Australian Government

Department of Education, Employment and Workplace Relations

CUVPHI404A Enhance, manipulate and output photo images

Release: 1

ISC INDUSTRY SKILLS COUNCILS
Creating Australia's Future

CUVPHI404A Enhance, manipulate and output photo images

Modification History

Version	Comments
CUVPHI404A	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 apply techniques to image enhancement, manipulation, output and post-output processes. The manipulation and output processes are used to enhance and resolve the concept for the image.

Application of the Unit

People applying the skills and knowledge in this unit could be working in photo centres, specialised photo processing laboratories or in photography studios.
At this level, work may be independent or supervised depending on the work content.

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.*

Innovation and Business Skills Australia

Elements and Performance Criteria

1. Retrieve work prints or digital files	1.1 Clarify and confirm concept for *final image* in consultation with *relevant colleagues* as required
	1.2 Identify and select work prints or files that are consistent with concept or brief
2. Plan image output	2.1 Identify and confirm qualities and characteristics of the work prints or files suitable for *enhancement and manipulation*
	2.2 Resolve output strategies consistent with the purpose of the final image, including identification of constraints and requirement of specified image use
3. Prepare work environment for analog or digital work	3.1 Select *work environment* to meet requirements
	3.2 Care for work environment so that it remains clean and safe during the production of work
	3.3 Safely set up relevant *equipment* and prepare materials for the work
4. Enhance and manipulate the images	4.1 Select *techniques for image manipulation* and enhancement consistent with the concept, testing processes and purpose of the work
	4.2 Select appropriate *materials* and equipment
	4.3 Consider *screen-based issues* where appropriate
	4.4 Apply selected techniques to enhance and manipulate the images to resolve them ready for output, which includes resolving *output strategies*
5. Output images	5.1 Select appropriate materials and/or *equipment* for *output option*
	5.2 Safely output image by digital or analog means
6. Restore work environment and resources	6.1 Safely restore work area after use
	6.2 Minimise and clean up waste according to safety requirements
	6.3 Clean and maintain equipment according to manufacturer instructions
	6.4 Store equipment according to workplace procedures and ensure readiness for future use

Required Skills and Knowledge

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

Required skills

- literacy skills to interpret written instructions, safety procedures and technical data
- learning skills to experiment with a range of processing techniques
- numeracy skills to:
    - interpret technical charts and diagrams
    - calculate and measure materials required for image processing
- planning and organising skills to set up equipment in a logical sequence
- self-management skills to:
    - comply with OHS requirements
    - work within required time parameters
- technical skills to use equipment and materials to enhance photo images.

Required knowledge

- physical properties and capabilities of the equipment and materials used in photo imaging for image enhancement, manipulation and output
- characteristics of different materials under different treatments and the potential of these characteristics to achieve different effects
- elements and principles of design and how they may be used and adapted for image processing
- intellectual property issues and legislation associated with image enhancement, manipulation and output
- sustainability considerations associated with photo imaging materials and equipment used in images
- OHS procedures in relation to photo imaging work.

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: • output a body of images that demonstrates command of enhancement and manipulation techniques • apply knowledge of processes and options for the enhancement of photo images.
Context of and specific resources for assessment	Assessment must ensure access to: • relevant photo imaging materials, tools and equipment.
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 observation of the candidate using processing and outputting techniques • evaluation of photographs produced by the candidate • case studies and scenarios as a basis for discussion of issues and challenges that arise in the context of image production • review of portfolios of evidence • review of third-party reports from experienced practitioners. Assessment methods should closely reflect workplace demands (e.g. literacy) and the needs of particular groups (e.g. 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: • CUVPHI303A Process photo images to work-print and file stage.

Innovation and Business Skills Australia

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.

Final image may be for:	• advertising • medical and scientific report • personal expression and art • photo-documentary • political commentary • promotion • social commentary.
Relevant colleagues may include:	• client • supervisor • others working on the project.
Enhancement and manipulation techniques may include:	• adjusting density and contrast • adjusting levels and curves • correcting colour • digital tool box functions • dodging and burning • exploring different filters • masking, multiple printing, and multiple exposure • using a range of print developers • using liquid emulsions • using photo relevant menu.

Work environment may mean:	• darkroom equipped with film developing requirements, appropriate lighting and plumbing
	 • digital context equipped with:
	   • computer, scanner, printer or other output devices
	   • safely installed and managed electrical cabling
	   • storage for software.

Equipment may include:	• computer • electronic storage devices • imaging applications and software • output devices • relevant wet darkroom equipment • scanner.
Techniques for image	• digital techniques using a range of imaging applications,

manipulation may involve:	including Adobe Photoshop and features used by the photo imaging industry, such as:
	• batch processing
	• colour/contrast and density controls
	• conversion to colour files to black and white images
	• filters
	• image assembly from multiple originals
	• layers and channel operations
	• masking
	• text
	• unsharp masking
	• wet darkroom techniques:
	  • emulsion transfer and use of liquid emulsions
	  • general and local toning and bleaching
	  • high contrast techniques, including bas relief and tone-line
	  • image tone modification
	  • masking, multiple exposure, and multiple printing
	  • pseudo solarisation (sabattier effect)
	  • selective contrast control
	  • use of different print developers.

Materials may include:	• a range of film types for black and white, colour transparencies and colour negative imaging • a range of light-sensitive papers • relevant chemicals for wet darkroom film and paper development • storage folders and negative carriers.
Screen-based issues may relate to:	• aliasing • ambient light • colour calibration • colour management • colour space • pixelation • resolution • screen size • WYSIWYG (what you see is what you get).
Output strategies may involve:	• inks and pigments • metamerism • paper surfaces and types • type of printer • viewing conditions of output.

Output *equipment* may include:	• analog:
	  • contact printers
	  • enlargers
	  • enlarging easel
	  • timers
	  • wet processing apparatus
	• digital:
	  • dye sublimation
	  • emerging print technologies
	  • inkjet (desktop and large format)
	  • laser printers
	  • LED and CRT printers
	• other print technologies:
	  • cyanotype
	  • digigraphs and compugrams
	  • gravure
	  • photolithography
	  • screen printing.

Output options may be:	• digital print • file • film (colour transparency) • hybrid technology • photographic print, including black and white, and colour • web.

Unit Sector(s)

Visual communication – photo imaging