Measuring What Matters in CTE®

Teacher Assessment Blueprint

Graphic Production Technology

Test Code: 5938 / Version: 01

General Assessment Information

Blueprint Contents

Test Type: The Graphic Production Technology assessment is included in NOCTI's Teacher assessment battery. Teacher assessments measure an individual's technical knowledge and skills in a proctored proficiency examination format. These assessments are used in a large number of states as part of the teacher licensing and/or certification process, assessing competency in all aspects of a particular industry. NOCTI Teacher tests typically offer both a written and performance component that must be administered at a NOCTI-approved Area Test Center. Teacher assessments can be delivered in an online or paper/pencil format.

Revision Team: The assessment content is based on input from subject matter experts representing the following states: Delaware, Missouri, New Jersey, and Pennsylvania.

CIP Code

10.0305- Graphic and Printing Equipment Operator, General Production

Learning that works for America CTE™

Career Cluster 3- Arts, A/V Technology, and Communications

o*net™ in*it

51-5112.00- Printing Press Operators

NATIONAL COLLEGE CREDIT RECOMMENDATION SERVICE
University of the State of New York - Regents Research Fund

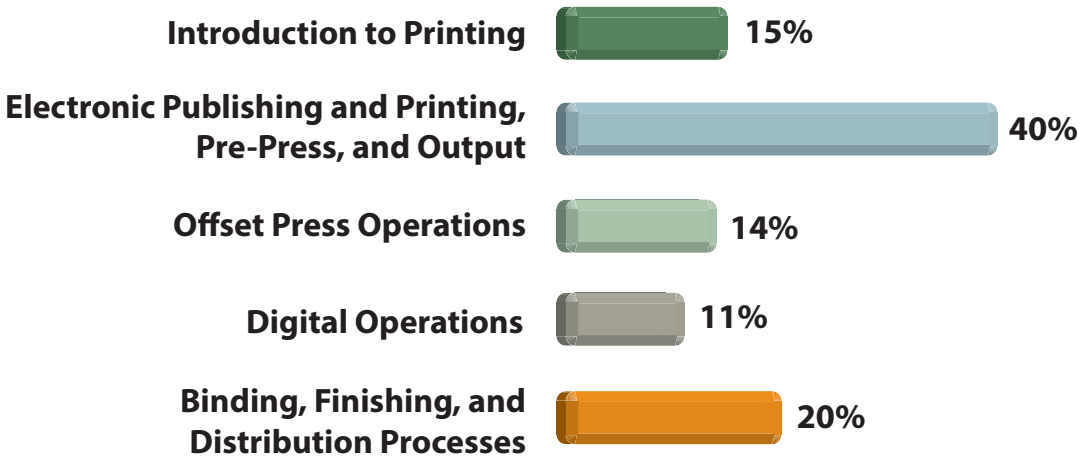
In the lower division baccalaureate/associate degree category, 3 semester hours in Graphic Production Technology

Written Assessment

NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours
Number of Questions: 198
Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included in this Assessment

Introduction to Printing

- Demonstrate knowledge of relevant OSHA standards, environmental protection, and safety procedures
- Explain the importance of quality control procedures, consistency of production, and statistical process control (SPC) as it relates to customer satisfaction
- Identify workflow, processes (including software), and equipment in graphic communications
- Demonstrate mathematical concepts relating to print, estimating materials/service costs, and preparing work orders
- Understand legal aspects of copyrighted materials
- Understand/define/articulate printing terminology
- Describe various methods of graphic reproduction (e.g., offset, screen, intaglio, gravure, letterpress)

Electronic Publishing and Printing, Pre-Press, and Output

- Identify and demonstrate principles of layout and design
- Identify type terminology, styles, and uses
- Identify proofreader's marks, proofread and mark-up copy
- Make conversions using printer systems of measurement
- Demonstrate steps in the creative process (e.g., thumbnail, rough, comprehensive, mechanical)
- Crop, scale, and manipulate images
- Prepare elements for a variety of imposition layouts
- Demonstrate basic computer knowledge (e.g., storage, troubleshooting, peripherals)
- Demonstrate proficiency in computer graphics and page layout applications
- Demonstrate knowledge of pre-flighting electronic files
- Output color separations from digital files

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Specific Standards and Competencies (continued)

Electronic Publishing and Printing, Pre-Press, and Output (continued)

- Edit and manipulate single-color, spot color, and process color jobs
- Adjust work to meet the needs of target audience
- Demonstrate ability to calculate paper costs for job, waste included
- Differentiate between web, multimedia, and print graphics
- Exhibit knowledge of PDF workflow
- Demonstrate knowledge of different color modes and color management (e.g., CMYK and RGB)
- Exhibit familiarity with output devices
- Exhibit familiarity with input devices

