
Electrical Contractor Registration Agency of the Electrical Safety Authority

PRE-MASTER ELECTRICIAN COURSE & EXAMINATION INFORMATION



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ESA is not responsible for ensuring that you have all of the requirements to obtain the Master Electrician Licence. Passing the examination is only one of the requirements. It is up to you to make sure that you understand all of the requirements prior to taking the course and examination. For your convenience, the Master Electrician Licence Requirements may be found on page 3.

Frequently Asked Questions

What is a Master Electrician Licence?

This is a licence issued to an individual who has demonstrated at least three (3) years experience in the electrical trade;

- As a journeyman electrician carrying out work under a valid C of Q as a construction & maintenance, domestic & rural or industrial electrician, or
- Working for an electrical contractor as a licensed P.Eng. registered with the PEO, or
- Working for an electrical contractor as a CET or C-Tech registered with the OACETT

This licence gives the authority for an individual to be designated with the responsibility for;

- the personal planning and direct supervision of electrical work carried out on behalf of an electrical contractor, and
- ensuring that the electrical work is carried out in accordance with applicable laws (i.e. Electrical Safety Code, Occupational Health and Safety Act, etc.)

What does “Designated Master Electrician” (DME) mean?

A Designated Master Electrician (DME) is an individual who holds a valid ME Licence and either owns or employed by an electrical contracting business and has been designated by the electrical contractor as the Designated Master Electrician.

They are required to be actively employed by the designating electrical contractor, and cannot be the Designated Master Electrician for more than one electrical contractor at any one time.

The DME is responsible for the personal planning and direct supervision of electrical work carried out on behalf of the electrical contractor; and for ensuring that the electrical work is carried out in accordance with the applicable laws.

As the Master Electrician Licence is a requirement for obtaining an Electrical Contractor Licence, the applicant must employ at least one Designated Master Electrician at all times.

In addition, they cannot carry out electrical work unless they hold a valid C of Q for the scope of work being performed.

Who should apply for a Master Electrician Licence?

- Anyone who is or will be operating an Electrical Contracting Business (i.e. Sole Proprietor)
- Anyone who is or will be employed as a Designated Master Electrician for an Electrical Contracting Business
- Anyone who wishes to attain a higher level of electrical and business expertise

What are the requirements to become a Master Electrician for 1st time applicants?

To be eligible for the Master Electrician Licence you must;

- 1) Be at least 18 years old.
- 2) Demonstrate at least three (3) years experience;
 - a. As a construction and maintenance electrician, a domestic and rural electrician or an industrial electrician carrying out work under a valid certificate of qualification, or
 - b. Working for an electrical contractor as a licensed professional engineer, and are registered with the Professional Engineers of Ontario, or
 - c. Working for an electrical contractor in the capacity of a certified engineering technician or a certified engineering technologist, and are registered with the Ontario Association of Certified Engineering Technicians and Technologists; and
- 3) Have passed the Master Electrician qualifying examination within the 12 month period preceding the date of the license application; and
- 4) Not owe ESA any money for which payment arrangements have not yet been made.

Can a Master Electrician do electrical work?

A Master Electrician may not carry out electrical work unless he or she holds a valid certificate of qualification. The Trades Qualification and Apprenticeship Act defines the scope of work limits for each type of certificate of qualification.

What is the cost for a Master Electrician Licence?

The ME licence fee is \$75 + GST for a 1 year term, or \$150 + GST for a 2 year term. A master electrician licence expires on the date indicated on the licence.

Where can I write the Master Electrician Examination and what does it cost?

Examinations are offered by ESA at various locations, and will continue to be offered throughout the province. A current listing of examination locations, dates, and application forms are available on our website at www.esaecra.info under Pre-Master Training.

The cost of the examination is \$125.00 + GST.

What is the Pre-Master's Course? What does it cost? Is it mandatory?

The Pre-Master's Course is designed to provide a standard training package to assist Electricians in preparing to write the Master Electrician's Examination, or to improve the qualifications of Master Electricians. The course is divided into 12 Modules and references specific sections of Ontario's Electrical Safety Code, the Building Code, other pertinent legislation, electrical calculations, and trade and business practices.

