



# GRAPHIC COMMUNICATIONS

SkillsUSA Championships Technical Standards

## PURPOSE

To evaluate each competitor's preparation for employment and to recognize outstanding students for excellence and professionalism in the field of Graphic Communications.

First, download and review the General Regulations at: <http://updates.skillsusa.org>.

## CLOTHING REQUIREMENT

### Class E: Competition Specific — Business Casual

- Official SkillsUSA white polo shirt
- Black dress slacks or black dress skirt (knee-length minimum)
- Black closed-toe dress shoes

*Note:* Wearing socks or hose is no longer required. If worn, socks must be black dress socks and hose must be either black or skin-tone and seamless/nonpattern.

These regulations refer to clothing items that are pictured and described at: [www.skillsusastore.org](http://www.skillsusastore.org). If you have questions about clothing or other logo items, call 1-888-501-2183.

*Note:* Competitors must wear their official competition clothing to the competition orientation meeting.

## ELIGIBILITY

Open to active SkillsUSA members enrolled in programs with graphic communications as the occupational objective.

## EQUIPMENT AND MATERIALS

1. Supplied by the technical committee:  
All equipment and materials used in the hands-on component of the competition.
2. Supplied by the competitor:  
All competitors must create a one-page resume. See “Resume Requirement” below for guidelines.

### RESUME REQUIREMENT

Competitors must create a one-page resume to submit online. SkillsUSA national competitors should submit their resume by June 1. The link for resume submission will be published on <http://updates.skillsusa.org> on May 1. Failure to submit a resume will result in a 10-point penalty.

**Your resume must be saved as a PDF file type using file name format of “Last Name\_First Name.”** For example, “Amanda Smith” would save her resume as **Smith\_Amanda**. If you need assistance with saving your file as a PDF, visit [the Adobe website](#) for more information.

**Note:** Check the Competition Guidelines and/or the updates page on the SkillsUSA website at <http://updates.skillsusa.org>.

### PROHIBITED DEVICES

Cell phones or other electronic devices not approved by a competition’s national technical committee are **NOT** allowed in the competition area. Please follow the guidelines in each technical standard for approved exceptions. Technical committee members may also approve exceptions onsite during the SkillsUSA Championships if deemed appropriate.

#### Penalties for Prohibited Devices

If a competitor’s electronic device makes noise or if the competitor is seen using it at any time during the competition, an official report will be documented for review by the SkillsUSA Championships director. If confirmed that the competitor used the device in a manner which compromised the integrity of the competition, the competitor’s scores may be canceled.

## SCOPE OF THE COMPETITION

This competition is related to competencies defined by Print[ED], the nationally-recognized accreditation program for high schools and junior colleges. Learn more at [www.print-ed.org](http://www.print-ed.org).

### KNOWLEDGE PERFORMANCE

The competition will include an online test of general Graphic Communications knowledge.

## **SKILLS PERFORMANCE**

The competition includes a series of testing stations designed to assess ability to perform identified competencies. Each year, the Graphic Communications Technical Committee defines competition stations.

## **COMPETITION GUIDELINES**

1. In accordance with the graphic communications industry, the competition consists of six unique but contributing performance stations:
  - a. Digital press operations — the electronic submission and job ticketing of files to digital printing equipment
  - b. Layout and Preflighting — the re-creating of a design using appropriate page layout software and ensuring its suitability for print output.
  - c. Finishing — the operation of a paper cutter and tabletop folders according to instructions provided.
  - d. Offset press operations — the operation of a simulated offset lithographic press, making necessary adjustments to various press systems, (feeding, registration, printing, inking, dampening and delivery) to successfully complete print jobs. Competitors will have an opportunity to practice using the simulation software weeks in advance of the competition.
  - e. Oral professional assessment — a mock job interview requiring communication skills, quick thinking, and the ability to persuade the interviewer of suitability for a fictitious job opening.
  - f. Production planning — the solving of production problems related to paper, ink/toner, and other variables necessary to determine the optimal approach for producing a particular graphics job. These exercises require the use of straightforward mathematical concepts.
2. For equipment, software, and press simulator specifications, please check:  
<http://updates.skillsusa.org>.
3. As soon as the competitors have completed the exercises in each competition station, they should notify a judge. The judges will gather the completed layouts and answer sheets for evaluation and scoring.

