
Written and Performance Exam General Overview

- The intent of this exam is to assess your ability to teach the skills found in the Massachusetts Technical Education Framework.
- This exam is aligned to the frameworks which can be accessed [here](#).
- Many questions and tasks require a synthesis of knowledge based on experience in the field and may not be found in any book.
- Candidates are encouraged to prepare for their exam by reviewing textbooks and reference material which has been listed as part of this exam outline. These resources can be found using online search tools, online vendors, and websites.
- Contact the Technical Teacher Testing Office if you need further assistance in locating resources listed in the exam outline.
- Use this exam outline and the Massachusetts Technical Education Framework to focus your preparation for the exam.

Written Exam

- Number of Questions: 100
- Administration Time: 3 hours
- Administration Method: Remote Proctoring Online Session

Written Exam Content Coverage

5%	<i>Health and Safety</i>
25%	<i>Hand and Power Tool Safety</i>
10%	<i>Reading Technical Drawings and Prints</i>
20%	<i>Fundamentals of Sheetmetal Work</i>
10%	<i>Fabrication and Pattern Layouts</i>
5%	<i>Welding and Plasma ARC Cutting</i>
5%	<i>Soldering Metals</i>
5%	<i>Design and Install Air Duct Systems</i>
5%	<i>Architectural Sheet Metal</i>
10%	<i>Sheet Metal Working Related Mathematics</i>

Written Exam Reference Materials (Reference Current Edition)

- **Sheet Metal Layout** by Leo A. Meyer (Goodheart-Willcox)
- **Today's 40 Most Frequently Used Fittings** by Richard Budzik (Practical Publications)
- **Heating, Ventilation, and Air Conditioning Pattern Development** by C. Zinngrabe

Materials Needed for the Written Exam

- A four-function calculator is included in the online testing system. No other calculators are permitted.
- Scrap paper and pencil/pen are permitted.

Written Exam Sample Items

Each question on the exam consists of one incomplete sentence or question followed by four choices. Some items reference an image or diagram. A few sample items are included below; the correct answer is designated with an asterisk (*).

When drilling metal, what factors are used to determine the required speed of the twist drill:

- a. size of drill and motor.
- *b. materials and size of drill bit
- c. pulley and motor r.m.p.
- d. motor r.m.p. and material

Steel is primarily a mixture of:

- a. cold rolled steel and tin.
- *b. iron and carbon.
- c. hot rolled steel and zinc.
- d. zinc and carbon.

Performance Exam

- Administration Time: 4 hours
- Administration Method: Onsite at an approved Teacher Testing Location

Performance Exam Content Coverage

46% *Project Layout*

32% *Project Fabrication*

16% *Project Soldering*

6% *Safety*

Materials Required for the Performance Exam (Candidate Must Supply)

- Face mask (cotton face covering or respirator which fully cover the nose and mouth)
- Eye Protection
- Industry-Approved Work Clothes and Boots/Shoes

Notes: All tools and materials necessary to complete this Exam will be available at the exam site. Candidates are welcome to bring their personal hand tools if they wish. No books or notes will be allowed. Cell phones are prohibited during the exam administration.

Onsite Performance Exam Requirements

- Candidate must practice social distancing and wear the appropriate face covering that covers the nose and mouth while at the exam site.
- Testing sites may have individual requirements based on location and the current guidance from the Center for Disease Control and Prevention (CDC).

Performance Exam Reference Materials (Reference Current Edition)

- **Safety Orientation** by NCCER (Pearson Prentice Hall) www.crafttraining.com
- **OSHA Regulations** www.osha.gov
 - [1910.1200 - Hazard Communication](#)
 - [1910 Subpart I - Personal Protective Equipment](#)