



Australian Government

Department of Education, Employment and Workplace Relations

ICPPR282C Produce and manage basic digital print

Revision Number: 1

ICPPR282C Produce and manage basic digital print

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to produce and manage digital print for a basic print production environment.
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Application of the Unit

Application of the unit	This unit requires the individual to produce and manage digital printing systems to achieve maximum productivity. The individual will perform troubleshooting and conduct maintenance, manage digital print client service operations, construct a range of electronic data files, perform basic colour management techniques, design electronic workflow systems, produce and manage a print run and coordinate finishing and delivery. The competency is best applied in the instant printing and copy shop business environment.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Troubleshoot and maintain operations of a digital print system	1.1.Errors in operation of the hardware and consumable components in the printing module of a digital printing system are identified and rectified 1.2.The source of errors related to the electronic data file, digital front end, workstation or industry software or hardware printing systems is located and rectified and/or technical assistance is coordinated according to manufacturer's specifications 1.3.Preventive maintenance is performed according to manufacturer's specifications to ensure digital print system functions at optimum productivity with minimum downtime and wastage 1.4.Incompatibilities between versions of hardware and software used in digital printing are identified and rectified
2. Liaise with clients	2.1.Print service and quality expectations are clearly communicated to a client according to enterprise procedures 2.2.Advice is provided to clients on how to set up electronic data files for digital printing according to enterprise procedures, manufacturer's specifications and digital print equipment capabilities 2.3.Advice is provided to clients on appropriate substrates and document finishing methods for digital printing jobs, according to the client's budget and job specifications
3. Perform basic electronic document impositions	3.1.Electronic file imposition using a range of industry software is completed according to job specifications 3.2.Document finishing requirements for an imposed digital print job are finalised with co-workers or external services, if required, according to equipment availability and enterprise procedures
4. Perform basic digital colour management	4.1.RGB, CMYK and PMS colour charts are outputted and differences between computer monitor colour and digitally printed colour are adjusted 4.2.Common problems of colour digital printing are rectified and communicated to clients according to job specifications
5. Access and verify electronic data files	5.1.A workstation computer and industry software are used to locate and retrieve electronic data files according to job specifications

ELEMENT	PERFORMANCE CRITERIA
	5.2. A digital front end processor is used to locate and retrieve electronic data files according to job specifications 5.3. Preview or pre-flight check of electronic data files is performed to verify correct job set up according to job specifications 5.4. Basic troubleshooting methods are applied to identify unverified data files, file errors and job requirement inconsistencies according to manufacturer's specifications
6. Submit data files to a digital print system	6.1. Job priority is determined according to job specifications and production schedules 6.2. Data files are submitted to print and image quality and machine productivity checks are performed
7. Produce digital proof and run print job	7.1. A proof run is conducted to confirm proof conforms to job specifications and/or for client approval, if required 7.2. A print run is conducted according to job specifications ensuring that machine productivity and quality are monitored and rectified throughout the duration of the print job
8. Coordinate and/or perform document finishing and client delivery	8.1. The steps required for document finishing if not performed on in-line finishing units are determined on a web or sheet-fed system according to enterprise procedures 8.2. Finished print work is packaged in a manner to prevent damage and to conform to delivery requirements according to job specifications

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- OHS in relation to operating machinery such as safely switching off machinery before cleaning is started
- communication of ideas and information by interpreting the job brief and providing advice to internal and external clients about options and limitations
- collecting, analysing and organising information by collecting and analysing data about printing process, machine specifications and performance to calculate appropriate adjustments for the job
- planning and organising activities by providing information about time and materials requirements for production scheduling
- teamwork when cooperating with other workers and coordinating the production unit to ensure efficient operation
- mathematical ideas and techniques by calculating electronic file memory requirements for print job management and scheduling
- problem-solving skills by defining whether printing or data processing faults minimise machine downtime and wastage
- use of technology by using software to construct electronic files for digital printing

Required knowledge

- troubleshooting and problem solving
- safety devices that need to be in place when working on the machine
- paper misfeed, how to access and clear it
- problems with front to back registration
- problems that can occur if substrate weight and machine specifications do not match
- problems that can occur downloading files from a digital front end and how can they be solved
- distinguishing between a problem with downloading from a digital front end and a problem with the printing module
- action if a digital front end loses communication with the printing module
- quality control
- precautions that can be taken to maintain fit, proportion and position of printed images
- ensuring that the machine has been calibrated to manufacturer's specifications
- what to do if image colour is not consistent
- ensuring that correct dimensions and measurements have been set up in the pre-press stage
- quality issues that can arise if improper substrate handling procedures are not

