

Skills Canada National Competition

SCOPE DOCUMENT	
Competition Year	2012
Competition location	Edmonton, AB
Trade Number	11
Trade Name	Offset Printing
Level	Post-Secondary

1. INTRODUCTION

1.1 Purpose of the Challenge.

Offset printing involves the production of printed material using an offset sheet-fed press and other equipment to create finished, printed products. Press operators are responsible for producing all printed material at a printing operation.

The skill requires an in-depth knowledge of handling, troubleshooting, and maintaining printing factors such as ink, paper, and equipment. Generally, production of the printed product will use a traditional ink-on-paper process, but increasingly operators are using toner-on-paper technology for shorter runs and variable data.

Operators also have to be able to mix custom ink colours, operate cutting equipment to produce a job to a customer's specifications. Quality control equipment like densitometers and photospectrometers are used to verify and adjust the print quality.

1.2 Duration of contest.

6.0 hours per contestant. Total contest duration is 2 days.

1.3 Competency specification

Press Run

Competitors shall be able to:

- Print a specified amount of printed products on the sheet-fed offset press according to the quality and technical criteria set and accepted by a customer and according to standards in the industry.
- Perform make-ready, operation and adjustments on 2 and/or 4-colour sheet-fed offset press with or without remote control consoles.
- Use presses with either semi-automatic or automatic plate mounting.

Cleanup

Competitors shall be able to:

- Clean the equipment and premises after the offset printing process
- Cleaning must be done in a specified time
- Perform common maintenance activities on offset presses.

Finishing

Competitors shall be able to:

- Finishing the printed work by trimming it with a paper cutter to specified dimensions
- Use a programmable paper cutter.
- Use a simple folding machine.

Other Related Skills

Competitors shall be able to:

- Operate a digital printing press.
- Demonstrate knowledge and management of offset printing materials – paper, ink, etc.
- Operate measuring and quality control devices.
- Use different measuring devices like densitometer, spectrophotometer, micrometer etc.
- Demonstrate an understanding of safety and environmental regulations.

2. CONTEST DESCRIPTION

2.1 List of documents produced and timeline for when competitors have access to the documents.

DOCUMENT	DATE OF DISTRIBUTION VIA WEBSITE
Scope	December 15 th , 2012
Judging Criteria	March 1 st , 2012

2.2 Tasks that may be performed during the contest

- Task 1: 4 color Process
 - Prior to production a discussion with judges about expectations production quality, color shifts and overall cleanliness
 - 50% total ink coverage on press sheet
 - Printed 4 color process, one side, lightweight coated cover, 12 1/2" x 19" press sheet
 - 1500 sheets including make-ready of 500 sheets
 - Metal plates and color proofs are provided

- Line screen 175 LPI
- Competitors are responsible for make-ready, production and wash up
- Prior to going on count, competitors must sign their own OK sheet which will be used as your base criteria throughout press run & reset press counter to Zero
- Operate measuring devices like micrometer and densitometer
- Time allocated is two hours, including washup
- No overtime will be allowed
- Task 2: Color mixing process
 - Mix 2 Pantone colors using a formula guide and digital scale
 - Competitors required to produce 150 grams of each colour for use in Task 5
 - Colours mixed will be announced at the competition
 - Time allocated for this task: 45 minutes including cleanup to mix both colours
 - No overtime will be allowed
 - If task is not completed in allocated timelines, a substitution of a process colour (cyan or magenta) will be used for Task 5.
- Task 3: Cutting process-Part 1
 - Cut from 19" x 25" sheet, 9.25" x 12.25" feed stock for future use in Task 5, using a computerized cutter
 - Time allocated for this task: 30 minutes
 - No overtime will be allowed
- Task 4: Cutting theory assessment
 - Competitor to complete cutting scheme from supplied worksheet
 - Identify lead edges, sequence and calculate cuts
 - Time allocated for this task: ½ hour
 - No overtime will be allowed
- Task 5: 2 color process
 - 2 colour PMS printed on light weight cover, 9.25" x 12.25" press sheet
 - 35% total ink coverage on press sheet
 - 1000 sheets including make-ready of 500 sheets
 - Metal plates and color proofs are provided
 - Competitors are responsible for make-ready, production and wash up
 - Prior to going on count, competitors must sign their own OK sheet which will be used as your base criteria throughout press run & reset press counter to Zero
 - Time allocated is 1 hour 30 minutes, including washup

- No overtime will be allowed
- Task 6: Maintenance Activities
 - Calculate the required packing for a printing blanket to a specified cylinder undercut
 - Identify outside & inside diameter of a roller bearing
 - Identify various press rollers and their locations
 - Test & measure conductivity of three different samples
 - Test & measure pH levels of the different samples
 - Identify Shore hardness of supplied rollers

3. EQUIPMENT, MATERIAL, CLOTHING

3.1 Equipment and material provided by Skills/Compétences Canada

- 2 color press: Heidelberg Printmaster 46
- 4 color press: Heidelberg SM52-4LX
- Polar Cutter 78X
- Metal plates, inks, stock and chemicals
- Color proof of jobs
- 10X Loupe will be provided, no personal loupes allowed
- PMS book
- Digital scales and ink mixing equipment
- Densitometer
- Steel print ruler or line gauge
- Micrometer
- Olfa Knife
- Nitrile Gloves, Safety Glasses & hearing protection

3.2 Equipment and material provided by the competitor

- Steel Toe Shoes

3.3 Required clothing (Provided by competitor)

- Short-sleeve shirt, fairly tight-fitting
- Pants
- Jewellery must be removed prior to competition
- Long hair must be secured

4. SAFETY REQUIREMENTS

4.1 List of required personal protective equipment(PPE) provided by competitors

- | | | |
|---|---|--|
| <input type="checkbox"/> Safety Glasses | <input checked="" type="checkbox"/> CSA approved Safety shoes | <input type="checkbox"/> Latex gloves |
| <input type="checkbox"/> Safety Gloves | <input type="checkbox"/> Welding helmet | <input type="checkbox"/> Dust Mask |
| <input type="checkbox"/> Hard Hat | <input type="checkbox"/> Welding gloves | <input type="checkbox"/> Leather gloves |
| <input type="checkbox"/> Hearing protection | <input type="checkbox"/> Respiratory protection | <input type="checkbox"/> No PPE required |

Note: Competitors will not be allowed to compete if the above items are not brought and used.

4.2 List of required personal protective equipment(PPE) provided by Skills/Compétences Canada (SCC)

- No additional PPE will be supplied by SCC

5. ASSESSMENT

5.1 Point breakdown

POINT BREAKDOWN	/1000
Task 1	500
Task 2	50
Task 3	50
Task 4	50
Task 5	300
Task 6	50

6. ADDITIONAL INFORMATION

6.1 Consecutive translation

If consecutive translation is required on site, the Skills/Compétences Canada Provincial/Territorial offices must advise Skills/Compétences Canada National Secretariat a minimum of 1 month prior to the competition or this service might not be guaranteed.

6.2 Tie (No ties are allowed)

In the event of a tie, the highest combined score in the Final Inspection subsections of Tasks 1 and 5 will determine the winner.

6.3 Competition rules

Please refer to the competition rules for all general SCNC information.

7. NATIONAL TECHNICAL COMMITTEE MEMBERS

Region	Name	Email address
Pacific Region	Bruce Kenworthy	printguy@shaw.ca
Western Region	Natascha Jasper	
Atlantic Region	Ken Holden	
CPISC Representative	Jeff Polley	
Workshop Supervisor	Michael Yez	