

522 CMR 18.00: CONTINUING EDUCATION

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18.01: Scope and Application

(1) Engineers and Firemen. In accordance with the provisions of M.G.L. c. 146, § 49, 522 CMR 18.00 requires the renewal of engineer, firemen, and special licenses every five years. All engineers and firemen licensed by the Commonwealth to operate Boilers shall demonstrate completion of 30 hours of continuing education at or through an institution or organization approved by the Marshal, in consultation with the Chief, during each five-year period preceding each license renewal.

All engineers and firemen shall submit to the Department a certificate of completion from any department approved institution or organization that they have completed 30 hours of continuing education, when renewing their engineer's or fireman's license. The 30 hours of continuing education shall be completed before an engineer or fireman licensee can renew his or her license, in an active status.

A final certificate of completion shall be from one institution or organization for all hours required by statute. Approved organizations or institutions may provide credit to individuals who wish to transfer from one organization/institution to another in the middle of a course. The organization or institution may give credit to individuals provided they can produce verifiable proof that they participated in approved continuing education sessions.

Engineers and firemen shall complete the full 30 hours of continuing education with the same institution or organization, whether or not said institution or organization may conduct the course at different locations. If an institution or organization cannot provide the full 30 hours to ensure license renewal, the engineer or fireman may transfer his or her continuing education training to another institution or organization, provided they comply with 522 CMR 18.01.

Upon transfer of continuing education training to another institution or organization, the institution or organization which provided the continuing education shall provide the individual with a certificate evidencing the number of hours successfully completed by the individual at that institution. Other organizations or institutions shall accept this certificate as proof of the hours accumulated to date when issuing the final certificates of completion. Only final certificates of completions shall be accepted by the Department. Transfer certificates shall not be submitted to the Department.

Licenses not renewed by their expiration date shall become void and shall after one year be reinstated only by re-examination of the licensee. 522 CMR 18.01 does not apply to licenses renewed with an "inactive" status.

All Massachusetts Engineer and Fireman licensees, upon completion of 30 hours of continuing education, will receive from that institution or organization a uniform certificate, approved by the Marshal, which they will retain and furnish the same to the Department, if so requested. They may also receive matter, approved by the Marshal or his or her designee, which shall be affixed to their license application upon renewal.

(2) Special-to-have-charge and Special-to-operate Licenses. Individuals licensed to operate Boilers under a special-to-have-charge, or special-to-operate license shall demonstrate completion of six hours of continuing education at or through an institution or organization approved by the Marshal, in consultation with the Chief, during each five-year period preceding each license renewal.

18.02: Definitions

The terms defined in 522 CMR 1.02: *Definitions* are hereby adopted and incorporated for use in 522 CMR 18.00. In addition, the following terms as used in 522 CMR 18.00 are defined as follows:

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Approved. Approved by the Marshal, in consultation with the Chief, which comply with 522 CMR 18.00.

Gas Turbine. A device using combustion gasses directly in a turbine. The basic components consist of a compressor, combustor, and turbine. Fuel used is natural gas, high-quality fuel oil, synthetic gas or liquefied coal.

Guest Speaker. Any individual who participates in the instruction of a continuing education program under the request and direct personal supervision of a duly licensed and registered Instructor or Monitor of any approved continuing education program for engineers and firemen.

Instructor. Any duly licensed and registered person who instructs any continuing education program for engineers or firemen. An Instructor shall hold the same grade of Massachusetts engineer or fireman license to the level of course he or she is instructing; no credit shall be awarded for any programs or courses instructed by a person holding a lesser grade license, unless they are a guest speaker approved by the Instructor or Monitor. Instructors shall only be credited hours for the actual nonredundant time that they have spent actively participating in the instruction of the program.

Monitor. A Massachusetts engineer who oversees and has been appointed as the administrator for any approved continuing education program for engineers and firemen. It is not required that the Monitor be physically present in each class. All Monitors shall hold a Massachusetts Engineers license of equal or greater grade of the Instructors of any approved program. A Monitor shall only be credited hours for the actual nonredundant time that he or she has spent actively participating in the instruction or design of the program.

