

<b>Title</b>	<b>Demonstrate knowledge of colour and its management for the print industry</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>20</b>

<b>Purpose</b>	People credited with this unit standard are able to: demonstrate knowledge of colour and how it is perceived, colour gamuts, spaces and ICC profiles; describe procedures for measuring colour for printing; and analyse the working environment for light and the viewing of colour.
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<b>Classification</b>	Printing > Digital Processes for Print
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<b>Available grade</b>	Achieved
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### Explanatory notes

- 1 Candidates must follow any applicable and recognised codes of practice, and documented workplace health, safety, and environmental procedures for personal, product, workplace health, safety, and environmental matters, and the obligations required under current law including the Health and Safety in Employment Act 1992, Privacy Act 1993, Copyright Act 1994, and their subsequent amendments.
- 2 Definitions  
*LAB* refers to the CIE LAB colour space (properly CIE L\*a\*b\*), capable of representing all possible colours. This uses three variables, a lightness, L\* (L-star) and colour values on a red-green axis (a\*) and a blue-yellow axis (b\*);  
*ICC* refers to the International Color Consortium, <http://www.color.org/>, an organisation dedicated to developing and implementing colour management throughout industry, and who was responsible for developing the 'ICC Profile' specification.

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### Outcomes and evidence requirements

#### Outcome1

Demonstrate knowledge of colour and how it is perceived.

#### Evidence requirements

- 1.1 Colour, as perceived by an observer, is described in terms of wavelengths of light, and the three types of cone cells in an observer's eyes.
- 1.2 Colour models are described in terms of their components.

Range must include but is not limited to – RGB (red, green and blue), CMYK (cyan, yellow, magenta, black), LAB.

1.3 Perception of colour in objects, as perceived by an observer, is described in terms of wavelengths of light reflected by the object.

1.4 Perception of colour from a monitor (display unit), as perceived by an observer, is described, in terms of emitted light and the RGB colour model.

1.5 Light sources are described in terms of colour temperatures.

Range must include but is not limited to – Kelvin scale.

1.6 Perception of colour in objects, as perceived by an observer, is described in terms of the colour temperature of the viewing light.

## **Outcome2**

Demonstrate knowledge of colour gamuts, spaces and ICC profiles.

### **Evidence requirements**

2.1 Colour gamuts and colour spaces are described in terms of the relationship between them.

2.2 Use of ICC profiles in a workplace is described in terms of their purpose.

## **Outcome 3**

Describe procedures for measuring colour for printing.

### **Evidence requirements**

3.1 Procedure for measuring monitor (display) colour is described in terms of transmitted light, analysed by a monitor optimiser.

3.2 Procedure for measuring colour on a substrate is described in terms of reflected light and colour value (chromaticity).

3.3 Procedure for measuring ambient light is described in terms of lux, candela and Kelvin.

## **Outcome 4**

Analyse the working environment for light and the viewing of colour.

### **Evidence requirements**

4.1 The current working environment for viewing colour is analysed in terms of ambient light.

Range electric light sources, sunlight.

- 4.2 Improvements which could be made to standardise the current working environment for viewing colour are identified and analysed.

<b>Replacement information</b>	This unit standard replaced unit standard 24514 and unit standard 24515.
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<b>Planned review date</b>	31 December 2017
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#### Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	19 September 2013	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0005
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

#### Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

#### Comments on this unit standard

Please contact [Competenz info@competenz.org.nz](mailto:Competenz info@competenz.org.nz) if you wish to suggest changes to the content of this unit standard.