



Australian Government

MSL974008 Capture and manage scientific images

Release: 1

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Modification History

Release 1. Supersedes and is equivalent to MSL974008A Capture and manage scientific images

Application

This unit of competency covers the ability to capture accurate and reproducible images of scientific (environmental, medical and technical) subjects using a scientific approach and workplace procedures/protocols to ensure the integrity of the image. It also includes the ability to generate and maintain pre- and post-image capture records to ensure that images can be reproduced.

This unit of competency is applicable to laboratory technicians in all industry sectors. Personnel who capture images as a substantial part of their job role, should consider accessing the following units of competency from the *CUA Creative Arts and Culture Training Package*:

- CUAPHI402 Apply photo imaging lighting techniques
- CUAPHI302 Capture photographic images
- CUAPHI401 Capture images in response to a brief
- CUAPHI303 Process photo images to work-print and file stage
- CUAPHI510 Produce technical photo images.

While no specific licensing or certification requirements apply to this unit at the time of publication, laboratory operations are governed by relevant legislation, regulations and/or external accreditation requirements. Local requirements should be checked.

Pre-requisite Unit

Nil

Competency Field

Testing

Unit Sector

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

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| 1 | Establish requirements for | 1.1 | Define requirements and purpose of the work and create a brief |
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| | image capture | 1.2 | Choose an imaging technique that maintains the integrity and veracity of the subject and fulfils the work requirements |
| | | 1.3 | Plan the work using technical knowledge to ensure an effective and efficient result |
| 2 | Plan and set up the shoot | 2.1 | Select and assemble the required equipment |
| | | 2.2 | Follow ethical and legal work practices at all times |
| | | 2.3 | Assess risks or hazards and implement safety procedures |
| | | 2.4 | Prepare the subject to achieve the brief |
| 3 | Capture and reproduce the required image | 3.1 | Expose media or film and accurately document the work in progress |
| | | 3.2 | Review the image against the work requirements and repeat if necessary |
| | | 3.3 | Reproduce the image to specification |
| 4 | Keep records and deliver images | 4.1 | Accurately and retrievably record the request, technical specifications and images so that they are retrievable |
| | | 4.2 | Store records safely and securely to archival standards |
| | | 4.3 | Follow copyright and crediting policies and procedures |
| | | 4.4 | Make the images available to the client, discuss the results and ensure that requirements have been met |

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Scientific imaging techniques

Scientific imaging techniques include one or more of:

- photographic (digital, transparencies and prints)
- video
- other non-visible light sources, such as ultraviolet (UV) light, fluorescence and phosphorescence
- direct transformation from images to data, such as reading of DNA sequencing gels
- X-ray and auto-radiations
- micrographs and electron micrographs

Scientific subjects

Scientific subjects include, but are not limited to, one or more of:

- building sites, environmental survey and monitoring sites
- accident or incident sites and injuries
- forensic evidence
- biological specimens
- histological sections
- live animals
- chromatography gels

Purpose of the image

Purpose of the image includes, but is not limited to, one or more of:

- publication as a thesis
- presentation on the web
- temporal serial recording of changes over time
- display as a poster, diorama, print or projection
- preview, snapshot or proof of an image for production at a later stage
- records of data for inclusion in databases
- use in forensic investigation or court proceedings

Ethical and legal work practices

Ethical and legal work practices include one or more of:

- industry codes of practice, contracts, permits, intellectual property (IP), crediting, plagiarism and copyright

- moral rights, model release, etiquette, decorum and sensitivity towards the subject, and confidentiality

Production of images

Production of images includes one or more of:

- sending images for processing
- processing the images
- use of commercial software

Storage of records

Storage of records includes one or more of:

- the brief, technical specifications and images
- file management (back-ups, data retrieval and storage)
- paper-based, electronic or digital

Safety procedures

Safety procedures include, but are not limited to, one or more of:

- recognising and observing hazard warnings and safety signs
- use of personal protective equipment (PPE), such as hard hats, hearing protection, gloves, safety glasses, goggles, face guards, coveralls, gowns, body suits, respirators and safety boots
- following required containment procedures through the use of appropriate equipment, such as biohazard containers, laminar flow cabinets, Class I, II and III biohazard cabinets and Class PCII, PCIII, and PCIV physical containment facilities
- use of material safety data sheets (MSDS)
- handling and storage of all hazardous materials and equipment in accordance with labelling, MSDS and manufacturer instructions
- following established manual handling procedures

Work health and safety (WHS) and environmental management requirements

WHS and environmental management requirements include:

- complying with WHS and environmental management requirements at all times, which may be imposed through state/territory or federal legislation. These requirements must not be compromised at any time
- applying standard precautions relating to the potentially hazardous nature of samples
- accessing and applying current industry understanding

of infection control issued by the National Health and Medical Research Council (NHMRC) and State and Territory Departments of Health, where relevant

Unit Mapping Information

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Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=5c63a03b-4a6b-4ae5-9560-1e3c5f462baa>