# Main Electrical Institute School Policies/Catalog

320 Presumpscot Street, Unit 1A Portland, ME 04103 (207) 544-8143

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Approved and Regulated by the State of Maine Electrical Examination Board and approved by other and various state boards

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## **Introduction**

Main Electrical Institute (hereinafter referred to as M.E.I.) offers the finest technology for student training and is staffed with qualified, approved, and dedicated instructors. We are committed to providing relevant training and high-quality education so that you are confident in your trade and can not only know how to perform a task, but the "why" behind it.

## **Our Mission**

To be a premier educational provider and to produce a safe, qualified, professional workforce that is confident in their trade and able to serve communities at a high level of service.

## **Faculty Members**

Chief Executive Officer: Matthew Flaherty Director of Education: Brandon Tyndale

Admissions & Program Coordinator: Lindsay LeBlanc Administrative Assistant & Enrollment: Sarah Lee

## **Course Descriptions**

#### **Basic Electricity I (45 Hours)**

This course is an introduction to DC circuits. Basic electrical safety, atomic structure, Ohm's law, static electricity, magnetism, resistors, series circuits, parallel circuits, combination circuits, measuring instruments. By the end of this course, students will have a basic command of Ohm's law and calculations of DC electricity.

This course is offered via Self-Paced study for \$400

\*\*\*Materials Required (see appendix)

## **Basic Electricity II (45 Hours)**

This course is an introduction to AC circuits and the theory around it. With a firm foundation established in Basic Electricity I, this course introduces induction and capacitance and all the effects upon a circuit that are associated with them. True power, reactive power, apparent power, and more are introduced and discussed.

This course is offered via Self-Paced study for \$400

\*\*\*Materials Required (see appendix)

Prerequisites: Basic Electricity I

#### **Blueprint Reading (45 Hours)**

This course is a comprehensive study in blueprints of various systems. It will prepare the student in residential, commercial, and industrial building plans—including elevations, plan view, risers and more. A thorough study of symbology throughout the trades will be key as the student learns to read prints with other trades in mind.

This course is offered via Self-Paced study for \$400

\*\*\*Materials Required (see appendix)

Prerequisites: None

#### **Controls I (45 Hours)**

This course focuses on wiring methods and materials pertaining specifically to residential applications. Starting with the outside service and proceeding toward the interior wiring, both materials and methods are covered. Those taking the course online will receive instruction through the chapter reading only. By the end of this course, students should be able to identify materials and properly install devices commonly found in residential applications. Layout of various residential rooms will be covered, and students should be able to lay out a room to comply with the NEC.

This course is offered via Self-Paced study for \$400

\*\*\*Materials Required (see appendix)

#### **Prerequisites:**

Basic Electricity I (or permission from the instructor), Basic Electricity II (or permission from the instructor)

#### **Intro to the NEC (45 Hours)**

This course is an in-depth look at chapters 1-4 of the National Electrical Code, and an overview of chapters 5-8. These chapters lay the foundation for all installations.

Students benefit greatly from access to a video series to aid them as they study on their own.

This course is offered via Self-Paced study for \$300

\*\*\*Book/Materials Required (see appendix)

## **Transformers (45 Hours)**

This course will give the student a basic understanding of the various types of transformers, construction, operation and theory of transformers. The various connections such as delta, wye, T and others are introduced. Students will become proficient in using transformer formulas to determine related values. Self-paced students will benefit from access to a video series which will aid them as they study on their own.

This course is offered via Self-Paced study for \$400

\*\*\*Materials Required (see appendix)

**Prerequisites:** Basic Electricity I, Basic Electricity II

#### Motors (45 Hours)

This course will give the student a basic understanding of both DC and AC rotating machines. Students will gain a working knowledge of motors both in theory, construction types and basic operating principles. This course covers single-phase as well as 3-phase motor types.

This course is offered via Self-Paced study for \$400

\*\*\*Materials/Book Required (see appendix)

Prerequisites: Basic Electricity I, Basic Electricity II

#### **Controls II (45 Hours)**

This course will help students be comfortable with electric motor controls. Reading and drawing line diagrams, logic, and associated rules. Students will gain an understanding of contactors, motor starters and reversing motor circuits. Various control devices such as timers, counters and reduced voltage starting are introduced.