18.03: Requirements of Institutions or Organizations

The following provisions shall be met for any institution or organization to have a continuing education program considered for approval:

- (1) A copy of all curricula, quizzes, training material, and certificates of completion to be used shall be provided to the Department.
- (2) Continuing education shall not be divided into training increments of less than two hours, unless approved by the Marshal.
- (3) Curricula shall contain the minimum topics and associated hours for those topics as listed in 522 CMR 18.04.
- (4) All courses shall be monitored by a Massachusetts engineer of equal or greater grade of Massachusetts license, who shall verify by his or her signature on each participants' certificate of completion that all persons issued such certificate have fully participated in the applicable program. Instructors shall only be credited hours for the actual nonredundant time that they have spent actively participating in the instruction of the program.
- (5) Method of Verification. Each program shall provide a means to ensure certificate authenticity. Such means may include, but shall not be limited to:
 - (a) Institution embossment of certificate;
 - (b) Computer data transfer of program participants;
 - (c) Signature verification; and/or
 - (d) Numbering certificates.
- (6) Certificates of completion shall contain the following:
 - (a) Name of participant;
 - (b) Address of participant;
 - (c) Massachusetts license grade and number of participant;
 - (d) Hours of continuing education completed by participant;
 - (e) Name and address of the institution or organization acting as continuing education provider;

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- (f) Licensed Massachusetts engineer's legible signature verifying participation hours listed; and
- (g) Said licensed Massachusetts engineer's license number.

18.04: Curriculum

(1) Engineers and Firemen Requiring 30 Hours of Continuing Education. The following topics shall be covered in any approved curriculum with the recommended time spent each topic:

(a) M.G.L. c. 146 and 522 CMR, with particular attention to M.G.L. c. 146, §§ 46 through 56 and 522 CMR 2.00: *Power Boilers*.

1. Topic Description. M.G.L. c. 146 as it pertains to the licensing of engineers and firemen; operation, maintenance, inspection and repair of Boilers.
2. Purpose. To ensure that all engineers and firemen have a thorough knowledge of Massachusetts General Laws and regulations as pertain to Boilers and turbines.
3. Recommended Time Allotted. Two hours.
4. Recommended Instructional Methods. Lectures, discussion, and test.
5. Recommended Texts. M.G.L. c. 146 and 522 CMR.

Recommended topics, or topics as approved by the Marshal may include, but are not limited to the following:

(b) Steam Boiler Operation.

1. Topic Description. Safe Boiler operation, including safe operation and maintenance practices of all Appurtenances.
2. Purpose. To ensure that all engineers and firemen have a thorough knowledge of safe Boiler operation and maintenance of all Appurtenances.
3. Recommended Time Allotted. Eight hours.
4. Recommended Instructional Methods. Lectures, discussion, and test.
5. Recommended Texts.
 - a. *Boiler Operator's Guide* - ISBN #0-07-036574-1
 - b. *Stationary Engineering* - ISBN #0-8269-4443-4
 - c. *Powerplant Engineering* - ISBN #0-07-019106-9
 - d. *ASME Code Section VII, Recommended Guidelines for the Care of Power Boilers*
 - e. *B and W "Steam"* - ISBN #09634570-0-4

(c) Steam Turbine Operation.

1. Topic Description. Safe turbine operation, including safe operation and maintenance practices of all Appurtenances.
2. Purpose. To ensure that all engineers and firemen have a thorough knowledge of safe turbine operation and maintenance of all Appurtenances.
3. Recommended Time Allotted. Eight hours.
4. Recommended Instructional Methods. Lectures, discussion, and test.
5. Recommended Texts.
 - a. *Boiler Operator's Guide* - ISBN #0-07-036574-1
 - b. *Stationary Engineering* - ISBN #0-8269-4443-4
 - c. *Powerplant Engineering* - ISBN #0-07-019106-9
 - d. *B and W "Steam"* - ISBN #09634570-0-4

(d) *NBIC; ASME Boiler and Pressure Vessel Code Sections I, IV; ASME Code for Pressure Piping B31.1 Power Piping*

1. Topic Description. The structure and review of the *NBIC* as well as the *ASME* Codes as it relates to Boiler construction.
2. Purpose. To ensure that all engineers and firemen have a working knowledge of the *NBIC* and *ASME* Codes.
3. Recommended Time Allotted. Four hours.
4. Recommended Instructional Methods. Lectures, discussion, and test.
5. Recommended Texts.
 - a. *NBIC*
 - b. *ASME Boiler and Pressure Vessel Code Sections I, IV*
 - c. *ASME Code for Pressure Piping B31.1 Power Piping*

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(e) Gas Turbines.

