



Initial Education Provider [IEP] Guidelines

The Board of State Examiners of Electricians

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TO: Education Providers

Topic: Regarding new and renewing Providers of MA electrical programs

The Board of state Examiners of Electricians historically adopts the new code within a month or less of a new code year release. According to the Board's regulations 237 CMR all 600hr Journeyman, 150hr Master, 300hr Systems Technician and 75hr Systems Contractor programs must be approved by the Board and all programs renewing their approval for the new cycle must submit their application to do so no less than 90 days prior to the adoption of the Electrical code by the Board.

This handbook is designed to aid you in the evaluation and approval process and outline expectations using the requirements in the Board's regulations for new and existing Initial Education Providers (IEPs). As you will be teaching the code, lesson plans and handout materials you submit to the Board should show and address how you present the objectives of the NEC and how you have integrated the MEC in your program. The package you present must be comprehensive. There is an included checklist to help you check off items as you put them together. Continuation or approval is contingent upon meeting the requirements of the program. Providers who do not meet the criteria will not be approved. As the Board meets virtually, all applications must be submitted comprehensively and completely to the Board office via email in pdf format. Preferably submitted as not more than one or two pdf documents.

Special note: - Approval by the Office of Private Occupational School Education does not mean automatic approval by the Board of State Examiners of Electricians. There is a separate office and a separate approval.

Existing Providers who have submitted complete packages and received approval for their programs may commence conducting classes after January 1, 2023 or Board adoption of the code (whichever comes first). Any advertisement of classes prior to subcommittee approval must explicitly indicate "tentative" or "subject to Board approval". New Providers must be completely approved by the subcommittee before advertising and conducting classes. The Board's education subcommittee will begin issuing Provider approvals no earlier than December 2022.

If you have any questions, contact the Board office at electricians.board@mass.gov . We look forward to working with you in the new code cycle.

Sincerely,

Board of State Examiners of Electricians

1 Federal Street. Ste. 0600

Boston, MA 02110 | phone 617-727-9931 | fax 617-727-9932

B. Program Overview and Application

There are two types of providers overseen by the Board: - Mandatory Continuing Education providers (CEPs) and Initial Education providers (IEPs). IEPs group is further divided into several types. The IEP application is submitted for all of these types each new code cycle. A copy of the current version of the application has been included with this document for convenience. Upon submittal, complete application packets are brought forward to the Education Subcommittee for recommendation. The subcommittee then reviews the materials together with an administrative report if any of the Provider's history and determines Provider re-approval for the cycle. Following the review process, the Board will notify the provider of the decision or any actions to be taken.

The following provides a brief description of the main definitive factors that determine the differences in IEP types:

Vocational School, (under CH74 DESE) Program

Chapter 74 School Vocational Education grades 9-12 (in-state)

- A vocational education program is a high school day-time program that receives oversight from the Department of Elementary and Secondary Education (DESE) and follows established content and formats called educational strands. The DESE conducts safety reviews of these programs for compliance and discipline. Although the Board does not audit these programs it does provide direction and in collaborative effort with DESE, the schools and their electrical department directors and instructors ensures compliance with the Board regulations and required curriculum.

Vocational School extracurricular, non CH74 Program

Vocational High Schools offering extracurricular evening and weekend programs (post secondary education)

- Programs held in or sponsored by Vocational High schools that fall outside of CH 74 governance (typically night and weekend programs) must comply with 237 CMR 18.02 and 22. Such programs are not governed by DESE or the Office of Private Occupational Schools Education and must submit their program packages to the Board of State Examiners of Electricians for approval and renewal each new code year.

Private Occupational School

- A private occupational school is licensed by and receives oversight from the Office of Private Occupational Schools Education (OS). However, the program must also be vetted for approval by the Board for compliance with its regulations.

Labor and Trade Association (Union or Non-Union)/ Trade and Employment, Association, or Private Organization Providers

Labor and Trade organizations (IBEW and applicable trade organizations)

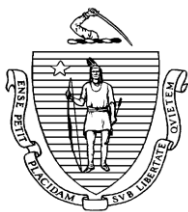
- Labor organizations provide education programs for members and follow nationwide JATC curricula that is also reviewed and approved by the Board. Their program including administration is assumed to be consistent and similar between training councils.

Company programs (Non-Union counterparts)

- Companies provide in-house training programs that provide education and experience through employment.

Trade and Employment Association, or Private Organization Providers

- Private companies and trade organizations may submit programs for approval. Their scope of responsibility is defined in the submittal.