## **STANDARDS AND COMPETENCIES**

### **GC 1.0 — Demonstrate competencies related to the digital press operations to related Print[ED] competencies**

- 1.1. Follow instructions on job ticket
- 1.2. Using the controller software, competitors will correctly program the job for print
  - 1.2.1. Use Adobe Creative Cloud
- 1.3. Check files in preparation for preflight
  - 1.3.1. Describe the steps to be followed prior to preflight
- 1.4. Complete preflight procedures
  - 1.4.1. Explain the process and concept of checking files to rip
- 1.5. Check and make necessary corrections to files prior to preflight
  - 1.5.1. Apply the use of a checklist prior to preflight
- 1.6. Apply instructions for ripping of completed files

- 1.6.1. Explain terminology and directions prior to preflight
- 1.7. Demonstrate knowledge of the PMS color system
- 1.8. Demonstrate knowledge of type use in page layout design
  - 1.8.1. Explain how type can affect design
- 1.9. Make adjustments when sending a job to an output device
- 1.10. Use Adobe Creative Cloud in opening and exporting files to an output device
  - 1.10.1. Describe the use of software in preflight and ripping

### **GC 2.0 — Demonstrate competencies related to layout and preflighting**

- 2.1. Use Adobe Creative Cloud page layout software
- 2.2. Follow and interpret the provided instructions to complete the page layout project, utilizing knowledge of page layout terms and concepts.
  - 2.2.1. Place provided images and/or design elements
  - 2.2.2. Place and stylize provided text files
  - 2.2.3. Create/modify/apply colors for design elements
  - 2.2.4. Utilize InDesign's preflight profile(s) to evaluate the document and correct any non-conforming elements.
  - 2.2.5. Save completed file

### **GC 3.0 — Demonstrate finishing processes to related Print[ED] competencies**

- 3.1. Follow instructions for use of tabletop folding equipment
  - 3.1.1. Define terms used in folding procedures
  - 3.1.2. Describe various folding procedures
- 3.2. Make adjustments on tabletop folder
  - 3.2.1. Explain the components and functionality of the tabletop folder
- 3.3. Make adjustments for a letterfold
  - 3.3.1. Describe the characteristics of a letterfold fold
- 3.4. Make adjustments for an accordion fold
  - 3.4.1. Describe the characteristics of an accordion fold
- 3.5. Demonstrate knowledge of paper characteristics

### **GC 4.0 — Demonstrate offset press operations and processes using the offset press simulator**

- 4.1. Read job ticket instruction for job to be run on a press
  - 4.1.1. Define terms used
  - 4.1.2. Describe presswork procedures
- 4.2. Make necessary adjustments to a job in a given situation
  - 4.2.1. Translate instructions into appropriate adjustments
- 4.3. Make adjustments in the feeder system
  - 4.3.1. Explain the components and functionality of the feeder systems
- 4.4. Make adjustments in the register system
  - 4.4.1. Explain the components and functionality of the register system
- 4.5. Make adjustments in the delivery system
  - 4.5.1. Explain the components and functionality of the delivery system
- 4.6. Make adjustments in the inking system
  - 4.6.1. Describe the characteristics of ink
  - 4.6.2. Explain the components and functionality of the inking system

- 4.7. Make adjustments in the dampening system
  - 4.7.1. Explain the components and functionality of the dampening system
- 4.8. Make adjustments in the printing system
  - 4.8.1. Explain the components and functions of the printing system
- 4.9. Demonstrate knowledge of ink and water balance adjustment
  - 4.9.1. use QC tools to check ink density or dot gain during production on the press
- 4.10. Make necessary adjustments to comply with the job being printed in terms of color, placement and registration
  - 4.10.1. Explain the overall offset press operations function