The cost of the Pre-Master's course is \$517.00 + GST and is not a prerequisite for the Master Electrician Examination. ***However, applicants that fail the Master Electrician Examination two (2) times will be subject to review, and may not be permitted to write again unless the applicant has participated in a Pre-Master Electrician Course or other related course.***

To REGISTER for the Pre-Master's Course, call 1-877-372-7233 select option 4

Course Outline

Background

Developed by the Electrical Contractor Registry Agency (ECRA) and presented by the Electrical Safety Authority, the Pre-Master's Course has been designed to expand the knowledge and skills of Electricians and assist electricians and other persons, who are qualified to be licensed (P.Eng, CET, C-Tech), in preparing to write the Master Electrician Examination.

This course has been arranged into 12, three to four-hour modules. It is intended to readily lend itself to part-time or full-time study. For part-time study, one module may be covered per session. For full-time study, two modules may be covered in a full-day format.

The following subject categories are covered in the course material:

Module 1 Code Content, Application and Administration

This module provides necessary insight and skills to navigate the essentials of the Electrical Safety Code (ESC).

Module 2 Conductors

Covering the most common Code rules for metallic and nonmetallic sheathed cables, armoured cables, mineral insulated cables, rigid and flexible conduits, cable trays, boxes, cabinets and fittings and high voltage wiring methods, this module deals with the most critical subjects, pertinent to all installations.

Module 3 Protection and Control

This module explains the rules for application of fuses, circuit-breakers and control devices to protect and isolate electrical wiring and equipment so as to minimize electrical fire and shock hazards.

Module 4 Installing Electrical Equipment and Services

Section 26, covering electrical equipment installations and Section 6 on services into buildings are covered in detail.

Module 5 Grounding and Bonding, Temporary Services

Grounding and Bonding provides safety to persons and property by:

- Limiting circuit voltages
- Minimizing potential differences between electrical equipment and other metallic systems
- Facilitating operation of electrical protection
- Minimizing voltage surges from lightning and other sources

Module 6 High Voltage Installations, Lines and Farm Buildings

High Voltage, overhead line work and farm wiring are all unique wiring types requiring special understanding.

Module 7 Motors, Theatres, Travelling Shows

All represent unique applications in the ESC.

Module 8 Lighting, Fire Alarm Systems, Fire Pumps, Emergency Systems

Lighting represents a significant heat source and therefore potential fire hazard, which leads nicely into the other topics covered in this module.

Module 9 Hazardous Locations, Pools, Spas, Tubs and Waterfront Facilities

The dangers of hazardous locations cannot be overemphasized and with the introduction of new rules in the 23rd Ontario Electrical Safety Code, it is essential that the Master Electrician has a working knowledge of the requirements this module will cover. Similarly, water and electricity can be a deadly combination wherever it may be.

Module 10 Other Relevant Legislation

There is more to running a business than knowing the Ontario Electrical Safety Code; this module deals with regulations in other Acts, which have a profound impact on the contractor's business.

Module 11 Electrical Calculations, Trade Practices and Ontario Building Code

This module provides additional information on selected subjects, which are required knowledge for anyone in a responsible position in an electrical contracting firm.

Module 12 Licensing and Business Practices

The last module deals with the Licensing system, reciprocity agreements, responsibilities of master electricians, the "must do" practices and the ethics involved in this very competitive industry.

Take-Home Quizzes

A take-home quiz is provided at the end of each module.

“Working together we will increase Electrical Safety in the Province of Ontario”

To REGISTER for the Pre-Master's Course, call 1-877-372-7233 select option 4

Pre-Master Training Course and Master Electrician Examination Study Material

A Pre-Master Electrician Course Student Manual will be provided to you during the course.

In addition to the Student Manual you are responsible for the following course material;

1. **2002 Ontario Electrical Safety Code** 23rd Edition
(Purchase from Orderline 1-888-361-0003 www.orderline.com)
2. **Ontario OH&S Act & Regulations** which includes the Construction and Industrial Projects (Purchase from Carswell 1-800-387-5164 ISBN # 978-07798-0010 for the 2007 version). If the 2007 version is unavailable to purchase, you are able to use the one issued in 2008.
3. **A Calculator**
4. **Other Relevant Legislation** as they relate to electrical contracting (See listing below)



Other Relevant Legislation consists of the following;

(These can be downloaded for free from www.e-laws.gov.on.ca. Specific links are beside each regulation. These documents are relevant to the training and examination, but are not mandatory requirements.)