Commonwealth of Massachusetts
Division of Occupational Licensure
 1 Federal St, Suite 0600 • Boston, MA 02110-2012
Board of State Examiners of Electricians

INITIAL EDUCATION PROVIDER APPLICATION AND RENEWAL

This form is NOT applicable to vocational trade daytime programs [Chapter 74]

Clearly Print/type information:

Representative/ Name of Applicant		Email address	
School/Association/Institution Name		Telephone number	
Address	City/Town	State	Zip
School/institution <input type="checkbox"/> Public vocational school evening <input type="checkbox"/> Private occupational school <input type="checkbox"/> In-house company training program <input type="checkbox"/> Trade association <input type="checkbox"/> Labor training programs (Union or Non-Union) <input type="checkbox"/> College <input type="checkbox"/> Junior College	Course type (check all applicable): <input type="checkbox"/> Journeyman Electrician Program <input type="checkbox"/> Master Electrician Program <input type="checkbox"/> Systems Technician Program <input type="checkbox"/> Systems Contractor Program	Program type (check all applicable): <input type="checkbox"/> Day <input type="checkbox"/> Evening <input type="checkbox"/> Other (Explain) _____	

1. Has there been an application submitted to the Office of Private Occupational School Education? ☐ Yes ☐ No
2. Is the school/institution/association currently conducting courses/classes? ☐ Yes ☐ No Commencement Date? _____
3. Have you previously been approved by this Board to conduct this program ☐ Yes ☐ No Last Approval cycle? _____
4. Is this application being submitted as an out-of-state school/Association/Institution provider? ☐ Yes ☐ No
 Location(s) where said courses will be held:

 (Use separate sheet if necessary)
5. List other state(s) in which the institution is a recognized provider

6. List all instructors for this program

Name	license Number and Type

Pursuant to 237 CMR 18.02 I hereby apply for approval from the Board of State Examiners of Electricians to offer courses and training to students in accordance with the requirements for examination pursuant to 237 CMR 13.00. I fully understand that failure to abide by the above requirements, failure to comply with 237 CMR, and failure to abide by any other Board requirements shall be grounds for the Board to initiate formal adjudicatory proceedings which may result in the suspension or revocation of any licenses held by involved individuals, and rights and privileges associated with this approval as a provider, along with any other discipline allowed by law. This institution agrees to abide by all Board Regulations and attest that all statements made herein are accurate and true. This application is signed under the pains and penalties of perjury.

 Representative/applicant Signature

 Date



Application Checklist

1. Application must be completed in full and emailed in PDF format to electricians.board@mass.gov
2. For programs that require Office of Occupational Schools licensing this application should be submitted after Occupational School's approval and licensing.
3. Use the checklist below as a guide through the documentation that the Board will be checking to ensure the program complies.
4. For multiple sites that operate separately submit an application for each site location.

Education Provider checklist

Area For Board use		New Program <input type="checkbox"/> Renewal <input type="checkbox"/>	
<u>Provider Name:</u> 		<u>Program Reviewed :</u> Journeyman Electrician Program <input type="checkbox"/> Master Electrician Program <input type="checkbox"/> Systems Technician Program <input type="checkbox"/> Systems Contractor Program <input type="checkbox"/>	
<u>Code Cycle:</u> 		<u>Date(s) of review:</u> 	
<u>Submittal:</u> Application <input type="checkbox"/> Surety bond <input type="checkbox"/> Refund policy <input type="checkbox"/> Course makeup rules <input type="checkbox"/> Attendance policy <input type="checkbox"/> Code of conduct <input type="checkbox"/> Recordkeeping <input type="checkbox"/> Comment forms <input type="checkbox"/> OS license <input type="checkbox"/> Certificate Sample <input type="checkbox"/> Student agreement <input type="checkbox"/>		<div style="display: flex; justify-content: space-between;"> <div> References <input type="checkbox"/> B Curriculum <input type="checkbox"/> A Curriculum <input type="checkbox"/> D Curriculum <input type="checkbox"/> C Curriculum <input type="checkbox"/> Lesson plans <input type="checkbox"/> Learning objectives <input type="checkbox"/> Handouts copies <input type="checkbox"/> Competency profiles <input type="checkbox"/> </div> <div> Schedule (If available) <input type="checkbox"/> Instructor names <input type="checkbox"/> Instructor qualifications <input type="checkbox"/> Site locations <input type="checkbox"/> </div> </div>	



C. Surety or Performance Bond

Providers who charge students to attend courses are required to have a performance bond for the protection of students who enroll in their program to provide compensation where the provider failed to present, deliver, or otherwise provide an approved program for the required duration. The bond is payable to the commonwealth to cover any and all persons or entities wronged by negligent, purposeful, or accidental omission, cancellation, failure to provide, or other action or process that adversely affected the student, including physical access related incidents.

Programs licensed by Division of Occupational Licensure, Occupational Schools Department (OS) are already required to obtain a bond amount according to income and it is determined at the time of OS approval. Existing programs should have a bond in place and proof of the Bond shall be submitted at the time of renewal. The form provided on the page following is an example and may be used by your insurance agent.



