



**Australian Government**

# **ICPKNW311 Apply knowledge of the graphic pre-press sector**

**Release: 1**

## ICPKNW311 Apply knowledge of the graphic pre-press sector

### 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 work in or deal with individuals in the pre-press sector of the printing industry.

It applies to individuals who require a detailed technical knowledge of pre-press activities and a working knowledge of related areas. They should have skills to facilitate technical communication and be able to work as a member of a team.

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 understood and followed within workplace and in personal work practices
3. Apply detailed knowledge of pre-press processes	3.1 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 understood and applied 3.2 Different types of images (line, half-tone, digital) and their uses are assessed to identify most appropriate image for given job 3.3 Different output settings (screen rulings, angles, shapes), are researched and their effects on final product are evaluated 3.4 Different types of output required for different printing processes are researched and evaluated for different jobs 3.5 Different output devices (film setters, plate setters, analogue proofs, digital proofs) are researched and evaluated for different jobs
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 appraised to inform decisions made for different jobs 4.2 Types of jobs and products for each process are considered to ensure appropriate choices are made to meet client needs 4.3 Capabilities and limitations of each process are reviewed for different jobs
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 considered for

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	<p>different jobs</p> <p>5.2 Types of processes are appraised to inform decisions made for different jobs</p>
6. Apply knowledge of substrates and inks	<p>6.1 Range of substrates used for each printing process is researched and evaluated for different jobs</p> <p>6.2 Relationship of different paper sizes is considered for different jobs</p> <p>6.3 Effects of different weights and callipers of substrates on pre-press operations are researched for different jobs</p> <p>6.4 Effects of paper grain on pre-press, printing and finishing operations are researched for different jobs</p> <p>6.5 Effects of different properties of ink (drying properties, fastness, gloss) on pre-press operations are researched for different jobs</p>
7. Apply detailed knowledge of pre-press requirements for printing and finishing processes	<p>7.1 Designs that are appropriate for different printing processes are explored according to different jobs</p> <p>7.2 Dot gain and trapping requirements for different printing processes, inks and substrates are evaluated for different jobs</p> <p>7.3 Effects of different substrates on use and positioning of trimming and folding marks are evaluated for different jobs</p> <p>7.4 Criteria for evaluating suitability of pre-press outputs for printing processes are explored and implemented</p> <p>7.5 Criteria for producing folding impositions are evaluated for different jobs</p>
8. Apply knowledge of colour theory	<p>8.1 Colour theory of additive colours (light), Red, Green, Blue (RGB), is used to inform pre-press and/or design decisions</p> <p>8.2 Colour theory of subtractive colours (pigments), Cyan, Magenta, Yellow, Key (black) (CMYK), is used to inform pre-press and/or design decisions</p> <p>8.3 Relationship between ranges of visual colour RGB and CMYK is used to inform pre-press and/or design decisions</p> <p>8.4 Relationship between hue, greyness and substrate for tone and colour correction is used to inform pre-press and/or design decisions</p> <p>8.5 Colour matching conditions and colour matching systems are used to inform pre-press and/or design decisions</p> <p>8.6 Procedures that ensure effective colour management are</p>

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	implemented
9. Apply basic knowledge of costs of production	<p>9.1 Main cost elements (fixed, capital, variable) in pre-press production are considered during different jobs</p> <p>9.2 Information required to accurately cost jobs and means of collecting it (manual and computerised) are considered and implemented, where required, during different jobs</p> <p>9.3 Ways of minimising use of materials without affecting quality of output are considered and implemented during different jobs</p> <p>9.4 Ways of maximising efficiency of capital and human resources are considered and implemented during different jobs</p>
10. Apply basic knowledge of production management requirements and systems	<p>10.1 Types of information that need to be exchanged between different stages of production to facilitate production efficiency are identified and implementation strategies are developed</p> <p>10.2 Systems (manual and computerised) that can be used to exchange information are considered and implemented during different jobs</p> <p>10.3 Basic principles of efficient production management are applied during different jobs</p> <p>10.4 Principles of effective quality management are considered and implemented during different jobs</p>

## Foundation Skills

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

<b>Skill</b>	<b>Performance Criteria</b>	<b>Description</b>
Reading	1.3, 10.1	<ul style="list-style-type: none"> <li>Researches and comprehends information in a range of text types from various sources</li> </ul>
Oral Communication	1.1	<ul style="list-style-type: none"> <li>Uses appropriate vocabulary, including technical language relevant to role and context</li> </ul>
Numeracy	9.1, 9.2	<ul style="list-style-type: none"> <li>Uses estimation and other assessment skills to check the outcomes and decide on the appropriate accuracy for the outcomes</li> <li>Interprets and analyses a range of mathematical information that is used in familiar and routine tasks</li> <li>Represents the mathematical information in a form that is personally useful as an aid to problem solving</li> </ul>
Navigate the world of work	1.2, 1.3, 2.1, 8.6	<ul style="list-style-type: none"> <li>Maintains knowledge of the printing industry required for current role</li> <li>Complies with legislative requirements and follows organisational policies and procedures relevant to own role</li> </ul>
Get the work done	1.2, 1.3, 3.1-3.5, 4.1-4.3, 5.1, 5.2, 6.1-6.5, 7.1-7.5, 8.1-8.6, 9.2-9.4, 10.1-10.4	<ul style="list-style-type: none"> <li>Takes responsibility for planning and organising own workload using analytical processes to decide on a course of action, and assembles the resources required</li> <li>Recognises the potential of new approaches to enhance work practices and outcomes, and generates new ideas while regularly reviewing priorities and performance during implementation</li> <li>Monitors trends and identifies concepts, principles and features of approaches in use in other contexts, and redesigns these to suit own situation</li> <li>Applies formal problem-solving processes when tackling an unfamiliar problem</li> <li>Uses a range of digitally based technology and applications to access and filter data, and extract, organise, integrate and share relevant information in increasingly effective ways</li> </ul>

## Unit Mapping Information

<b>Code and title current version</b>	<b>Code and title previous version</b>	<b>Comments</b>	<b>Equivalence status</b>
ICPKNW311 Apply knowledge of the graphic pre-press sector	ICPKN311C Apply knowledge of the graphic pre-press sector	Updated to meet Standards for Training Packages	Equivalent unit

## Links

Companion volumes are available from the IBSA website:

[http://www.ibsa.org.au/companion\\_volumes](http://www.ibsa.org.au/companion_volumes) - [http://www.ibsa.org.au/companion\\_volumes](http://www.ibsa.org.au/companion_volumes)