1. Topic Description. Gas Turbine design and operation, including safe operation and maintenance practices of all Appurtenances.
2. Purpose. To ensure all engineers and firemen have a working knowledge of Gas Turbine construction, operation, and maintenance, as they relate as an Appurtenance of a Boiler.
3. Recommended Time Allotted. Four hours.
4. Recommended Instructional Methods. Lectures, discussion, and test.
5. Recommended Texts: As determined by the Department.

(2) Special-to-have-charge and Special-to-operate Licenses Requiring Six Hours of Continuing Education. The following topics shall be covered in any approved curriculum with the recommended time spent on each topic:

(a) M.G.L. c. 146 and 522 CMR, with particular attention to M.G.L. c. 146, §§ 46 through 56 and 522 CMR 2.00: *Power Boilers.*

1. Topic Description. M.G.L. c. 146 as it pertains to the licensing of engineers and fireman; operation, maintenance, inspection and repair of Boilers.
2. Purpose. To ensure that all engineers and fireman have a thorough knowledge of Massachusetts General Laws and regulations as pertain to the licenses they hold.
3. Recommended Time Allotted. Two hours.
4. Recommended Instructional Methods. Lectures, discussion, and test.
5. Recommended Texts. M.G.L. c. 146 and 522 CMR.

(b) Steam Boiler Operation.

1. Topic Description. Safe Boiler operation, including safe operation and maintenance practices of all Appurtenances.
2. Purpose. To ensure that all engineers and fireman have a thorough knowledge of safe Boiler operation and maintenance of all Appurtenances.
3. Recommended Time Allotted. Four hours.
4. Recommended Instructional Methods. Lectures, discussion, and test.
5. Recommended Texts.
 - a. *Boiler Operator's Guide* - ISBN #0-07-036574-1
 - b. *Stationary Engineering* - ISBN #0-8269-4443-4
 - c. *ASME Code Section VII, Recommended Guidelines for the Care of Power Boilers*
 - d. *B and W "Steam"* - ISBN #09634570-0-4

18.05: Miscellaneous Provisions

(1) Any Massachusetts engineer, fireman or individual with a Special-to-have-charge or Special-to-operate license who falsifies or misrepresents any certificate of completion shall be subject to a Department hearing which may result in the suspension or revocation of his or her license.

(2) Any Massachusetts engineer, fireman or individual with a Special-to-have-charge or Special-to-operate license may, upon written request at the time of renewal of his or her license, request that such license be placed in inactive status until such time that he or she satisfies the continuing education requirements necessary to renew his or her license. Individuals making such request shall submit the renewal fee as required by statute at the time of request.

(3) Inactive licenses prohibit those engineers or firemen from legally operating or to be in charge of any steam Boiler or turbine/engine so long as the license is inactive.

(4) Engineer, fireman, Special-to-have-charge or Special-to-operate licenses not renewed, either active or inactive, at expiration date shall become void and shall after one year be reinstated only by re-examination of the licensee.

(5) Any Instructor added to a program, after a program has been approved, shall be approved by the Marshal or his or her designee.

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(6) Monitors and Instructors who are approved to conduct continuing education shall keep uniform records of attendance of licensees following the format provided by the Department, for a period of five years after the issuance of the licensee's certificate of completion. They shall be responsible for the security of all uniform certificates and other Marshal approved matter and the proper issuance thereof. Strict and accurate attendance records shall be kept and submitted to the Department, at its request, for review. The Department shall keep records of the issuance of uniform certificates and other matter as it relates to the approved programs. The falsification of attendance records and the fraudulent issuance of certificates or other Department matter shall be grounds for initiating formal proceedings under M.G.L. c. 146, § 59 and c. 30A.

REGULATORY AUTHORITY

522 CMR 18.00: M.G.L. c. 146, § 49.