The Commonwealth of Massachusetts
Division of Occupational Licensure
1 Federal Street, Suite 0600 • Boston, Massachusetts 02110-2012
Board of State Examiners of Electricians
www.mass.gov/dpl/boards/el
(617)727-9931

SURETY BOND FORM
PROVIDERS OF ELECTRICIAN EDUCATION

Policy/Bond number: _____

Know all persons by these presents: that, _____ (Provider) of _____

(city) in the state of _____ Principal, and _____

(surety/bond/insurance company) of _____ (city) in the state of _____

_____ a _____ (corporation, LLC, etc.) existing under the laws of the

state of _____ and duly authorized to transact the business of Surety in the Commonwealth of Massachusetts, as Surety, are held and firmly bond unto the Commonwealth of Massachusetts, as obligee, the sum of fifty thousand dollars **\$50,000** for payment to the Treasurer of the Commonwealth or to the Director of the Division of Professional Licensure or his designee, of which sum said principal and surety do jointly and severally bind themselves, their heirs, executors, administrators, successors, and assigns and each and every one of them firmly by these presents.

The condition of this obligation is such that whereas, if the said organization shall satisfy all claims or judgments against them as determined by the Division of Professional Licensure or a court of competent jurisdiction, in both actions by the Division and actions by students to recover damages resulting from fraud or misrepresentation used in procuring enrollments in a Board approved continuing education program or from a breach of contract, then this obligation shall be void, provided, however, that the aggregate liability of the surety under this bond for all breaches of the conditions of the bond shall, in no event, exceed the sum of this bond; and provided further that the liability of the surety under this bond shall be limited to indemnifying the claimant only for the actual damages. This bond shall not limit or impair any right to recovery otherwise available pursuant to law, nor shall the amount of the bond be relevant in determining the amount of damages or other relief to which any plaintiff may be entitled.

The surety may cancel this bond by giving 90 days notice in writing to the obligee Director of the Division of Professional Licensure, by certified mail, thereafter surety shall be relieved of any liability for any breach of condition occurring after the effective date of such cancellation. However, this bond is continuous until cancelled by said surety

In witness whereof, the said Surety has signed and sealed this instrument this _____ day of _____ Year _____.

Name of Authorized Agent of Surety (bond/insurance company)

Signature of Authorized Agent of Surety

Address of Authorized Agent of Surety

Address of School

Effective Date of Bond



D. Instructor Qualifications

Instructors must be MA licensed by examination, in good standing and possess the credentials that qualify them to teach the subject matter provided to students. Qualifications and backgrounds may differ apart from industrial knowledge. The instructor qualifications should be submitted in the form of a resume and any other pertinent qualifications may also be submitted.

The resume should contain:

- Full name
- Address (physical and mailing)
- Contact (email and phone)
- MA License number and any out of state licenses and their standing
- Relevant work history
- Relevant education history
- Indication of relevant qualifications

E. Expected Outcome

The purpose of structured training is to equip students with the knowledge, skill and ability to turn what they've learned about the trade of electrician or systems into real world applicability. Upon acquiring these attributes, they are able to; qualify to take the exams necessary to attain licensure, confidently work at their trade, and insure the safe installation of electrical equipment for the safety of the public. Adult learners learn at a level that may be described as more urgent and targeted as many of the students may already have begun their careers and thus student participation in the classroom is more prevalent and encouraged. Their field experience and exposure through practical exercises fosters further comprehension and synthesis of the applied science. Instilling the importance and values of pride in work and public safety. Proper training can bolster a responsible workforce of licensed individuals and prevent issues later in their careers.

Inculcating core lesson content is essential to the student's ability to progress. Whilst coverage of significant changes in industry methodologies and technology ensures students are getting the most current education possible. It is important that the outcome or terminal objective be consistent for those reasons even while the delivery methods may vary by instructor. A syllabus and lesson plan is a rational process that helps provide consistency for the primary instructor, subsequent instructors and help to place the student during transfer to a different program or school. Approval of the program includes approval of the curricula.

The instruction should follow the plan and be thorough and tailored to the audience. The more the student is engaged and involved, the more effective the class will be at achieving its goals.

F- Code of Conduct

All instruction provided should be conducted in a way that maintains the safest and most beneficial learning environment to the students. The Instructor should also experience a safe environment conducive to teaching and a learning exchange and that allows the instructor to perform at their best, providing what is beneficial to the students individually and as a class. To help accomplish this, acceptable standards of behavior should be stated at the time of registration and posted if possible so students and instructors are aware.

The School may set penalties and disciplinary actions for students who do not conform to these standards, but the key is to keep students informed, forewarned, and thus forearmed, so there are no issues later on in the program.

In the case of documented hardships students should expect that reasonable accommodations will be made so they can meet their requirement, however there are additional limitations. For a full consideration of the rules on the matter see 237 CMR 18.02 (4)

Instructor Code of Conduct

Excellence

- ❖ I will strive for excellence in all my responsibilities by:
 - Arriving at class and conducting classes on time
 - Encouraging active participation in class discussions and other meetings
 - Making ahead of time class preparations

Respect

- ❖ I will do my utmost to foster an environment in which every member is provided respect by:
 - Conducting myself with integrity in all my dealings.
 - Abstaining from and discouraging harassing behavior.
 - Avoiding and prohibiting distractions during classes
 - Demonstrating respect through my actions.

