



Australian Government

ICPPRN382 Produce and manage complex digital print

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICP Printing and Graphic Arts Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to produce and manage digital print in a complex print production environment by constructing and accessing complex electronic data, performing colour digital management and adjusting machine settings to ensure production and print quality are maintained.

It applies to individuals who possess a sound theoretical knowledge base, who typically provide leadership and use a range of specialised and technical skills in the commercial print, pre-press, bureau, high-end digital print or a combination of these business environments.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Printing

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Troubleshoot and correct production workflows for digital printing	1.1 Productivity analysis on a digital production system is undertaken to determine the most productive approach according to job specifications 1.2 Workflow procedures for digital printing are developed according to equipment availability and production environment, for a range of job specifications 1.3 Possible causes of problems in workflow procedures are identified and rectified, and strategies to improve productivity with minimum resource waste and according to job specifications are developed

ELEMENT	PERFORMANCE CRITERIA
	1.4 Preventive maintenance on a digital printing system is undertaken according to manufacturer's specifications to ensure maximum productivity, and minimum downtime and wastage
2. Liaise with clients	2.1 Print services, quality expectations and print costing for digital printing are communicated to client according to enterprise procedures 2.2 Productivity advantages and disadvantages of different digital print options are communicated according to manufacturer's specifications and enterprise procedures 2.3 Turnaround times are calculated and communicated to client according to enterprise procedures
3. Confirm job specifications	3.1 Print job specifications are correctly interpreted from job documentation or production control system 3.2 Availability of all job components are checked according to enterprise procedures 3.3 Scanning, proofing and finishing requirements of each job are checked and internal workflow and/or outsource arrangements are coordinated 3.4 Run time of job is determined and completion time correctly estimated
4. Access, verify and submit electronic data files to a digital printer	4.1 Workstation computer and industry software are used to locate and retrieve electronic data files according to job specifications 4.2 Preview or pre-flight check is performed on electronic data files to verify correct job set-up according to job specifications 4.3 Job priority is determined according to job specifications and production schedules 4.4 Data file is submitted to print and image quality and machine productivity checks are performed and adjustments made to correct any problems
5. Perform complex digital colour management	5.1 Appropriate digital colour management solutions are used to minimise variation in colour selection, lighting conditions and surrounding colour, machine calibration, screen angle, machine resolution, conversion algorithms from red, green, blue (RGB) to cyan, magenta, yellow and key black (CMYK), substrate type and condition 5.2 Printed RGB, CMYK and PMS colour charts are used to perform colour matching with client proof 5.3 Accurate recommendations on colours to use when producing

ELEMENT	PERFORMANCE CRITERIA
	electronic data files are made according to job specifications 5.4 Colour matching of an electronic data file created using RGB colour model is performed by using machine calibration procedures and customising an output profile
6. Perform and/or coordinate document proofing	6.1 Digital proof run is conducted for client approval and to confirm proof meets job specifications 6.2 Internal or external pre-press proofing systems operators are consulted to conduct the proof run and provide job specifications according to enterprise procedures 6.3 Communication between client and proofing provider occurs to ensure proof conforms to job specifications
7. Run digital print job and/or coordinate press print run	7.1 Production schedules, enterprise procedures and job specifications are observed and liaison with internal and/or external production operators is maintained to determine print run start and duration time 7.2 Digital print run is conducted according to job specifications ensuring machine productivity and quality are monitored and adjusted throughout the print job
8. Perform and/or coordinate document finishing and client delivery	8.1 Finishing method is determined according to job specifications 8.2 Steps required for document finishing are identified and if necessary performed on in-line finishing units on a web or a sheet-fed system according to enterprise procedures 8.3 Packaging and presentation of finished print work is completed with co-workers and/or external source, if necessary, to avoid damage and conform to delivery requirements according to job specifications

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1-1.4, 2.2, 3.1, 4.1-4.3, 5.3, 5.4, 6.1-6.3, 7.1, 7.2,	Recognises and interprets text to establish job requirements from information contained within relevant procedures and specifications

	8.1-8.3	
Writing	2.1-2.3, 6.3, 8.3	Enters routine data associated with production processes and enterprise procedures
Oral Communication	1.1-1.4, 2.1-2.3, 4.1-4.3, 5.3, 6.1-6.3, 7.1, 7.2, 8.1, 8.3	Speaks clearly using appropriate vocabulary, tone and pace to report faults and discrepancies
Numeracy	2.3, 3.4	Interprets and analyses a range of mathematical information used in familiar and routine tasks
Navigate the world of work	1.1-1.4, 2.1-2.3, 3.1, 3.3, 4.1-4.4, 5.1-5.4, 6.1-6.3, 7.1, 7.2, 8.1-8.3	- Works independently and collectively within broad parameters, with a strong sense of responsibility and ownership of goals, plans, decisions and outcomes - May seek to make implicit protocols and expectations more explicit, and may challenge those who appear to work against effective outcomes, or do not reflect stated values, decisions and outcomes
Interact with others	1.1-1.4, 2.1-2.3, 4.1-4.3, 5.3, 6.1-6.3, 7.1, 7.2, 8.1, 8.3	Collaborates with others to achieve joint outcomes, playing an active role in facilitating effective group interaction, influencing direction and taking a leadership role on occasion
Get the work done	1.1-1.4, 3.3, 3.4, 4.1-4.4, 5.1, 5.2, 5.4, 6.1-6.3, 7.1, 7.2, 8.2, 8.3	- Determines priorities and sequences steps involved in clearly defined, familiar tasks - Takes responsibility for planning and organising own workload using analytical processes to decide on a course of action, and assembles required resources - Recognises and anticipates an increasing range of complex problems, their symptoms and causes, actively looking for early warning signs and implementing contingency plans - Reflects on the ways digital systems and tools are used, or could be used, to achieve work goals, and begins to recognise strategic, as well as operational, applications - Utilises a broad range of features within applications to improve personal productivity, optimising software functions for specific purposes