This course is offered via Self-Paced study for \$400

\*\*\*Materials Required (see appendix)

Prerequisites: Basic Electricity I, Basic Electricity II, Controls I

#### **Math for Electricians (45 Hours)**

This video course is designed to prepare a student for the variety of math equations that an electrician will face on a routine basis. Basic multiplication, division, algebra, trigonometry and geometry are applied in real-life applications as an electrician would see in real life.

This course is offered via Self-Paced study for \$400

\*\*\*Materials/Book Required (see appendix)

Prerequisites: Basic Electricity I, National Electrical Code

#### **Electronics (45 Hours)**

This course is introductory in nature and exposes the student to a wide variety of electronic considerations. Upon completion, the student will have a basic understanding of RLC networks, diodes, power supplies, transistors, amplifiers, oscillators, digital circuits, integrated circuits, and more.

This course is offered via Self-Paced study for \$400

\*\*\*Materials Required (see appendix)

#### **Prerequisites:**

Basic Electricity I, Basic Electricity II, Proficiency in basic math skills is required

## **Advanced Code - Level II (45 Hours)**

#### <<<ELECTIVE>>>

Provided via video series, this course focuses on the second half of the code book with Chapters 5-8. The student will gain understanding on the structure of the code book and the rules governing each chapter of the code. Special occupancies, special equipment, special conditions, and communications are discussed in detail. Time will be spent on the more often neglected formulas and calculations in order to aid the student seeking to become a Master Electrician or Journeyman Electrician. This course is approved as both a "Trade Related" and "Non-Trade Related" course to satisfy the electives for either Journeyman or Master.

This course is offered via Self-Paced study for \$400

\*\*\*Book/Materials Required (see appendix)

#### **Prerequisites:**

Intro to the NEC Highly Advised

#### **Business Communications (45 Hours)**

#### <<<ELECTIVE>>>

This course is designed to satisfy one of the elective classes required for the Master Electrician license. Students will learn the importance of effective business communications and the many different delivery methods to choose from. Additionally, students will learn to identify obstacles of communication and how to overcome them. Good writing practices are thoroughly discussed. Business presentations, positive and negative communication methods, and more are discussed.

This course is offered via Self-Paced study for \$500

#### Foundations of Business (45 Hours)

#### <<<ELECTIVE>>>

This course is designed to satisfy one of the elective classes required for the Master Electrician license. Students will learn the foundational principles of business, economics, and problems that often arise. Additionally, ethics, social responsibilities, the global environment, and forms of ownership are discussed. The many challenges of starting a business will be identified—recruiting techniques, marketing strategies, accounting principles and habits, as well as other financial dimensions will be explored.

This course is offered via Self-Paced study for \$500

## **Small Business Management (45 Hours)**

#### <<<ELECTIVE>>>

This course is designed to satisfy one of the elective classes required for the Master Electrician license. Students will learn the principles of management, gain an understanding in the various personalities, attitudes, and work behaviors likely to be experienced while managing in the work force, as well as understanding the value and process of developing a mission and vision statement. Additionally, topics such as strategizing, setting goals and objectives, organizational structures and culture, networking, decision making, and more are covered in this course.

This course is offered via Self-Paced study for \$500

# Courses Offered per Half-Program for Colorado

## **First Half**

The first half of the program includes 45 hours of instruction in each of the following:

- Basic Electricity I
- Basic Electricity II
- Transformers
- Controls I
- Blueprint Reading
- National Electrical Code

## **Second Half**

This second half of the program includes 45 hours of instruction in each of the following:

- Math
- Controls II
- Motors
- Advanced Code Level II
- Business Communications
- Foundations in Business
- Business Management

# Courses Offered per "Year" for New Hampshire

#### **Year One**

The first "year" of the program includes 45 hours of instruction in each of the following:

- Basic Electricity I
- Basic Electricity II
- Blueprint Reading
- Controls I

## **Year Two**

The second "year" of the program includes 45 hours of instruction in each of the following:

- Transformers
- Motors
- Math
- Conduit Bending

#### **Year Three**

The third "year" of the program includes 45 hours of instruction in each of the following:

- National Electrical Code
- Controls II
- Advanced Industrial Controls
- Solar Photovoltaics

#### **Year Four**

The fourth "year" of the program includes instruction in each of the following:

- NFPA70E and OSHA Safety Guidelines (16 hours)
- Common Code Violations and NH Laws (4 hours)
- Advanced Code Level II (45 hours)

# **Courses Offered per Half-Program for Utah**

## **First Half**

The first half of the program includes 45 hours of instruction in each of the following:

- Basic Electricity I
- Basic Electricity II
- Transformers
- Motors
- Controls I
- Blueprint Reading
- National Electrical Code

## **Second Half**

This second half of the program includes 45 hours of instruction in each of the following core classes:

- Math
- Controls II
- Electronics

Three Electives are included in the program.

The following options are available (3 must be selected):

- Advanced Code Level II
- Business Communications
- Foundations in Business
- Business Management

## **GENERAL POLICIES**

## **Entrance Requirements**

M.E.I. does not discriminate based on race, sex, religion, ethnic origin, or disability.

Prospective students must have a high school diploma or its equivalent to be accepted for enrollment. If neither of these are met, special consideration may be granted if the student shows aptitude in the areas of the trade, or if a minor, with the permission of the parent or legal guardian.

Students enrolled in high school may enroll prior to graduation with parental consent, must be 16 years old prior to starting, and show proficiency in understanding basic math skills.

## **Sponsorship Accountability**

M.E.I. recognizes that many students are sponsored by their employer to further their career and professional development. As such, there is a fiduciary responsibility to the sponsor to ensure that the student is doing the required work. Therefore, it must be understood that the student's progress records, including grades, attendance, and participation may be reported to the sponsor at any time, either upon the request of the sponsor, or if there is concern from the instructor that the sponsor should be made aware of.

## **Grading System**

A minimum of 70% overall grade is required. Grading is based on a weighted method where the following portions are averaged together to get the overall grade:

- 1. Completion of reading assignments: Prerequisite to finishing the course. A grade will not be issued until necessary reading is completed.
- 2. Homework assignments: All assignments will be averaged together, and that portion of work will represent 40% the total grade. (The exception to this is the Blueprint Reading course, in which the homework represents 75% of the total grade.)
- 3. Final Exam: Where a final exam is required, the exam is considered open notes, and the grade will represent 60% of the class grade. If a class allows for open book, it will be stated in the course syllabus for that specific course. (The exception to this is the Blueprint Reading course, in which the Final Project represents 25% of the total grade.)

## **Requirements for Successful Completion**

- Read all required assignments by the completion date established
- Complete all "end of chapter" assignments by the completion date established
- Pass the final exam (under the supervision of a proctor if online/correspondence)

All completed classes will be recorded on the student's official transcript and will be provided to the student upon completion of the program.

If a student is unable to get a passing grade, reasonable effort to remediate the student will be made. If after two (2) attempts at passing the final exam, the student still fails, additional costs to student may be required, up to and including the full course price for additional training.

## **Book Usage Policy—The Lending Program**

In order to keep the cost down as much as possible, books are not required to be purchased. Books will be issued to a student at the start of each class and upon completion of the course, the book must be turned back in prior to issuance of certificate or transcripts. In the event that a book is lost or severely damaged, a prorated fee will be charged depending on the condition of the book when it was signed out.

<u>NOTE</u>: The only book that is required to be purchased on your own is the National Electrical Code book, as this is central to your career and will be part of your tool kit for the rest of your tenure in the electrical industry.

## **Address Changes**

It is a student's responsibility to update their address on file with us if there are any changes.

#### Payment Policy & Transcript Release Agreement

Payment is required in full before registration is considered complete.

Transcripts will not be released until all tuition is paid in full, and all books are returned.

## Payment Options—Self-Paced Learning

OPTION #1: One Half Program PAID IN FULL: \$2,250. This includes 6 classes.