Ethical conduct

- ❖ I am beholden to MA standards of ethical behavior and demonstrate this by:
 - Complying with applicable laws, policies and directives.
 - Providing instruction on required scope of material.
 - Demonstrating impartiality and fairness with all students.
 - Requiring the use of safe attire and teaching tools when appropriate.

Safety

- ❖ I will promote the emphasis of safety and safe practices in the profession and industry:
 - Instilling the importance of taking the time to practice safety
 - Teaching students to have a solemn and deep respect for the dangers of this field of expertise and demonstrating the repercussions of shoddy practices or neglect.
 - Informing students regarding licensure and the impacts repercussions of unlicensed practice.

Tutoring

- ❖ I will demonstrate understanding of my role as the teacher by:
 - Developing lesson plans that will help students meet the goal of the program
 - Guiding students throughout the learning process
 - Recognizing student abilities and aiding them accordingly
 - Doing my best to equip students with knowledge, comprehension and application

An instructor uses tutoring building blocks to develop within a student a competent professional. The words of the instructor are always used to uplift, raise and encourage the student to another level of awareness and competence.

Student Code of Conduct

Attention

- Silencing cell phones and other devices allows all to pay attention to the instructor and shows respect for the others and the time and expense on their part and yours.
- Talking also can be disruptive and should be relegated for participation and contribution.

Discipline

- It takes discipline to be attentive in a classroom and is easier for some more than others. However when we exercise discipline the rewards are limitless.
- Discipline is necessary in all aspects of our lives and is the key to success.

Esteem

- Having esteem for someone means that you have regard for them or respect them.
- There is something extraordinary about every person and every interaction can be a learning experience. Maintain this view of others and not only can you develop esteem but you will also be esteemed.

Punctuality

- Being on time shows respect for those who are expecting you. Both the instructor and student should be on time to get the most out of the session.
- When you are on time it does wonders for your confidence and causes others to trust in your reliability. Practicing punctuality will prepare you for the working world whether working for a large company or conducting your own business.

Timeliness

- Timeliness has several implications such as appropriateness and relevance. You should aspire to maintain timeliness in assignments and in conduct with a view to being relevant and appropriate. Promote within each other an environment of safety and learning.

A student's goal is to become adept in their vocation or trade.

Disruptions and unprofessional behavior which may result in expulsion from class and forfeiture of payment include, but are not limited to:

- Arguing, fighting, horseplay.
- Physical abuse, verbal abuse, threats, intimidation, harassment, coercion and/or other conduct which threatens or endangers the health or safety of any person.
- Attempted or actual theft of and/or damage to personal or public property.
- Failure to comply with orders or directions of instructor or law enforcement officers acting in performance of their duties and/or failure to identify oneself to these persons when requested to do so.
- Violation of federal, state, or local law on premises, including but not limited to the following:
 - Use, possession or distribution of narcotic or other controlled substances except as expressly permitted by law; or
 - Illegal or unauthorized possession of firearms, explosives, other weapons, or dangerous chemicals on college premises.
- Intoxication, use, possession or distribution of alcoholic beverages except as expressly permitted by law.

G. Recordkeeping Requirements

General:

MA regulations establishes recordkeeping requirements for providers and licensees. Your submittal should describe your recordkeeping practice and provide examples. The Board often receives complaints of lost records due to damage or destruction when businesses close or offices are subject to natural disasters. While we cannot predict all the ways in which records may be jeopardized we implore institutions to establish a plan of action that would take care of the students' records in the case of an unforeseeable event. The requirements are set per 237CMR18.02(3) & (4) on attendance records for audit purposes at 10 years minimum.

Provider Recordkeeping Duties:

- Creates attendance list(s) with all names (including generation-Jr., III, Sr. etc) and acquires a signature (sample form provided)
- Provides written agreement for licensee to sign
- Conducts and records attendance a minimum of three times daily, twice at time intervals that reasonably coincide with formal starts, stops, breaks and lunch periods and once randomly.
- Records attendance only for those who attended
- Maintains records for 10 years and provides copies to Board staff upon request.
- Gives each attendee an approved certificate stating completion.
- Maintains computer records if provided access to the program.

Record tampering or falsification of records will not be tolerated. Improper or fraudulent identification verification, relaxation of the hours of attendance, recording attendance for someone who did not attend, failing to provide records, or other improper breaches of accurate recordkeeping may result in penalties such as a complaint issued on the responsible licensee and loss of program approval by the Board.

H. Resources and Materials Required for Class

Resources are necessary in accomplishing the objectives and for research and as teaching aids. Student responsible and school responsible resources and material will need to be listed or provided with the application for program approval. Any and all resources must be indicated. PowerPoint presentations and any program instruction should be provided or referenced.

