

Standards and Competencies

GC 1.0 — Demonstrate competencies related to the digital workflow process to related PrintED competencies

- 1.1 Follow instructions on job ticket
 - 1.1.1 Explain the nature and type of instruction relevant to this type of work
 - 1.1.2 Determine all implications of the instructions on the steps that follow
- 1.2 Use page layout software
 - 1.2.1 Use InDesign
 - 1.2.2 Use QuarkXPress
 - 1.2.3 Distinguish between the functionality of each page layout software
- 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 in order 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 impact design
- 1.9 Make adjustments when sending a job to an output device
- 1.10 Use InDesign in opening and exporting files to an output device
 - 1.10.1 Describe the use of software in preflight and ripping
- 1.11 Use QuarkXPress in opening and exporting files to the output device
 - 1.11.1 Describe the use of software in preflight and ripping

GC 2.0 — Demonstrate competencies related to electronic prepress processes to related PrintED competencies

- 2.1 Use page layout software, InDesign or QuarkXPress
 - 2.1.1 Describe software functionality
 - 2.1.2 Explain software use in page layout design
- 2.2 Follow instructions in designing page layout document
 - 2.2.1 Define terms used in page layout

- 2.2.2 Apply instructions to an assigned work project
- 2.3 Import provided picture files
 - 2.3.1 Explain considerations in the handling of pictures being imported to page layout
- 2.4 Import text files provided
 - 2.4.1 Explain considerations in the handling of text being imported to page layout
- 2.5 Create colors for rules and headlines
 - 2.5.1 Describe the procedures to add color to the page layout
- 2.6 Check for accuracy prior to saving a completed file
 - 2.6.1 Explain the procedures for checking files before preflight
- 2.7 Save a completed file

GC 3.0 — Demonstrate competencies related to finishing processes to related PrintED competencies

- 3.1 Read instructions for use of table top folding equipment
 - 3.1.1 Define terms used in folding procedures
 - 3.1.2 Describe various folding procedures
- 3.2 Make adjustments on table top 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 competencies related to offset press operations processes to related PrintED competencies

- 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 procedures understanding of paper handling
- 4.10 Demonstrate knowledge of ink and water balance
 - 4.10.1 Explain the theory of offset — ink and water do not mix
- 4.11 Demonstrate safe operations when running the press
 - 4.11.1 Describe the safety implications of operating a press
- 4.12 Make necessary adjustments to comply with the job being printed in terms of color, placement and registration
 - 4.12.1 Explain the overall offset press operations function

GC 5.0 — Demonstrate competencies related to production planning to related PrintED Competencies

- 5.1 Demonstrate knowledge of the characteristic of various types of paper, i.e., basic sizes, basis weight, etc.
- 5.2 Perform paper cutting problem solving
 - 5.2.1 Describe the process to determine number out in paper use
- 5.3 Demonstrate knowledge of grain and how it impacts run ability on the press and paper cutting
- 5.4 Demonstrate knowledge of inks: kinds and characteristics
 - 5.4.1 Explain ink and its characteristics
 - 5.4.2 Describe the composition of ink and its use in different processes
 - 5.4.3 Perform ink consumption problems
 - 5.4.4 Complete formulas and procedures to determine ink use
- 5.5 Determine total quantities of paper needed
 - 5.5.1 Explain paper purchasing: pricing and quantities
- 5.6 Determine total quantity of ink needed
 - 5.6.1 Describe ink use and ink requirements
- 5.7 Determine cost of paper and ink
 - 5.7.1 Describe the process to determine total cost of ink and paper on a job

- 5.8 Make dummies for production planning purposes

GC 6.0 — Complete an oral professional assessment in a simulated customer situation

- 6.1 Perform customer service related activities when relating to a customer
 - 6.1.1 Explain the function of the customer service representative
- 6.2 Communicate professionally with technical knowledge
 - 6.2.1 Describe the workings of a production environment
 - 6.2.2 Explain the nature of work performed and requirements of customers
- 6.3 Respond quickly, accurately and professionally in a customer situation

Committee Identified Academic Skills

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

Math Skills

- Use fractions to solve practical problems
- Simplify numerical expressions
- Solve practical problems involving percents
- Solve single variable algebraic expressions
- Find surface area and perimeter of two-dimensional objects

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. To view high school standards, visit: standards.nctm.org/document/chapter7/index.htm. Select “Standards” from menu.

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: www.mcrel.org/standards-benchmarks/

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.readwritethink.org/standards/index.html.

CONTEST SCORECARD

Items Evaluated	Possible Points
Digital Workflow	200
Electronic Prepress	200
Finishing	100
Offset Press Operations.....	200
Oral Professional Assessment.....	100
Production Planning.....	100
Technical Knowledge Test.....	100

Sub Total	1,000
Résumé Penalty	_____
Clothing Penalty	_____
Safety Penalty	_____
TOTAL	_____