



Australian Government

ICPPRP4300 Manage colour

Release: 1

ICPPRP4300 Manage colour

Modification History

Release	Comments
Release 1	This version first released with ICP Printing and Graphic Arts Training Package Version 4.0.

Application

This unit describes the skills and knowledge required to manage colour in pre-press operations to ensure proofs, monitors and final products match requirements.

It applies to individuals who work in the graphic pre-press sector of the printing and graphic arts industry. Individuals may also take responsibility for production flow and provide leadership and guidance to others with some limited responsibility for the output of others.

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

Unit Sector

Pre-Press

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. Identify colour requirements	1.1 Determine printing conditions to identify colour management requirements 1.2 Establish printer's requirements to guide provision and use of International Colour Consortium (ICC) colour profiles
2. Prepare test charts for press	2.1 Identify and select required test charts 2.2 Print test chart with enterprise standard ink densities on a range of standard and non-standard stock 2.3 Use colour measuring technology to examine printed test charts and generate colour profile for that press and stock

ELEMENT	PERFORMANCE CRITERIA
3. Calibrate digital proofing device	3.1 Linearize proofer for required stock 3.2 Produce digital test file 3.3 Print test file on a proofing device and on the type of press that will be used to obtain a proof for both film and direct-to-plate technologies 3.4 Measure results with a spectrophotometer 3.5 Use results to generate output profile that allows for dot gain, Grey Component Replacement (GCR), Under Colour Removal (UCR), total gradients and black values
4. Create different monitor profiles using colour tuning package	4.1 Set contrast and brightness 4.2 Apply Red, Green, Blue (RGB) and Cyan, Magenta, Yellow, Key/black (CMYK) and ICC profiles 4.3 View jobs on screen through required profiles
5. Calibrate scanner and digital camera	5.1 Load test chart 5.2 Calibrate scanner 5.3 Scan test chart and output digital proof 5.4 Use spectrophotometer to measure proof and generate and load ICC profile into scanning software 5.5 Set up standard lighting conditions according to colour management requirements 5.6 Photograph ICC target and output digital proof 5.7 Use spectrophotometer to measure proof and ICC profile as generated 5.8 Load ICC profile into digital camera software
6. Carry out maintenance	6.1 Check system according to enterprise requirements 6.2 Update system and fix an errors identified during checks according to enterprise requirements
7. Use colour profiles	7.1 Use selected profiles and confirm colour on monitors, proofs and final product match requirements 7.2 Use press fingerprint for final output in a controlled environment 7.3 Include colour wedges in all files and outputs

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

Skill	Description
Reading	Identifies and evaluates text to establish job requirements
Numeracy	- Uses technological devices to measure and record data and act on results - Determines numerical measurements of specialised equipment
Planning and Organising	Takes responsibility for planning and organising own workload and assembles required resources
Self-management	- Takes responsibility for addressing predictable, and some less predictable, problems in familiar work contexts - Identifies and addresses tasks that require proactive monitoring on a regular basis
Technology	- Analyses results from technical instruments and test samples to diagnose problems - Identifies purposes, specific functions and key features of complex digital systems and tools and analyses multiple sources of information

Unit Mapping Information

Supersedes and is equivalent to ICPPRP430 Manage colour.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICPPRP4300 Manage colour

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of the unit, including evidence of the ability to:

- produce a portfolio of three jobs that demonstrates that:
 - the final product printed was printed on various stocks and matches digital proofs on simulated stock
 - monitors were checked to confirm they have different loaded profiles that match the requirements of the portfolio jobs
 - enterprise colour management system maintenance procedures have been followed.

In the course of the above, the candidate must:

- demonstrate awareness of colour theory and proofing in pre-press process
- confirm colour in proofs, monitors and final products match.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- HS issues encountered during colour management for pre-press
- light, including:
 - measurements of light intensity and colour temperature
 - standard lighting conditions for matching colour
 - effects different lighting conditions have on using monitors, proofing and printing
- colour theory, including:
 - the difference between Red, Green, Blue (RGB) and Cyan, Magenta, Yellow, Key/black (CMYK) colour
 - Under Colour Removal (UCR) and Grey Component Replacement (GCR) theory and their respective effects on images
 - colour communication standards
 - common colour management problems and solutions

- colour measuring technology, including densitometers and spectrophotometers
- use of International Colour Consortium (ICC) profiles, including effect on output
- when an ICC profile is included in a Portable Document Format (PDF) file
- scanning theory, including:
 - factors that influence selection of highlight and shadow aim points
 - determination of grey balance requirements and why it is prior to the application of colour correction
 - factors that determine colour correction requirements
- printing processes, including:
 - ink densities and their application to stocks and different types of jobs
 - the effects different stocks and inks have on colour reproduction throughout the printing process
 - the effects of age and configuration of the press (eg. 2-colour vs. 4-colour) on colour reproduction
 - dot gain and its effect on colour
 - the impact of type of press and printing process on final output
 - strengths and limitations of different printing processes in colour reproduction
- sources of information about colour management.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the area of work.

This includes access to:

- densitometers and spectrophotometers
- scanner
- a digital camera
- digital proofing devices
- industry software packages.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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