Each licensee attending the class shall be required to have a current version of the NEC and MEC for use in the class, regardless of when the next code is scheduled to be disseminated. The version can be a published version of NFPA-70, NEC Code Handbook, NEC electronic version or any media available and not distracting or disruptive to the other attendees (no audio version). Any licensee without the code book shall be excluded from the class.

The following resources are required to be available in the classroom:

- MEC current version (527 CMR 12.0)
- NEC (NFPA -70) current version
- Candidate Information Bulletin for each registered student (ref.:237 CMR 18.02(3)(a))
- Reports of Proposals (ref.: 237CMR 18.02(3)(b))
- Reports of Comments (ref.: 237CMR 18.02(3)(b))
- NFPA -70E (ref.: 237CMR 18.02(3)(b))
- NFPA -72 (ref.: 237CMR 18.02(3)(b))
- Board Policies and Guidelines (ref.: 237CMR 18.02(3)(b))
- Applicable Building Code References (ref.: 237CMR 18.02(3)(b))
- Applicable and relevant references as needed (ref.: 237CMR 18.02(3)(b))
- Text for apprentice class.
- Refund policy
- Attendance policy
- Course make-up policy

I. Facility Requirements

The application is for the location stated. If additional locations are used, additional submittals are required for approval of each location. The facility must meet minimum standards and provide a suitable learning environment. The facility's address and demonstration that the facility meets the requirements must be submitted with application.

- Facilities used for classes shall afford reasonable accessibility. Stairs and other impediments should be avoided.
- Seating should be available for all attendees. Seating should be safe and appropriate.
- Facilities used shall be Fire Code compliant.
- Maximum allowable (posted) shall not be exceeded.
- Exits shall be properly marked and pointed out to the students. Unobstructed egress routes are required.
- The room shall be free from distractions. Noise in room, travel routes, and adjacent noises shall be eliminated or minimized.
- Climate temperature, lighting, and air quality shall all be acceptable.
- Parking and access should be adequate.
- No alcohol is allowed or served in the room used for instruction.
- No smoking or tobacco products are allowed inside the facility except in designated areas.
- Housekeeping and trash disposal should be acceptable.
- Toilet facilities shall be available in sufficient numbers and be kept clean and functional.
- Potable drinking water stations shall be available.
- Emergency contact information and means shall be available and posted.

J. Establishing Policies

a. Refund Policy

The refund policy of a participant's fee should be defined and posted so that the student knows prior to enrolling, how to proceed for fee recovery. The policy must be legal and clear. It has to state the circumstances under which you are obligated to withhold or return the monies.

At a minimum, the required deposit should be stated, and at what point it is needed and at what point it is forfeited (if at all).

Disclose all costs (attendance, materials, supplies, food, parking, etc.) and describe if any is reimbursable and by what method (cash, check, debit, credit to account, etc.).

Disclose what the policy might be for reimbursement for failure to attend, late, makeup if only partially finished, and if the person leaves after the start but before the completion, including voluntary and involuntary departure. The policy for disrupting the class, if it results in refund or not, has to be described.

Makeup classes for excusable absences (to be evaluated by the provider) shall be conducted to cover the approximate material missed prior to certificate presentation. Each provider or school is required to have and post the attendance policy and make-up policy in disclosed and available to all attendees.

J. Policies cont'd

b. Attendance Policy

Attendance for the entire seminar or class is mandatory for all students. Records of attendance shall be required as a condition of program approval. Clock hours are used for the determination of completion and breaks in excess of 5 minutes per hour or in entirety of 15 minutes total for the class presentation shall be excluded from the instructional time.

Attendance records shall be maintained for all attendees a minimum of 3 code cycles or 10 years and be available to the Board per 237 CMR. Failure to maintain, retain or provide records shall be grounds for removal of provider approval and grounds for disciplinary action against the license(s) held by the provider and/or the instructor(s).

Makeup classes for excusable absences (to be evaluated by the provider) shall be conducted to cover the approximate material that the student missed during the term. Each provider is required to have and post an attendance policy and make-up policy for all attendees to see. Regulations 237 CMR 18.02(2) states:

“(2) Hardships and Makeup Classes.

(a) IEP's are required to make available to truant students, who have documented their hardships, a make-up class or a written examination on the learning objective for the excused student.

(b) Students are required to provide written documentation, within 30 days of such hardship to their provider.

(c) No consideration for hardship shall be given to a student, unless written documentation is provided by the student to the provider within 30 days of such hardship and such hardship is accepted by the provider.

(d) Students who fail to complete the scheduled make up class, or if applicable, have not obtained a 70% score on the examination, are required to successfully complete the learning objective to receive credit for such clock hours.

(e) No makeup class or examination shall be given for a learning objective where a student is absent for 10% or more in a learning objective. In such situations the student must retake and successfully complete the learning objective to receive credit for such clock hours.

Established policies for makeup and attendance with defined classroom hours ensure program compliance.