A. Electricity Act

http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_98e15_e.htm#BK255

- Electricity Act, 1998 ONTARIO REGULATION 164/99, Amended to O. Reg. 10/02 ELECTRICAL SAFETY CODE http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_990164_e.htm
- ONTARIO REGULATION 570/05 Licensing of Electrical Contractors and Master Electricians http://www.e-laws.gov.on.ca/html/source/regs/english/2005/elaws_src_regs_r05570_e.htm
- Electricity Act 1998, PART VIII ELECTRICAL SAFETY http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_98e15_e.htm#bk239

B. Safety and Consumer Statutes Administration Act, 1996

http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_96s19_e.htm

- ONTARIO REGULATION 187/09, Part II - Reviews and appeals of orders issued by the electrical safety authority http://www.e-laws.gov.on.ca/html/source/regs/english/2009/elaws_src_regs_r09187_e.htm

C. Trades Qualification and Apprenticeship Act

http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90t17_e.htm

- R.R.O. 1990, REGULATION 1051, ELECTRICIAN http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_901051_e.htm
- R.R.O. 1990, REGULATION 1055, GENERAL http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_901055_e.htm

D. Occupational Health & Safety Act

- ONTARIO REGULATION 213/91, Amended to O. Reg. 628/05, CONSTRUCTION PROJECTS http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_910213_e.htm
- R.R.O. 1990, REGULATION 851, Amended to O. Reg. 629/05, INDUSTRIAL ESTABLISHMENTS http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_900851_e.htm
- ONTARIO REGULATION 632/05, Confined Spaces http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_050632_e.htm

E. Employment Standards Act, 2000

http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_00e41_e.htm

F. Construction Lien Act

http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_90c30_e.htm

- R.R.O. 1990, REGULATION 175, Amended to O. Reg. 366/02, GENERAL http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_900175_e.htm

G. Consumer Protection Act, 2002

http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_02c30_e.htm

H. Workplace Safety and Insurance Act, 1997

http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_97w16_e.htm

I. Bill C-45

http://www.parl.gc.ca/common/Bills_ls.asp?lang=E&Parl=37&Ses=2&ls=C45&source=#ebillc45txt

These can also be purchased at:

Publications Ontario bookstore

880 Bay Street, Toronto, Ontario, Canada, M7A 1N8

(Hours of service are: Monday to Friday 8:30 a.m. to 5:00 p.m., holidays excepted) and;

Access Ontario bookstore

Access Ontario, Ottawa Court House, 161 Elgin Street, Level 2, Ottawa, Ontario, Canada, K2P 2K1

(Hours of service are: Monday to Friday 8:00 a.m. to 5:00 p.m.)

Or **by telephone:** 1-800-668-9938 Toll Free or (416) 326-5300 fax to (613) 566-2234.

Master Electrician Examination Outline

Prior to signing up for the examination, review the Master Electrician Licence requirements found on page 3 of this package. Passing the examination is only one of the necessary requirements to obtain a Master Electrician Licence.

The objective of the Master Electrician Examination is to test an individual's knowledge of the laws, rules and regulations governing the installations and repair of electrical equipment and material and the supervision of such work.

The examination is divided into the following three sections:

1. The Ontario Electrical Safety Code (60%)
All sections of the 2002 Ontario Electrical Safety Code and ability of the applicant to properly use the Code as a Reference Book
2. Legal (30%)
The Occupational Health and Safety Act and regulations for Construction and Industrial Projects, the Workers Compensation Act, the Trades Qualification and Apprenticeship Act, Bill C45, Consumer Protection Act and the Construction Lien Act as they relate to electrical contracting
3. Technical (10%)
Calculations and definitions related to electrical work

Examination Particulars:

- It is mandatory that each applicant bring a government issued **photo ID** to the examination consisting of any of the following:
 - Driver's licence
 - Passport
 - Health insurance card
 - Canadian citizenship card
 - Government issued identification

Applicants who do not bring an acceptable form of identification, as well as the Confirmation Letter, will not be admitted into the examination area. The applicant will have to re-schedule for the next available examination.

Applicants must arrive to the examination location at least 30 to 60 minutes before the scheduled start time.

