

# Massachusetts Technical Teacher Testing Program Graphic Communications Content Outline

---

## 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

---

**10%** *Graphic Communications Safety Knowledge and Skills*

**5%** *Job Engineering Skills for Graphic Communications*

- Project Management
- Measuring Systems
- Estimate Costs

**10%** *Digital File Preparation*

**25%** *Graphic Design Practices*

- Typography
- Elements of Design
- Manipulate and Scan Images and Materials
- Page Layout Practices

**10%** *Preparation and Assembly Practices for Output to Various Media*

- File Management
- Pre-Flight and Output Practices

**25% Offset Print Production Practices**

- Feeder and Registration
- Inking and Dampening
- Cylinder Systems
- Delivery Systems
- Make-Ready on an Offset Press
- Printing Operations on an Offset Press

**8% Additional Printing Processes Used in Graphic Communications**

- Screen Printing

**7% Finishing Practices**

- Binding and Finishing

**Written Exam Reference Materials (Reference Current Edition)**

---

- **Offset Lithographic Technology** by Kenneth F. Hird (Goodheart-Willcox)
- **Graphic Communications: The Printed Image** by Z.A. Prust (Goodheart-Willcox)
- **Printing in a Digital World** by David Bergsland (Cengage Learning)
- **Solving Sheet Fed Offset Press Problems** by Dejidas, Eldred, Prince, and Suthons (GATF Publishing)

**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 (\*).

What would you do to remedy piling when printing?

- a. Increase the water.
- b. Re-adjust pressures.
- c. Change the offset blanket.
- \*d. Wash press and change ink.

Which of the following is a graphic display that allows quick movement from one application to another without exiting the application?

- a. Input device
- \*b. Windows-like environment
- c. Storage device
- d. LPI

## Performance Exam

- Administration Time: 5 hours
- Administration Method: Onsite at an approved Teacher Testing Location

### Performance Exam Content Coverage

---

- 10% Concept Design and Typography**
- Select and Use Appropriate Software to Design Project
- 14% Digital Image Capture/Enhancement**
- Scan Photograph for Color Reproduction
  - Use Appropriate Electronic Prepress Tools to Design Color Logo
- 8% Digital Page Layout**
- Digital Page Layout and Proof Text
- 22% Digital File Output**
- Prepare Imposition
  - Output Proofs
  - CTP Outputs
- 10% Paper Cutting**
- Preparation of Paper Stock
  - Paper Cutting
- 6% Feeder**
- Feeder Setup
- 3% Machine Folding**
- Folding
- 5% Delivery**
- Delivery Pile Jogger Operation
- 3% Printing Make Ready**
- Prepare Press for Printing
- 10% Printing**
- Printing with Offset Press
- 3% General Wash Up**
- Press and Plate Wash Up
- 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)
- Safety Glasses with Side Shields
- Disposable Gloves
- Industry-Approved Work Boots/Shoes
- Industry Approved Attire (no loose clothing, jewelry, or shorts); long hair must be restrained
- Personal Color Photograph

### **Materials Supplied by the Testing Site:**

- Computer
- Color Scanner
- Imagesetter (PS/RIP) – Tango Plate Maker
- Typeface Chart
- E-Scales
- Line Gauge
- Konica C1100
- Heidelberg Print Master Single Color Press

### **Software Supplied by the Site:**

- Adobe Design Creative Cloud
  - In-Design
  - Photoshop
  - Illustrator
- Mac or Windows workstation
- Microsoft Office

During this exam, candidates will be required to:

- Apply established appropriate OSHA safety standards to the tasks performed.
- Utilize appropriate personal protective equipment.
- Observe personal and clothing safety practices.
- Demonstrate safe ergonomic procedures.
- Follow practices for the safe operation of machinery.
- Demonstrate safe handling of chemicals and practice safe cleaning procedures.

**Note:** All other necessary tools and materials will be supplied. Candidates may supply any additional materials they may feel will assist in completing any of the required tasks. Orientation of shop and equipment will take place prior to testing. 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](http://www.crafttraining.com)
- **OSHA Regulations** [www.osha.gov](http://www.osha.gov)
  - [1910.1200 - Hazard Communication](#)
  - [1910 Subpart I - Personal Protective Equipment](#)