K. Enrollment (Signed) Agreement

a. Enrollment

Board regulations require that Providers enter a written agreement with their students. The agreement is a contract for the school or provider to provide the education and for the student to commit to the program. The agreement should set the expectations for both parties. It is necessary for conflict resolution and performance issues and it also indicates to the board an expected applicant for the license exam. A sample is provided as an example or template.

The regulation states:

18.02: Submittals, Renewals, Minimum Requirements, Audits and Sanctions for Initial Education Providers Conducting Learning Objective(s) for All Classes/Types of Licenses.
IEP Duties.

(c)Agreements.

- 1. IEP's shall enter into a written signed agreement for the objective(s) offered with each student.*
- 2. Such signed agreements, upon written request and within 30 days of such request, shall be given to the Board.*

L. Evaluation

a. Competency Profiles

For accomplishment of the objectives, providers are required to track student progress. This can be done by several different tools available to the instructor such as testing, performance or evaluation records, surveys, etc. Competency profiles are used to track student accomplishments and skill levels. The regulation requires student competency profiles to be developed and records kept for Board inspection.

*237 CMR 18.02: Submittals, Renewals, Minimum Requirements, Audits and Sanctions for Initial Education Providers Conducting Learning Objective(s) for All Classes/Types of Licenses.
(3) IEP Duties.*

(d) IEP's shall maintain on a prescribed form or other medium acceptable to the Board 'Student Competency Profiles' (SCP) for each student. SCP's must meet the following requirements:

- 1. Documents each of the learning objective(s) the student has completed with the student's name, dates of commencement and completion and the clock hours of successful completion.*
- 2. Are updated by the IEP at the end of each semester year.*
- 3. Upon written request and within 30 days of such request, shall be given to the Board. The Board may audit any IEP's educational program for compliance of 237 CMR.*

b. Quality Evaluation

The Board monitors education programs in its purview and looks for opportunities to improve. Institutions should have a feedback mechanism in place to gain insight into quality of presentation, content and program compliance. A sample course critique form has been provided so that Providers may utilize or emulate this method and content of acquiring feedback from the students. Each student shall be provided an opportunity to complete an evaluation and the completed evaluations shall be made available to the Board office upon request.

Sample Student Questionnaire

You may submit this Questionnaire to:
Board of State Examiners of Electricians

Fax this questionnaire to:
617-727-9932

Or you may mail the Board at:
1000 Washington St Ste 710
Boston MA 02118

1. How would you rate the instructor's comprehension of the material?
Excellent Good Fair Poor \No comment
2. Did this course meet your immediate needs for the electrical industry?
3. Would you recommend this course to others?
4. Did this course increase your knowledge of the profession?
5. Do you feel that more of the code should have been covered?
6. Do you feel that more of the Massachusetts General Laws should have been covered?
7. How would you rate the instructor's presentation of the material
Excellent Good Fair Poor \No comment
8. What is your overall rating of the course?
Excellent Good Fair Poor \No comment
11. What is your overall rating of the Instructor?
Excellent Good Fair Poor No comment

[illegible]

M. Scope

a. Objectives Overview-

Objective based training (often called performance based) has long been the expected training process for licensees in the regulations because it provides consistency and assures that the subject matter prescribed for Apprentice training. For this renewal cycle, providers will be reminded to implement objective based training.

Objective based training provides a systematic approach to establish repeatable teaching curricula based upon the job and tasks that the trainee must be able to do at the conclusion of the training. Once properly written objectives are written for a task or job, then the knowledge, skills or abilities can guide the learning to an outcome that can be measured and repeated, as with a competency profile. Objective based training can also be done or presented many different venues or methods (large group, small group, lecture, didactic, Socratic, lab, etc.) and still provide the desired outcome. Currently, because of several reasons including accountability, security, interaction for clarity of understanding, and content, computer, correspondence, or other “non-face” teaching method is not approved for class and the class may not be accepted for credit towards the requirement if these methods are used.

Objectives describe the criteria that the licensee attains. Two levels of objectives usually can describe the training process. The high level objective (the terminal objective, and there may only be one) gives an easy to understand conclusion of what the training is meant to convey (the goal). The lower level objectives (the enabling objectives, which may be many) describe the activities necessary to attain the terminal objective. Terminal and enabling objectives establish a hierarchy for the lesson. Terminal means what a licensee can do when the instruction is completed and enabling objectives describe the path to get to the terminal objective. Anything can be taught this way and it is easy to implement. The instructional method can dictate the objective action. An objective is simply a verb, a subject and criteria. An example: “Upon completion of the class, the licensee will be able to use the 2020 MEC to answer questions relating to electrical installations.” This terminal objective can be made more specific by stating “answering ten questions on...” or many more modifiers that establish criteria. One of the many enabling objectives could be “Using the 2020 MEC, locate the new changes in article 250 and explain with references to article and section, how the grounding of a service may have changed from the 2017 MEC.”

The submittal can have as many or as few objectives as you want, but the long range goal is to define the program with enough objectives so the training will be repeatable and be assured of covering all topics.