OPTION #2: Full Program PAID IN FULL: \$4,400 if paid in full before the program starts. \*Note: There are some electives which are only offered in the classroom, so if those are chosen, the pricing will increase.

<u>OPTION #3: Full Program Split-Payment</u>: \$4,500 in total. If enrolled in both halves of the program, but full payment cannot be made, the student may pay \$2,250 at the time of enrollment and the second half (\$2,250 1 year from the date of enrollment in the program).

<u>Individual Courses</u>: Any core class can be purchased as a stand-alone course for \$400. (Except the Intro to the NEC, which is \$300.)

## **Refund Policy**

#### All Students

It is a student's responsibility to update their address(es) on file with us. In the event that an old address is used to process a refund, and a check has to be cancelled and re-issued as a result of this oversight, a \$50 stop-payment fee will be deducted from the amount of the refund.

In ALL cases, any books or other resources that have been provided by the Maine Electrical Institute must be returned before any refund is issued.

## **Self-Paced Learning**

<u>Individual Courses</u> – Students who cancel their enrollment with the school within five (5) business days of original date of enrollment AND HAVE NOT YET BEGUN THEIR COURSE OF STUDY are entitled to a refund of tuition and fees paid except a cancellation charge of \$150 per course. Students who withdraw after beginning their course of study will receive no refund for any classes they have begun. Students who have been enrolled in a course beyond five business days are not entitled to any refund, regardless of the progress or lack thereof.

<u>Full Program Students (Limited or Journeyman Program)</u> – Students who cancel their enrollment with the school within five (5) business days of original date of enrollment AND HAVE NOT YET BEGUN THEIR COURSE OF STUDY are entitled to a refund of tuition and fees paid except a cancellation charge of 10% of the tuition paid. Students who withdraw after beginning their course of study will receive no refund for any classes they have begun. Students who have been enrolled in a program beyond 30 days are not entitled to any refund, regardless of the progress or lack thereof.

## **Required Progress:**

Students enrolled in any self-paced class must finish at least one course within four months to remain in active status. Students who do not show this rate of progress will be placed on an inactive roster and a 10% administrative fee will be applied if the student desires to finish the course after that time. If placed on inactive status, books must be returned to the school.

Since we partner with another company for the business courses, students enrolled in those courses must complete two courses in a one-year time frame or pay a \$215 administrative fee to continue.

## **Minimum Completion Times for Self-Paced Students:**

To ensure that students are employing good study habits (and not just searching for answers), a minimum of 30 days are required to pass from the time of enrollment to the time of a proctored exam. This will ensure that at least the minimum required time is spent in each course of study.

## **Proctored Exams:**

Students who are enrolled in Self-Paced classes can either arrange to take their final exams at the M.E.I. facility or will need to arrange an approved proctor prior to the time of the final exam. If a proctored exam is necessary, you will be given the additional instructions and requirements for such arrangements. The proctor agreement form must be completed and returned to M.E.I. prior to the start of the first exam.

Exams are considered open note exams (not open book) and the grade will represent 60% of the class grade. If a class allows for open book, it will be stated in the course syllabus for that specific course.

# **Appendix**

## **MATERIALS:**

The following is a list of materials required and the courses they are required for.

## For all courses except the NEC & Business courses):

 Scientific Calculator (capable of SIN, COS, TAN functions) (Texas Instruments TI-30XIIS)

## **Blueprint Reading course:**

- Graph paper with 1/4" graphing squares...at least 8.5 x 11" size paper.
- Architectural Scale 12" Ruler Do not use an Engineering Scale.

## Motors, Math, Intro to the NEC, and Advanced NEC courses:

- Because the Code Book is a central part of the electrician's career, it is required that each student purchase their own current copy of the <u>code book</u>. This is the only book M.E.I. requires the student to purchase.
- For the NEC courses you will also need a set of the handbook <u>index tabs</u>. These can be purchased directly from the NFPA website.
  (NOTE: DO NOT put the tabs in the code book until directed to do so in the course. We will provide some tips and tricks on best practices at the beginning of the course.)
- For the NEC courses, you will also need a set of at least 6 different colored chisel-tipped highlighters.