Offset Press Operations

- Identify components of an offset press and demonstrate knowledge of operating procedures
- Demonstrate understanding of press chemistry (e.g., ink tack, fountain solutions, solvents, dryers)
- Describe general maintenance and cleaning of an offset press
- Demonstrate knowledge of mixing PMS colors
- Describe auxiliary operations performed on press (e.g., perforation, scoring)
- Troubleshoot offset printing problems (e.g., scumming, pilling, chalking, roller stripping, ghosting, glazing)
- Demonstrate ability to print in register

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Specific Standards and Competencies (continued)

Digital Operations

- Identify components of a digital press or other digital device and demonstrate knowledge of operating procedures
- Demonstrate understanding of digital consumables (e.g., toner, fuser, waste)
- Describe general maintenance and cleaning of digital devices
- Describe auxiliary operations performed using inline/nearline devices (e.g., perforation, scoring)
- Demonstrate proper handling of various print media
- Troubleshoot digital printing problems (e.g., toner scatter, paper jams)
- Explain the importance of the RIP (Raster Image Processor) device and its functions

Binding, Finishing, and Distribution Processes

- Set up, adjust, and operate a paper cutter
- Set up, adjust, and operate a paper folder
- Demonstrate understanding of perforating, scoring, embossing, and die-cutting
- Perform preventive maintenance on bindery and finishing equipment
- Set up and operate a stitcher
- Set up, adjust, and operate a paper drill
- Explain different methods of binding and assembling (e.g., collating and gathering)
- Explain assembly of carbonless paper forms
- Calculate number of small sheets cut from large sheets
- Identify properties and use of various paper stocks
- Demonstrate knowledge of carrier options, postal sorting, and packaging requirements

Sample Questions

An item is protected by copyright when it is

A. registered with the U.S. Copyright Office
B. registered with the Library of Congress
C. published
D. created

Landscape page orientation is

A. vertical
B. enlarged
C. horizontal
D. diagonal

A scanner is a/an

A. input device
B. copy printout device
C. output device
D. DPI program

To "air" stock means to

A. expose the stock, uncovered, to hot temperatures
B. handle stock, allowing air between sheets
C. adjust air blasts to separate sheets
D. run the stock through the press without printing it

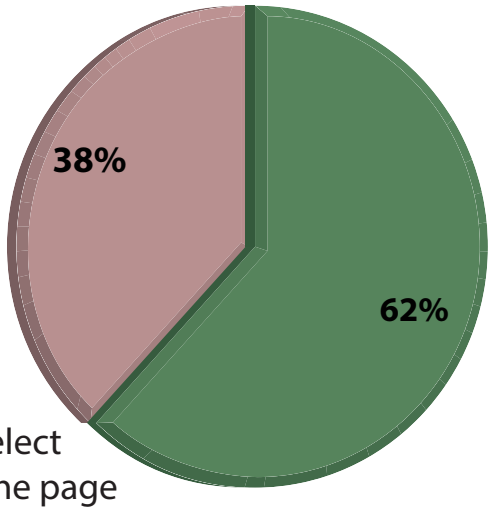
Antique, smooth, and coated refer to

A. recycled paper
B. paper sizes
C. paper colors
D. paper finishes

Performance Assessment

NOCTI performance assessments allow individuals to demonstrate their acquired skills by completing actual jobs using the tools, materials, machines, and equipment related to the technical area.

Administration Time: 2 hours and 15 minutes
Number of Jobs: 2



Areas Covered:

62% Design and Pre-Press
Participant will plan and create original artwork, create thumbnail sketches and apply design principles; select correct software, prepare a rough layout to scale, set up the page and use an appropriate font, output a comprehensive proof, proofread and output final copy.

38% Paper Drill, Shrink Wrap, Package, and Prepare for Pick-Up
Participant will scan the provided images, print copies, cut 80 postcards, paper drill or punch a hole, and shrink wrap or paper wrap. Prepare and print a mailing label.

Sample Job

Design and Pre-Press

Maximum Time: 1 hour 30 minutes

Participant Activity: The participant will create artwork similar to the images provided; prepare three thumbnail sketches based on acceptable design principles; prepare a rough layout to scale from the design selected; use the rough generated to determine the most appropriate available software for the job; set up the page and select the most appropriate available font(s) for the job; create an image similar to the illustration provided based on the design using the most appropriate software; output a comprehensive proof; proofread and make corrections; apply necessary adjustments and printer's marks; output a final copy for evaluator approval; output separations; and submit the work to the evaluator.