The expected outcome of the education is that everyone can use the current versions of all of the required references to do their jobs safely, in conformance with the requirements, and within the

legally require parameters of licensing. An example (the wording can be changed to suit your style) of the terminal objective with criteria, conditions, and action(s) could be:

Upon completion of the course, the licensee shall be able to use the references (2014 approved MEC, 2020 approved NEC, MA general laws, applicable MA Regulations, BSEE policies and guidelines, applicable fire and security references, and other relevant materials as approved by the BSEE) to locate and explain existing and newly revised electrical and systems licenses that they hold to be eligible for and to pass an examination.

Because of the licensing hierarchy that allows for electricians to do systems work but prohibits systems licensees from doing electrical work, the scope of the classes may be slightly different and focus on the license scope responsibilities. Topics for electricians may go into greater depth than a “C” or “D” licensee may need to hear to do their job. This makes it very important for providers to describe the objectives of each program they teach so that the proper content can be provided to the audience. The review and approval process for providers will involve comparing the objectives to the requirements. Providers will only be approved for the license programs that they indicate on the application, are qualified to provide and properly cover in content scope.

b. Objectives EL/ FA:

Enabling objectives should cover the tasks and objectives in 237CMR22.0.

- 22.01: 600 Hours of Education Required as a Prerequisite to Sit for Journeyman Examination (as Applicable Modular and Non-modular)
- 22.02: 150 Hours of Education Required as a Prerequisite for Master Electrician Examination
- 22.03: 300 Hours of Education Required as a Prerequisite for Systems Technician Examination
- 22.04: 75 Hours of Education Required as a Prerequisite for Systems Contractor Examination

22.01: 600 Hours of Education Required as a Prerequisite to Sit for Journeyman Examination (as Applicable Modular and Non-modular)

Candidates may elect to take a 600-hour modular format as listed in 237 CMR 2.01(2) or a non-modular format as listed in 237 CMR 22.01(1) as a Prerequisite to Sit for Journeyman Examination.

(1) The 600 hours of education required for eligibility for examination as a Journeyman Electrician shall include, but not be limited to, the following learning objectives:

- (a) DC Theory
- (b) AC Theory
- (c) National Electrical Code application of AC and DC Theory
- (d) Branch Circuit Calculations and Requirements
- (e) Feeder and Service Calculations and Requirements
- (f) Electrical Bonding and Grounding and Ground Path Theory
- (g) Conductor Selection and Overcurrent Protection
- (h) Wiring Methods
- (i) Motors and Controls

- (j) Transformers*
- (k) Low Voltage Systems and Controls*
- (l) Fire Warning and Security Systems*
- (m) Fiber, Data and Communications Wiring and Systems*
- (n) Use of Code book tables and examples*
- (o) Massachusetts Electrical Code and Amendments (527 CMR 12.00)*
- (p) Massachusetts Laws and Regulations Pertaining to Electrical Wiring*
- (q) Conduct of Electricians and Apprentices Including Inspection Requirements*
- (r) Job-site and Electrical Safety*
- (2) Modular Format:*
 - (a) First Tier: The curriculum (300-clock-hours) shall be consecutive clock-hours:*
 - 1. Module I:*
 - a. Jobsite and Electrical Safety*
 - b. Introduction to the National Electrical Code and Process*
 - c. DC/Alarm Theory*
 - d. Basic Math*
 - 2. Module II:*
 - a. Electrical Bonding and Grounding*
 - b. Low Voltage Systems and Controls*
 - c. Fire Warning and Security Systems*
 - d. Design and Testing (NFPA 72)*
 - 3. Module III:*
 - a. National Electrical Code application of DC Theory*
 - b. Massachusetts Electrical Code and Amendments (527 CMR 12.00)*
 - c. Wiring Methods*
 - 4. Module IV:*
 - a. Fiber, Data and Communications Wiring and Systems*
 - b. Massachusetts Laws and Regulations Pertaining to Electrical Wiring*
 - c. Conduct of Technicians and Apprentices Including Inspection Requirements*
 - (b) Second Tier: The Electrical curriculum (300-clock-hours) shall be consecutive clock-hours:*
 - 1. Module V:*
 - a. Electricians Math and Basic Electrical Formulas*
 - b. Electrical Circuit*
 - c. AC Theory*
 - d. Raceway, Outlet boxes and conductor fill*
 - e. Conductor Selection and Overcurrent Protection*
 - 2. Module VI:*
 - a. Branch Circuit /Feeder/ Service Requirements*
 - b. Branch Circuit/Feeder/ Service Calculations and Voltage Drops*
 - c. Motors, Controls and Transformers Requirements*
 - d. Use of Code book tables and examples*
 - e. Swimming Pools, and similar Installations*
 - 3. Module VII:*
 - a. One Family Dwelling Calculations*
 - b. Multi-family Dwelling Calculations*
 - c. Commercial Load Calculations*
 - d. Use of Code book tables and examples*
 - 4. Module VIII:*
 - a. Motor Calculations*
 - b. Transformer Calculations*
 - c. Review of Board rules and Regulations*
 - d. Review of Massachusetts General Laws applicable to Electricians*
 - e. General Review of all subjects covered*

(3) The Board may set additional education requirements by Board policy statements issued periodically as developments in the profession so require.