REQUIRED SKILLS AND KNOWLEDGE

- performed
- information sources
- machine manuals, safety and other documentation that are relevant to machine operation and maintenance and where are they kept
- finding information relating to industry software applications
- incorrect version of software or need an update, locating and acquiring this
- other sources of information can you identify
- job requirements and processing systems
- actions if vital information was missing from the job ticket (manual or electronic)
- checks to be undertaken prior to set up (availability of material, maintenance)
- file does not transfer correctly action should be taken to correct the problem
- data access and manipulation
- checks to be made to ensure the data is in a format that can be used in digital printing
- benefits of using electronic data rather than scanning hard copy
- ways to submit a PDF file to the digital printer
- communication and client interaction
- measure that can be taken to ensure clients have correct procedures for providing electronic files
- explaining to a client about differences in colour displayed on a computer monitor to printed output
- recommendations to a client who has created an electronic file in an incompatible software application
- estimating a turnaround time for a client with a tight deadline
- steps that would need to be followed for a client approval of the print
- proofing and adjustment
- circumstances where a job would be modified before printing
- why margins would be changed when the job reaches the printer
- what the proof checked against
- final approval for basic jobs
- adjusting colour, toner/ink coverage or density problems
- substrate transportation, delivery, in-line and on-line processes
- actions if the required substrate were unavailable
- maximum and minimum weight of substrate that can be printed on a specific machine
- maximum feeding and delivery quantities for the machine
- possible problems with incorrect feeding and delivery
- OHS procedures to be followed when setting up in-line processes
- in-line options are available on the machine
- on-line finishing options that are available on the machine
- document finishing and client delivery

REQUIRED SKILLS AND KNOWLEDGE

- various types of binding
- procedures that would be followed if the binding method required by the client was not available at your site
- options that could you suggested if the document size was too thick to staple?
- packaging of finished print work is important

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the ability to:

- produce electronic data files and manage digital workflows in the digital print production environment. Communicate clearly and professionally with clients. Design and implement efficient electronic workflows for a range of electronic file types. Access and verify data. Conduct a digital proof run. Produce and manage a digital print run. Manage and coordinate document finishing and delivery
- demonstrate use of computerised control and monitoring systems if available and appropriate
- demonstrate an ability to find and use information relevant to the task from a variety of information sources
- produce a flowchart that demonstrates FOUR examples of digital print workflows for digital printing (one basic document file, one variable data document file, one colour document file and one electronically imposed document file)
- create and print a document that provides information to clients on digital print services available and outlines correct methods for submitting electronic files to the services available
- electronically construct, digitally print and coordinate finishing for the following set of business stationery that has text and graphic elements:
 - four-colour A4 Letterhead, which includes static text and graphic elements and variable data name and address elements. Minimum variable components - 10
 - 100 four-colour business cards with crop marks. Maximum number of business cards to the maximum sheet size of the printer eg 20 cards on SRA3
 - four-colour 16-page A4 business proposal

EVIDENCE GUIDE	
	document, perfect bound with own choice of binding • four-colour 4-page advertising brochure using saddle stitch binding method printed on A4 or A3 substrate size • for valid and reliable assessment of this unit, evidence should be gathered over a period of time through a range of methods for assessment to indicate consistent performance • evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.
Context of and specific resources for assessment	Assessment must ensure: • assessment may take place on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment • a digital printing machine and digital front end.
Method of assessment	A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit: • direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • ICPSU201C Prepare, load and unload reels and cores on and off machine • ICPSU202C Prepare, load and unload product on and off machine • ICPSU208C Operate and monitor machines (basic) • ICPPR281C Set up and produce basic digital print • ICPPR383C Prepare for personalised digital printing.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.	
<i>Electronic data files</i> may include:	range of proprietary or non-proprietary data file formats compatible with a range of workstation computers and industry software.
<i>Manufacturer's specifications</i> may include:	technical, administrator and user specifications documented by a manufacturer for a range of printing machines.
<i>Enterprise procedures</i> may include:	may include rules, standards, OHS guidelines, communication protocols and behaviour codes of a range of workplace environments.
<i>Substrates</i> may include:	range of print media and paper.
<i>Inking systems</i> may include:	range of toners commonly used in 2-colour printing, including special colours.
<i>Machines</i> may include:	range of non-impact printing machines including inkjet and laser with or without colour manipulation capability, and including machines with computerised monitoring and/or control.
<i>In-line processes</i> may include:	minor in-line processes such as perforating, numbering, date coding and imposition that do not constitute another defined unit of competency. Major in-line process is defined as a separate competency eg flat-bed cutting, folding.
<i>Colour matching systems</i> may include:	use of visual colour assessment and matching under controlled lighting conditions.
<i>Design</i> may include:	simple graphics and text. Minor variation in registration position.
<i>User replaceable consumables</i> may include:	consumables required to be changed by an individual if damaged or reached expiry. Used by a range of printing machines for correct functioning such as ink, toner, developer, waste toner, cleaning web, fuser, substrates.
<i>User control interface</i> may	computerised monitoring and data entry

RANGE STATEMENT	
include:	device used to enter machine default settings, job specification settings, monitor machine status and perform machine productivity enhancements.
Registration mechanisms may include:	mechanical and/or electronic controls used to adjust substrate position throughout substrate feeding and transport units of a range of printing machines.
Calibration may include:	mechanical and/or electronic and/or visual controls used to identify and correct ink coverage and density inconsistencies in a range of printing equipment.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Printing
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Co-requisite units

Co-requisite units		