The Master Electrician Examination is 3 hours in length, which consists of 80 multiple choice questions; there is only one correct answer for each question. If you arrive late or require a restroom break during the examination, additional time for your examination will not be provided. The pass mark for the examination is 70%, or 56 correct answers. Applicants must pay close attention when filling in the answer (bubble) sheet. ***Only answers recorded on the answer sheet will be scored.***

The examination is open book; therefore each applicant is permitted to bring the following to use during the examination:

- A calculator
- The Ontario Electrical Safety Code
- The Occupational Health and Safety Act Regulations (Green Book)
- Other relevant legislation (found on page 6 & 7 of this package)
- **APPLICANTS MUST BRING A PENCIL** to fill in the answer sheet

Master Electrician Application Form

- ESA must receive your application seven (7) working days prior to the examination date, along with a current copy of your professional qualification (C of Q, P.Eng, CET, C-Tech). Applications that are illegible, incomplete or not accompanied by the examination fee will cause a delay in processing your application.

Confirmation Letter

- Once the Master Electrician Examination Application Form is received and reviewed by the Registrar's office, a letter will be sent to the applicant indicating whether or not they have been accepted to write the examination. It is up to the applicant to understand what the requirements are.
- If the applicant is accepted a Confirmation Letter will be sent out indicating the examination date, time and location. ***Applicants must bring this letter, along with government issued photo ID, to the examination location; otherwise the applicant will not be permitted to write.***

Refusal Letter

- Should the applicant not be accepted to write the examination, a letter will be issued indicating the application was refused.

Notification of Examination Results:

- The examination results will be mailed out within 15 working days; ***results will not be provided over the phone.*** Please ensure that the Office of the Registrar has your most current mailing address.

Pre-Master Electrician Course Requirement:

- Applicants that fail the examination two (2) times will be subject to review, and may not be permitted to write again unless the applicant has participated in a Pre-Master Electrician Course or other related course.

Cancellation or Rescheduling Particulars:

- An additional \$25.00 + GST fee will be charged to cancel or reschedule an examination unless ESA is notified seven (7) working days prior to examination date.

Master Electrician examination dates and location can be found on our website www.esaecra.info



Electrical Contractor Registration Agency of the Electrical Safety Authority

Office Use
Date: _____
Sales Order#: _____

Master Electrician Examination Application Form - Fee \$125 + GST = \$131.25

Submit application to:
ECRA of the Electrical Safety Authority
155A Matheson Blvd W, Suite 202
Mississauga, ON L5R 3L5
Fax (905) 507-4572

ESA is not responsible for ensuring that you have the requirements to obtain the Master Electrician Licence prior to taking the course and examination. It is up to you to make sure that you understand what the requirements are.

Can you demonstrate **at least 3 years experience**, (Check which option applies)

- as a **construction and maintenance** electrician, a **domestic and rural** electrician or an **industrial** electrician carrying out electrical work under a valid certificate of qualification (**C of Q**),
- working for an electrical contractor as a licensed **professional engineer (P.Eng)** registered with the Professional Engineers of Ontario, or
- working for an electrical contractor in the capacity of a **certified engineering technician (CET)** or a **certified engineering technologist (C-Tech)** registered with the Ontario Association of Certified Engineering Technicians and Technologists

If you cannot demonstrate the above 3 year experience, you will not be permitted to write the Master Electrician Examination

All applications must be faxed or mailed with a current copy of your certificate as indicated above. ESA must receive your application seven (7) working days prior to the examination date.

PART I				EXAMINATION SELECTION & QUALIFICATIONS			
Requested Examination Date		Examination Location		Examination Notification			
Trade Certificate of Qualification (Ontario or Quebec), P.Eng or OACETT #			Date of Issue (d/m/yr)		Date of Expiry (d/m/yr)		
Present Employer/Contractor Name and address					Contractor Licence # (if applicable)		
PART II				APPLICANT INFORMATION			
Applicant First Name			Middle initial	Applicant Last Name			
Home Address				City		Postal Code	
Home Phone #		Business Phone#			Fax #		
PART III				PAYMENT			
Payment Method: (please check one)							
<input type="checkbox"/> VISA <input type="checkbox"/> MASTER CARD <input type="checkbox"/> AMERICAN EXPRESS				Card Number		Expiry Date (M/YR) /	
Name on Card				Signature			
<input type="checkbox"/> ESA ACCOUNT # _____				<input type="checkbox"/> CHEQUE/MONEY ORDER # _____			
***make cheque/money order payable to the Electrical Safety Authority							

Declaration:

I, the undersigned, _____ certify that the above information is true, correct and complete to the best of my knowledge. **I have verified that I meet the requirements to obtain a Master Electrician Licence, and have read and agree to follow the Rules of Conduct.** I understand and consent to the verification of any information contained within this document.

