



Australian Government

ICPKNW313 Apply knowledge and requirements of the converting, binding and finishing sector

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 comprehend elements of processes, regulations, production costs and management systems.

It applies to individuals who work as a member of a team and may facilitate technical communication.

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

Unit Sector

Holistic knowledge

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. Apply knowledge of printing industry	1.1 Printing industry terminology and vocabulary are used correctly and accurately 1.2 New technology and new work processes are monitored and implemented when required 1.3 Trends within printing industry are monitored on an ongoing basis to inform personal work practices
2. Apply knowledge of government Acts and regulations	2.1 Basic principles and obligations involved in copyright, work health and safety (WHS), environmental protection, access and equity, and industrial awards are observed within workplace and in personal work practices

ELEMENT	PERFORMANCE CRITERIA
3. Apply detailed knowledge of pre-press processes	3.1 Basic principles behind pre-press functions such as image production (typesetting, scanning, graphic arts camera), image combining (manual and electronic), image output (film, plates, direct to press) and digital workflow are used in production processes 3.2 Appropriate use of different types of images (line, half-tone, digital) is investigated and used to determine job requirements 3.3 Different output settings (screen rulings, angles, shapes) and their effects on final printed product are described and used 3.4 Different types of output required for different media and printing processes are determined and used in production process 3.5 Different output devices (film setters, plate setters, analogue proofs, digital proofs) are identified, evaluated and built into production processes
4. Apply knowledge of printing processes	4.1 Basic principles of printing processes (lithography, relief, flexography, gravure, pad printing, screen printing, digital and electronic printing) are used to inform production processes 4.2 Understanding of types of jobs and products for which each process is appropriate is used to inform production decisions 4.3 Capabilities and limitations of each process are reviewed and used to inform production decisions
5. Apply knowledge of converting and finishing processes	5.1 Basic characteristics of converting and finishing processes (guillotining, flat-bed and rotary cutting, collating, folding, adhesive, mechanical and thermal fastening) are understood and used to inform production processes 5.2 Types of jobs and products for which each process is appropriate are assessed and used to inform production processes
6. Apply detailed knowledge of substrates	6.1 Relationship of different substrate sizes is used to inform production processes 6.2 Effects of different weights, callipers, bulk, density and opacity of substrates on pre-press, printing and finishing operations and end uses are researched and information used to inform production processes 6.3 Effects of paper grain on pre-press, printing and finishing operations are researched and information used to inform production processes 6.4 Impact of moisture content, porosity and ink absorbency on pre-press, printing and finishing operations is determined and used

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	to inform production processes 6.5 Effects of gloss, smoothness and surface strength on press, printing and finishing operations are determined and used to inform production processes 6.6 Effects of permanence, durability, and acidity and alkalinity of paper on pre-press, printing and finishing operations and end uses are determined and used to inform production processes 6.7 Bursting strength, folding endurance, tensile strength and tearing resistance are examined to determine effects on printing and finishing operations, end uses and production processes
7. Apply knowledge of converting and finishing requirements for pre-press and printing processes	7.1 Use and positioning of trimming and folding marks and how these are affected by different substrates are considered and used to inform production processes 7.2 Principles of effective quality management are considered and implemented where required during different jobs 7.3 Effects of different substrates on use and positioning of trimming and folding marks are researched to inform production processes 7.4 Criteria for producing folding impositions are identified and used to inform production processes 7.5 Procedures for determining appropriate packing techniques are accessed and used to inform production processes
8. Apply basic knowledge of costs of production	8.1 Main cost elements (fixed, capital, variable) in printing production are identified and used to inform converting and finishing decisions 8.2 Information required to accurately cost jobs and means of collecting it (manual and computerised) are applied to work practices 8.3 Ways of minimising use of materials without affecting quality of output are identified and used to inform converting and finishing processes 8.4 Ways of maximising efficiency of capital and human resources are identified and used to inform converting and finishing processes
9. Apply basic knowledge of production management requirements and systems	9.1 Types of information that need to be exchanged during different production stages to facilitate efficient production are used to inform personal work practice 9.2 Systems (manual and computerised) that can be used to

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	exchange information are selected and used in workplace 9.3 Basic principles of efficient production management are used to inform personal work practices

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	1.3	Researches and comprehends information in a range of text types from various sources
Oral Communication	1.1	Uses appropriate vocabulary, including technical language relevant to role and context
Numeracy	8.1, 8.2	- Uses estimation and other assessment skills to check the outcomes and decide on the appropriate accuracy for the outcomes - Interprets and analyses a range of mathematical information that is used in familiar and routine tasks - Represents the mathematical information in a form that is personally useful as an aid to problem solving
Navigate the world of work	1.2, 1.3, 2.1, 2.2	- Maintains knowledge of the printing industry required for current role - Complies with legislative requirements and follows organisational policies and procedures relevant to own role
Get the work done	1.2, 1.3, 2.1, 3.1-3.5, 4.1-4.3, 5.1, 5.2, 6.1-6.7, 7.1-7.3, 7.5, 8.2-8.4, 9.1-9.3	- Takes responsibility for planning and organising own workload using analytical processes to decide on a course of action - Plans, identifies and assembles resources required to complete tasks - Applies formal problem-solving processes when tackling an unfamiliar problem - Understands the purposes, specific functions and key features of common digital systems and tools, and operates them effectively

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICPKNW313 Apply knowledge and requirements of the converting, binding and finishing sector	ICPKN313C Apply knowledge and requirements of the converting, binding and finishing sector	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 ICPKNW313 Apply knowledge and requirements of the converting, binding and finishing sector

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Performance Evidence

Evidence of the ability to:

- use appropriate vocabulary and terminology in written and oral communications with tradespeople, colleagues, management or clients
- keep up to date with trends in the printing industry
- apply relevant legislative and workplace requirements when completing tasks
- determine image type, output settings, output requirements and output devices for different jobs
- apply the correct process for a converting or finishing job
- use a colour management system to determine colour requirements for a print job
- research appropriate substrates and inks for different print jobs
- accurately plan, cost and document a print job.

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:

- describe legislative and enterprise requirements that affect work practice
- describe the basic characteristics of the following converting and finishing processes:
 - guillotining
 - flat-bed and rotary cutting
 - collating
 - folding
 - adhesive
 - mechanical and thermal fastening
- describe the basic principles of the following printing processes:
 - lithography

- relief
- flexography
- gravure
- pad printing
- screen printing
- digital and electronic printing
- describe the range of substrates used for each printing process
- describe designs that are appropriate for different printing processes
- describe the basic principles behind the following pre-press functions:
 - image production (typesetting, scanning, graphic arts camera)
 - image combining (manual and electronic)
 - image output (film, plates, direct to press)
- describe the relationship between ranges of visual colour Red, Green, Blue (RGB) and Cyan, Magenta, Yellow, Key (black) (CMYK)
- explain the main cost elements in pre-press production
- explain the basic principles of efficient production management.

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 industry and include access to:

- special purpose tools, equipment and materials
- industry software packages.

Assessors must satisfy NVR/AQTF assessor requirements.

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