



Australian Government

POLFOR001 Apply specialised forensic science techniques

Release: 1

POLFOR001 Apply specialised forensic science techniques

Modification History

Release	Comments
1	This unit was released in POL Police Training Package release 1.0 and meets the Standards for Training Packages. This unit supersedes and is equivalent to PUAPOL806 Apply specialised forensic science techniques. • Content and formatting updated to comply with new standards • Unit recoded POL • New PC added to Element 2 and 3 • Three new PC added to Element 5 • PC 2.1, 2.5 and 3.3 revised • PC 2.2 and 2.3 merged • PC 6.4 and 6.5 merged • PC 4.4, 4.5, 4.6 and 4.7 removed

Application

This unit describes the skills required to apply specialised forensic techniques within crime scene investigations. This includes identifying, enhancing, recording and analysing evidence.

This unit applies to specialist police staff as part of the forensic investigation of crime or incident scenes.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to, particularly those related to continuity of evidence, forensic information management, work health and safety (WHS) and quality management.

Those undertaking this unit would be required to work autonomously and as part of a team. They would demonstrate the ability to critically analyse and evaluate crime scene related evidence to develop and test hypotheses. They would demonstrate knowledge of sciences as they apply to crime scene investigation. They would perform sophisticated tasks requiring strong adaptability across a broad range of unpredictable contexts.

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

Competency Field

Forensics

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Assess biological and non-biological evidence	1.1 Identify physical characteristics of biological evidence materials to determine their evidentiary value. 1.2 Identify physical characteristics of non-biological evidence materials to determine their evidentiary value.
2. Apply presumptive/confirmatory testing and enhancement techniques	2.1 Select advanced forensic techniques for the examination of trace/gross biological and non-biological evidence material. 2.2 Identify presumptive and/or confirmatory tests to determine sequence of forensic processing. 2.3 Conduct field based presumptive and/or confirmatory tests to determine the evidentiary value. 2.4 Select enhancement techniques and their sequence to maximise evidentiary value. 2.5 Conduct enhancement techniques to assist in location, recording, collection and interpretation of physical evidence.
3. Perform comparative analyses of physical evidence	3.1 Identify options for comparative analysis technique/s to maximise evidentiary value. 3.2 Select comparative analysis technique/s to maximise evidentiary value. 3.3 Conduct comparative analysis examinations to establish an opinion on inclusion/exclusion or insufficiency. 3.4 Verify examination results to substantiate the opinion on individualisation, inclusion/exclusion or insufficiency. 3.5 Record examination and results to substantiate the opinion.
4. Record examinations using forensic photography	4.1 Assess crime/incident scene to select photographic technique/s. 4.2 Apply photographic techniques in a methodical and sequential manner to record scene/incident/evidence. 4.3 Apply light theory to determine techniques for photographic recording of evidence. 4.4 Manage continuity of photographic images used for specialist examinations.
5. Examine evidence found	5.1 Assess human body to locate evidence.

on/associated with a human body	5.2 Select enhancement techniques and their sequence to locate, record and collect evidence. 5.3 Apply forensic techniques to record and collect evidence from human body. 5.4 Interpret the nature of wounds/injuries to inform the investigation. 5.5 Interpret characteristics of human body associated with death to inform the investigation. 5.6 Compare available information with examination of human body to verify or disprove information.
6. Evaluate results of scientific examinations	6.1 Review examination results for reliability and justification. 6.2 Evaluate significance of the evidence to form a conclusion or opinion within the context of the investigation. 6.3 Gather further information on evidence to validate conclusions/opinions. 6.4 Collate information related to the forensic investigation for reporting purposes.

Foundation Skills

The foundation skills demands of this unit have been mapped for alignment with the Australian Core Skills Framework (ACSF). The following tables outline the performance levels indicated for successful attainment of the unit.

ACSF levels indicative of performance:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Learning					Reading					Writing					Oral communication					Numeracy				

Performance variables:

1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
Support					Context					Text complexity					Task complexity				

Further information on ACSF and the foundation skills underpinning this unit can be found in the Foundation Skills Guide on the GSA website.

Unit Mapping Information

This unit supersedes and is equivalent to PUAPOL806 Apply specialised forensic science techniques.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=98c3984e-2cf1-48a8-8ed1-85e4b92e7351>

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Assessment Requirements for POLFOR001 Apply specialised forensic science techniques

Modification History

Release	Comments
1	These Assessment Requirements were released in POL Police Training Package release 1.0 and meet the Standards for Training Packages. • Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- assessing characteristics of biological and non-biological evidence
- identifying and applying advanced forensic techniques to examine evidence
- determining sequence of examinations
- identifying and applying enhancement techniques
- performing comparative analyses through the application of advanced forensic techniques
- recording information
- applying scientific methodology to support forensic analyses, logical thinking and problem solving within a crime/incident scene investigation
- demonstrating forensic photographic techniques to record results, including exposure, lighting, viewpoints and composition
- recording results in complex photographic situations, including macro, highly reflective or curved surfaces, low contrast and large scale low light circumstances, and multi-colour/multi contrast instances
- managing continuity of evidence
- using specialised forensic technology and equipment
- identifying, enhancing, recording, collecting and analysing evidence using various techniques
- gathering and collating information
- interpreting and evaluating information and opinions to inform the investigation

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- jurisdictional coronial and criminal legislation related to forensic investigation
- jurisdictional information management systems
- jurisdictional policies and procedures related to forensic investigations, including quality management systems, occupational/workplace health and safety, forensic photography and expert evidence
- fundamental principles of physics and how they are applied within a forensic environment (including mechanics and motion, forces, trajectory, electricity)
- fundamental principles of mathematics and how they are applied/calculated within a forensic environment (including trigonometry, triangulation)
- fundamental principles of chemistry (including behaviour of acids and bases, catalytic reactions)
- fundamental principles of biology (including molecular biology, cell structure function and replication, serology)
- human anatomy and physiology (including terminology, structural organisation, body systems, death processes and indicators)
- scientific methodology
- five stages of Disaster Victim Identification
- principles and definitions of comparative analysis (including pattern recognition, class and individual characteristics)
- advanced forensic techniques (including optical, physical and chemical enhancement)
- supporting scientific principles and operating principles of specialised forensic techniques
- limitations and sensitivity of presumptive/confirmatory tests
- illumination techniques (including visible, polarising, bright and dark field techniques)
- post-mortem medical process and procedures

Assessment Conditions

This unit contains no specific industry-mandated assessment conditions. Guidance on suggested and recommended conditions and methods can be found in the Implementation Guide.

This unit has been identified by industry as suitable for holistic assessment. Refer to advice in the Assessment Guide.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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