Date: _____

Signature: _____

Preparing for the Master Electrician Examination

Scheduling your study time

- Study early. It is suggested that arranging your study time into shorter sessions over a period of time proves to be far more valuable than cramming all the material into closely spaced and lengthy study intervals.
- Maintain a regular study schedule
- Set specific study goals
- Take breaks between study sessions, more complicated, and difficult subjects will require many frequent breaks
- Begin each study session with a short review of the previously studied material

Organizing your materials for an open book examination

- Open book examinations require ample preparation in order to understand and familiarize one self with the material
- Preparation allows for better organization, and will assist when searching for information during the examination
- Be sure to tab, or colour code information that is relevant to the examination
- Utilize your codebook to make notes, or expand on concepts or words which you might not understand
- Be sure to go over relevant legislation

Rules of Conduct for the Master Electrician Examination

The Electrical Safety Authority (ESA) upholds strict confidentiality with regards to all Master Electrician Examination material. Strict procedures have been implemented in order to preserve the integrity of the Master Electrician Examination.

- The examination remains the exclusive property of ESA and is protected by copyright
- The content of the examination, including the multiple-choice options, is not to be distributed to any other individual, organization or agency
- The Master Electrician Examination is not to be reproduced through memorization or any other means
- Applicants, at any time, are not permitted to leave with the Master Electrician Examination

To ensure the security of the examination area, applicants are not permitted to bring to the examination table: hats, scarves, gloves, coats, book bags, backpacks, cameras, cellular phones, pagers, tape recorders, headphones, headsets, radios, etc. These items must be left away from the examination area. ESA assumes no responsibility for lost, stolen, broken or misplaced personal property. It is up to the applicant to plan accordingly.

Applicants are permitted to bring to the examination table: Ontario Electrical Safety Code, Ontario OH&S Act & Regulation, Calculator and Other Relevant Legislation. For a complete list refer to page 6 & 7 of this package.

At any time, applicants are not permitted to speak to one another while in the examination area. Once the applicants have completed their examination, all applicants will proceed to leave the examination location immediately.

Applicants will not:

- Falsify or misrepresent information required by ESA
- Impersonate others or have someone impersonate themselves in order to participate in the Master Electrician Examination
- Obtain, use or give any answers to another applicant
- Designate or change any answers to questions on the Master Electrician Examination prior to the announcement of commencement, or after the announcement of the conclusion
- Be abusive, either physically or verbally towards the Proctor, ESA staff members, or to any other applicant

Applicants will comply with requests and instructions made by a Proctor, including, but not limiting to a request to leave the examination area.

Should an applicant not comply with ESA's Master Electrician Examination Rules of Conduct and be suspected of any improper activity, it may lead to any of the following as well will prohibit the applicant from writing the Master Electrician Examination for **twelve (12)** months.

- If prohibited items are found in the possession of a applicant, the results of the applicants examination will be declared null and void
- The Proctor is required to escort all violators of the above rules from the examination area, and the results of the applicants examination will be declared null and void

It is understood that all applicants will comply with ESA's Master Electrician Examination Rules of Conduct.

Applying for a Licence

Master Electrician Licence Application

The Master Electrician Licence application form is available online and by contacting the Customer Service Centre (1-877-372-7233).

What Information and Documentation is Required for Submission with the Application Form?

- Copy of your valid C of Q, P. Eng., CET or C-Tech Certificate, as applicable, which you must have held for a minimum of three (3) years
- Copy of documented examination passing certificate
- List of qualifying 3 year trade experience
- Employer information, if named as the Designated Master Electrician – Signed “Schedule A”
- Passport quality and size photo
- Licence Fee (Cheque, money order or credit card)

Applications will be submitted to:

Electrical Safety Authority
PO Box 24143
Pinebush Postal Outlet
Cambridge, ON
N1R 8E6

Further information can be found on our website www.esaecra.info or by contacting;

E-Mail: ESA.licensing@electricalsafety.on.ca

Phone: (905) 712-5385

Fax: (905) 507-4572