Australian Government

Department of Education, Employment and Workplace Relations

CUVPHI530A Prepare digital images for pre-press processing

Release: 1

ISC INDUSTRY SKILLS COUNCILS
Creating Australia's Future

CUVPHI530A Prepare digital images for pre-press processing

Modification History

Version	Comments
CUVPHI530A	This version first released with *CUV11 Visual Arts, Craft and Design Training Package version 1.0*

Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to prepare client image files for pre-press processing.

This unit is based on CUVGRD301A Prepare files for publication and ICPPP430A Manage colour, and has been contextualised for application to the photo imaging industry.

Application of the Unit

This unit applies to the digital imaging industry where image files require processing before printing. It requires the self-directed application of skills and knowledge to prepare digital images for pre-press processing.

This work would usually be carried out independently although guidance would be available if required.

Licensing/Regulatory Information

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

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Element	Performance Criteria
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

1. Consult with pre-press bureau about formatting requirements	1.1 Source a *checklist for printing requirements* from *appropriate people* and follow throughout preparation process
	1.2 Obtain relevant specifications for *software* and image file formatting from appropriate people
	1.3 Ensure constraints of different printing processes and other diffusion techniques are understood
2. Prepare files for pre-press processing	2.1 Prepare image files using *appropriate pre-press processing techniques*
	2.2 Choose suitable test charts/targets and print to appropriate specifications for ink density and *stock* on a linearised proofer
	2.3 Calibrate digital proofing device to examine test charts and use results to generate colour profile
	2.4 Print test file on calibrated digital proofing device and use results to generate output profile for *press* and stock
	2.5 Proof sample image and confirm with client
	2.6 Optimise images and output image product to profile specifications using industry standards
	2.7 Save image files in *appropriate format* for pre-press processing and prepare invoice or account for client
	2.8 Pack completed images for electronic or physical dispatch with invoice or account and deliver to agreed location by appropriate methods within agreed timeframe
	2.9 Conclude and maintain management procedures
3. Wrap up and review print preparation	3.1 Catalogue and archive images appropriately
	3.2 Review response from client against final printed product
	3.3 Maintain contractual and financial records for business and taxation purposes
	3.4 Review personal performance within job context
	3.5 Identify future opportunities, work directions, equipment needs and workflow changes resulting from job

Required Skills and Knowledge

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

Required skills

- research skills to access information on colour theory and management as it applies to pre-press processing
- communication skills to:
    - collaborate and negotiate between client and printing bureau
    - discuss colour, its theory and management
- literacy skills to:
    - interpret a broad range of information on colour theory and management as it applies to pre-press processing
    - interpret material specifications necessary for pre-press processing
- numeracy skills to:
    - calculate layout requirements and material specifications for pre-press processing
    - compare a colour sampler reading
    - determine colour cast and neutrality from a colour sampler reading
    - identify and assign numeric values to colour as required by pre-press processing
    - read and evaluate out of gamut colours and total ink/black ink limits
    - understand numeric values and meaning against colour theory and how RGB, CMYK and LAB colour values are quantified
- planning and organising skills to plan integration of colour management into pre-press processing contexts
- problem-solving skills to identify and resolve common colour management problems in pre-press processing
- technology skills to use and calibrate scanning and digital proofing devices.

Required knowledge

- colour theory and management associated with pre-press processing
- copyright, moral rights, intellectual property and legislative issues associated with pre-press processing
- different printing and diffusion techniques and their constraints with respect to design
- environmental issues associated with pre-press processing
- equipment, tools and materials associated with pre-press processing
- organisational and OHS requirements associated with pre-press processing and computer usage.

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 CMYK, CMYK with spot colour channel and Duo/Tri/Quad tone image files that cause no pre-press processing problems • produce clipping paths (deep etched) to suit the needs of the image and client or job requirements • manage colour in pre-press processing to ensure test prints and final products match.

Context of and specific resources for assessment	Assessment must ensure:
	
	• access to:
	   • an environment where digital image files can be prepared for pre-press processing
	   • appropriate sources of information to research colour theory and management
	   • appropriate learning and assessment support when required
	• the use of culturally appropriate processes, and techniques appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.

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 • review of third-party reports from experienced practitioners • case studies to assess candidate's ability to manage colour in pre-press processing • direct observation of candidate preparing digital image files for print processing • problem-solving activities to assess candidate's critical thinking skills. Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g.

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	people with disabilities, and people who may have literacy or numeracy difficulties, such as speakers of languages other than English, remote communities and those with interrupted schooling).
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • CUVPHI521A Produce commercial photo images • CUVPHI523A Produce media photo images • CUVPHI525A Plan, capture and exploit visual art photo images • CUVPHI526A Produce technical photo images • CUVPHI527A Make illustrative images for publication and display • CUVPHI528A Plan, capture and exploit stock photo images.

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.

Checklist for printing requirements may include:	• dot gain and dot gain curves
	• inks and ink limits
	• metadata requirements
	• optimal screen frequency
	• PostScript colour management
	• profile – embedded or not
	• screen:
	   • angles
	   • half tone
	   • ruling
	   • stochastic
	• stock
	• transfer function.

Appropriate people may include:	• staff at pre-press trade houses and bureaux • staff within pre-press sections of printing companies.
Software may include:	• colour management software • computer-aided design and drafting (CADD) software • densitometry/spectrophotometry software • drawing and graphics software • page layout and page description software • profile creating software • scanner profiling software.

Appropriate pre-press processing techniques may include:	• generating output profiles that allow for:
	   • achromatic reproduction
	   • black generation
	   • black values
	   • dot gain
	   • total gradients
	   • under colour removal (UCR), under colour addition (UCA) or varying levels of grey component replacement (GCR), including skeleton black
	• printing appropriate test charts:
	   • 3- and 4-colour neutrals

	• CMYK colour scales
	• colour swatches
	• providing combined images in editable/adjustable formats
	• providing combined images in security enabled or locked formats
	• providing scans in appropriate resolution:
	   • low resolution FPO (for position only)
	   • high resolution
	   • saving colour in required formats
	• using appropriate digital proofing devices:
	   • densitometers
	   • spectrophotometers, including strip reader style devices
	• using appropriate ICC profiles
	• using templates correctly.

Stock may include:	• high-groundwood • newsprint • super calendared uncoated • uncoated.
Press may include:	• gravure • heatset offset • image setters • sheetfed offset • waterless sheetfed • web press offset (rollfed).

Appropriate format may include:	• bit depth
	• compression options
	• encoding
	• file format/extension:
	   • encapsulated postscript (EPS)
	   • portable document format (PDF)
	   • tagged image file format (TIFF)
	• PostScript level
	• resolution:
	   • dots per inch
	   • lines per inch
	   • pixels per inch
	   • sample points per inch
	   • spots per inch.

Unit Sector(s)

Visual communication – photo imaging