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICPPRN382 Produce and manage complex digital print	ICPPR382C Produce and manage complex digital print	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a74b7a0f-a253-47e3-8be0-5d426e24131d>

Assessment Requirements for ICPPRN382 Produce and manage complex digital print

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Performance Evidence

Evidence of the ability to:

- demonstrate appropriate organisation skills to coordinate pre-press, print run, finishing and delivery production workflows
- produce and access complex electronic data
- conduct a digital proof run
- perform digital colour management
- adjust settings and ensure productivity
- perform preventive maintenance on digital printer
- demonstrate use of computerised control and monitoring systems if available and appropriate
- perform preventive maintenance tasks on a digital printer according to manufacturer's specifications
- prepare a written document outlining production workflow and giving reasons for production methods selected for a print job using the following job specifications within a specified production environment for:
 - 4-colour advertising brochure
 - quantity: 2000
 - substrate: 120gsm coated
 - text: supplied electronically
 - images: continuous tone photographs supplied
 - logos and line art: supplied electronically
 - layout: hand drawn thumbnails supplied
 - finished size: A3 bleed
 - finishing: guillotined, folded and saddle
 - packaging: boxed
- demonstrate turnaround time: 100 in 48 hours and remainder in 14 days
- produce a digital colour proof of a supplied electronic file
- use a digital colour management system to perform colour matching to a supplied proof.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

Troubleshooting and problem-solving

- identify problem-solving strategies to use if a key piece of equipment in the production workflow is temporarily unavailable
- describe actions required if the substrate type required is unavailable
- discuss workarounds to use if a data file error is received while accessing a PDF file
- outline what to do if a busy production schedule with tight deadlines and a power failure coincides and appears to be for an indefinite period of time

Analyse and recommend printing solutions

- explain factors that influence a decision on using a particular printing solution (run length, substrate type, application)
- explain cost differences between a specified job printed on a digital system and a specified traditional system (eg digital vs lithographic)
- describe quality differences between a specified job printed on a digital system and a specified traditional system (e.g. digital vs lithographic)
- explain the difference in turnaround time between a specified job printed on a digital system and a specified traditional system (e.g. digital vs lithographic)
- discuss the most appropriate print method for the specified print job

Communication and client interaction

- outline main differences between digital printing and traditional printing methods
- discuss recommendations to make to a client who has created an electronic file in an incompatible software application
- discuss suggestions to make to a client who requires a high-volume print run but needs a portion of the print job immediately
- list steps to follow for client approval of a proof

Job requirements and processing systems

- name actions required if vital information is missing from the job ticket (manual or electronic)
- outline checks needed prior to set-up (availability of material, maintenance)
- discuss what action to take if a file does not transfer correctly
- describe main points to be checked before submitting file to print

Data access and manipulation

- list checks to ensure data is in a format that can be used in digital print
- outline suggestions to make to a client who has an incompatible version of software

- list ways to submit a PDF file to the digital printer
- explain OCR scanning
- discuss how scan resolution affects document size and quality
- describe what action is required if a scanned image is too dark
- outline the sort of scanner hardware and software configuration that can be used to digitally scan a hardcopy multi-page document with text and images

Digital colour management

- outline the difference between colours displayed on a computer monitor and printed colour
- describe how machine calibration affects colour consistency
- explain how to use printed colour charts to perform colour matching to a proof
- explain what the acronym ICC stands for, and its significance
- describe how a simulation profile affects colour output

Proofing and adjustment

- explain circumstances in which a job can be modified before printing
- discuss why margins should be changed when the job reaches the printer
- outline steps to get client approval of the print
- identify what the proof is checked against
- describe the type of proofing system available in the traditional pre-press
- explain recommendations that can be made regarding an appropriate proofing system for a specified print job

Document finishing and client delivery

- discuss various types of binding
- list procedures to be followed if the binding method required by the client is not available at own site
- describe why packaging finished print work is important.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the printing field of work and include access to:

- special purpose tools, equipment and materials
- digital printing machine
- digital front end.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a74b7a0f-a253-47e3-8be0-5d426e24131d>