22.02: 150 Hours of Education Required as a Prerequisite for Master Electrician Examination

(1) The 150 hours of education which is required for eligibility for examination as a Master Electrician shall include, but not be limited to, the following learning objectives:

- (a) Plan review and calculations*
- (b) Advanced AC Theory*
- (c) Advanced Code calculations*
- (d) Branch Circuit/Feeder/ Service*
- (e) Emergency Systems*
- (f) Health-care*
- (g) Hazardous Locations*
- (h) Applicable Massachusetts General Laws pertaining to:*
 - 1. Licensing Laws*
 - 2. Permitting Laws*
 - 3. Inspection Laws*
 - 4. Appeals Process*
 - 5. Board Rules and Regulations*
 - 6. 237 CMR 12.00 through 23.00.*
 - 7. Good Business Practices/GBP*

(i) General review of all subjects covered in the 600-Clock-hour Journeyman course, as applicable.

(2) The Board may set additional education requirements by Board policy statements issued periodically as developments in the profession so require.

22.03: 300 Hours of Education Required as a Prerequisite for Systems Technician Examination

(1) In order to qualify to sit for the Systems Technician (Class D) examination, each apprentice whose electrical work experience can be properly documented shall complete 300-clock-hours (75-clock-hour/Module) of education as a prerequisite for examination as a Systems Technician. Said education will be divided into 75 hour modules. The 300 hours of education shall include, but not be limited to, the following learning objectives:

- (a) Module I:*
 - 1. Jobsite and Electrical Safety*
 - 2. Introduction to the National Electrical Code and Process*
 - 3. DC/Alarm Theory*
 - 4. Basic Math*
- (b) Module II:*
 - a. Electrical Bonding and Grounding*
 - b. Low Voltage Systems and Controls*
 - c. Fire Warning and Security Systems*
 - d. Design and Testing (NFPA 72)*
- (c) Module III:*
 - a. National Electrical Code application of DC Theory*
 - b. Massachusetts Electrical Code and Amendments (527 CMR 12.00)*
 - c. Wiring Methods*
- (d) Module IV:*
 - a. Fiber, Data and Communications Wiring and Systems*
 - b. Massachusetts Laws and Regulations Pertaining to Electrical Wiring*
 - c. Conduct of Technicians and Apprentices Including Inspection Requirements*
 - d. General Review of all subjects covered*

(2) The Board may set additional course requirements by Board-policy statements issued periodically as developments in the profession so require.

22.04: 75 Hours of Education Required as a Prerequisite for Systems Contractor Examination

(1) The 75 hours of education which is required for eligibility for examination as a Systems Contractor shall include, but not be limited to, the following learning objectives:

(a) Advanced alarm system theory.

(b) Applicable Massachusetts General Laws pertaining to:

1. Licensing Laws

2. Permitting Laws

3. Inspection Laws

4. Appeals Process

(c) Board Rules and Regulations:

1. 237 CMR 12.00 through 23.00

2. Good Business Practices/GBP

(2) The Board may set additional education requirements by Board-policy statements issued periodically as developments in the profession so require

REGULATORY AUTHORITY: 237 CMR 22.00: M.G.L. c. 141, § 2.

Lesson content shall be supported by reference materials.

c. Regulations:

Coverage of the Board regulations 237 CMR prepares students for the professional aspects of the trade as well as provides additional theory for exam questions. The Mass amendments to the code are 527 CMR 12 therefore the syllabus incorporates these regulations.

c. Syllabus

The syllabus should provide a list of objectives and a sequence for presenting the training throughout the duration of the program. It should be detailed enough to determine the level and extent of instruction. It should be able to act as a “menu” of what to expect.

d. Lesson Plans

This level of detail takes a look at the classroom setting and demonstrates the method of instruction and what objectives are to be taught by session including what activities and evaluations will be used.

e. Handouts

Handouts are part of the necessary resources and teaching aids and are used to support the objectives. A list of student handouts should be referenced or provided with the application submittal.

Sizing Electrical Boxes for Conduit Installations

Subject: Journeyman 600 Hour	Instructor: Mr. Electricity
Overview and Purpose Install electrical boxes for conduit installations	Massachusetts Standard Number: 2.G.02

Objectives Explain how boxes are selected and installed	The student will be able to: 1. Size the appropriate junction box for the given application 2. Explain the method to which the box will be installed
Instruction The use of the NEC with Mass amendments along with any manufacturers requirements	Lecture with powerpoint presentation
Resources The instructor will utilize the Electrical code book, projector, work sheets	Code Book, projector, work sheets
Activity The students will work with junction box handouts to properly size junction boxes	Work sheets, project sheets
Assessment Written test on junction boxes with use of handouts	Written test