical outlets and devices, including wiring connectors and methods.

Conductors

Determine ampacity, type of insulation, usage requirements, methods of installation, protection, support and termination. Includes calculation of voltage drop.

General Knowledge of the Electrical Trade

Terminology and practical calculations such as power factor, voltage and current ratings of equipment.

General Use Equipment

Knowledge of code rules covering appliances, heating and air conditioning equipment, generators, transformers, etc.

Grounding and Bonding
Demonstrate knowledge of system and circuit grounding requirements, methods and location of grounding connections. Selection of proper size grounding conductors, bonding of enclosures, equipment, and interior metal piping systems.
Lighting and Lamps
Knowledge of all types and applications of lighting fixtures, luminaires, ratings, requirements for occupancies, special provisions, clearances, etc. Includes load calculations for lighting.
Low Voltage Circuits and Equipment
Knowledge of circuits and equipment characterized by usage and electrical power limitations, which differentiate them from electric light and power circuits. Includes remote-control, signaling, and power limited circuits.
Motors, Controls, and Equipment
Knowledge of code rules governing installation of motors and controls. Includes calculations for motor feeder and branch circuits, short circuit, ground fault, and overload protection, and disconnecting means. Knowledge of all control circuits and motor type application and usage.
Overcurrent Protection
Knowledge of fuse application, circuit breakers and all types of protective devices for conductors and equipment. Includes rules on taps and splices.
Raceways
Knowledge of all types of raceways and their uses. Determining proper size, conductor fill, support and methods of installation.
Services and Feeders
Knowledge of code rules covering services. Calculation of electrical loads and determination of proper size, rating and type of service and feeder conductors.
Special Occupancies and Equipment
Knowledge of code rules as they apply to hazardous locations, health care facilities, places of assembly, etc. Includes code rules on signs, welders, industrial machinery, swimming pools, etc.