**GC 5.0 — Demonstrate comprehension of production planning concepts as related Print[ED] Competencies**

- 5.1. Demonstrate knowledge of paper characteristics as related to job planning and cost analysis by calculating a job estimate given specific job requirements
  - 5.1.1. Explain how grain direction factors into job preparation and production with printing and finishing equipment
  - 5.1.2. Demonstrate knowledge of paper types and sizes and the effects of each on job planning and print production
  - 5.1.3. Determine the most efficient and cost-effective way to cut paper for print production
  - 5.1.4. Determine the number of press sheets needed
  - 5.1.5. Determine the total number of parent sheets needed
  - 5.1.6. Determine the total cost of paper
- 5.2. Demonstrate knowledge of different printing processes as related to job planning and cost analysis by calculating a job estimate given specific job requirements
  - 5.2.1. Explain the difference between 4 color process and spot color printing
  - 5.2.2. Explain the benefits of both offset and digital printing equipment
  - 5.2.3. Explain the scenarios in which offset and digital printing would be more efficient than the other
  - 5.2.4. Determine the most efficient imposition and the number of forms required for printing
  - 5.2.5. Determine the cost of print equipment consumables such as plates, ink, toner, etc.
  - 5.2.6. Determine the time needed for printing on both offset and digital print equipment
  - 5.2.7. Determine the costs associated with printing for both offset and digital print equipment
  - 5.2.8. Analyze the differences in cost for both offset and digital printing
- 5.3. Demonstrate knowledge of different binding/finishing processes as related to job planning and cost analysis by calculating a job estimate given specific job requirements
  - 5.3.1. Determine the time needed for bindery/finishing production
  - 5.3.2. Determine the cost of bindery/finishing production

**GC 6.0 — Competitors must effectively participate in a mock job interview**

- 6.1. Review description of fictitious company, employment positions available, and sample interview questions (document will be distributed at orientation)
  - 6.1.1. Choose an open position to apply for

- 6.1.2. Prepare verbal answers to sample interview questions
- 6.2. During interview, persuasively communicate fitness for desired position
  - 6.2.1. Emphasize skills, talents, and experience
  - 6.2.2. Explain how company would benefit from your hiring
  - 6.2.3. Show interest in working for company
- 6.3. Communicate professionally, thoughtfully, and effectively to interviewer questions
  - 6.3.1. Answer questions clearly and concisely
  - 6.3.2. Exhibit good non-verbal communication, including eye contact, facial expressions, gestures, and posture
  - 6.3.3. Demonstrate self-confidence and composure

## **COMMITTEE IDENTIFIED ACADEMIC SKILLS**

The technical committee has identified that the following academic skills are embedded in this competition.

### **Math Skills**

- Use fractions to solve practical problems
- Simplify numerical expressions
- Solve practical problems involving percentages
- Solve single variable algebraic expressions

### **Science Skills**

None identified

### **Language Arts Skills**

- Provide information in conversations and in group discussions
- Provide information in oral presentations
- Demonstrate use of nonverbal communication skills: eye contact, posture and gestures using interviewing techniques to gain information
- Demonstrate knowledge of appropriate reference materials

## **CONNECTIONS TO NATIONAL STANDARDS**

State-level academic curriculum specialists identified the following connections to national academic standards.

### **Math Standards**

- Geometry
- Measurement
- Problem solving
- Communication
- Connections
- Representation

*Source: NCTM Principles and Standards for School Mathematics. For more information, visit: [www.nctm.org](http://www.nctm.org).*

## **Science Standards**

- Understands the structure and properties of matter
- Understands the sources and properties of energy
- Understands forces and motion.
- Understands the nature of scientific inquiry.

*Source: McREL compendium of national science standards. To view and search the compendium, visit: [www2.mcrel.org/compendium/browse.asp](http://www2.mcrel.org/compendium/browse.asp).*

## **Language Arts Standards**

- Students read a wide range of print and nonprint texts to build an understanding of texts, of themselves, and of the cultures of the United States and the world; to acquire new information; to respond to the needs and demands of society and the workplace; and for personal fulfillment. Among these texts are fiction and nonfiction, classic and contemporary works.
- Students apply a wide range of strategies to comprehend, interpret, evaluate and appreciate texts. They draw on their prior experience, their interactions with other readers and writers, their knowledge of word meaning and of other texts, their word identification strategies and their understanding of textual features. (e.g., sound-letter correspondence, sentence structure, context, and graphics.)
- Students adjust their use of spoken, written and visual language (e.g., conventions, style, vocabulary) to communicate effectively with a variety of audiences and for different purposes.
- Students use a variety of technological and information resources (e.g., libraries, databases, computer networks and video) to gather and synthesize information and to create and communicate knowledge.
- Students use spoken, written and visual language to accomplish their own purposes. (e.g., for learning, enjoyment, persuasion and the exchange of information.)

*Source: IRA/NCTE Standards for the English Language Arts. To view the standards, visit: [www.ncte.org/standards](http://www.ncte.org/standards).*