



Australian Government

POLINV019 Analyse crashes involving pedestrians and bicycles

Release: 1

POLINV019 Analyse crashes involving pedestrians and bicycles

Modification History

Release 1. This is the first release of this unit of competency in the POL Police Training Package.

Application

This unit describes the skills and knowledge required to apply crash analysis methodologies specific to pedestrian and bicycle crash incidents. It includes analysing evidence already collected by police crash investigators as part of the crash investigation.

This unit applies to those working as police officers involved in vehicle crash analysis.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are undertaken. Organisational policies and procedures must be consulted and adhered to, particularly those related to work health and safety (WHS).

Those undertaking this unit would work autonomously while remaining responsible for reporting to senior staff. They would demonstrate the ability to perform highly complex analysis in changing and often unfamiliar contexts.

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

Pre-requisite Unit

Not applicable.

Competency Field

Investigation.

Unit Sector

Not applicable.

Elements and Performance Criteria

ELEMENTS

Elements describe the essential outcomes.

PERFORMANCE CRITERIA

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

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|---|------------|--|
| 1 Examine features of a bicycle or pedestrian involved in crash incident | 1.1 | Identify bicycle parts for crash analysis |
| | 1.2 | Determine operational features of bicycle for crash analysis |
| | 1.3 | Assess bicycle rider safety equipment in crash incident to assess safety standard |
| | 1.4 | Identify pedestrian features to inform crash analysis |
| | 1.5 | Identify available sources of electronic data recordings to corroborate crash analysis |
| 2 Assess human and environmental factors in a pedestrian or bicycle crash incident | 2.1 | Assess medical and injury records to corroborate crash analysis |
| | 2.2 | Evaluate interviews and statements to corroborate evidentiary analysis and inform causal factors |
| | 2.3 | Interpret available electronic data to corroborate crash analysis |
| | 2.4 | Assess human action factors to determine effect on crash |
| | 2.5 | Assess environmental factors to determine effect on crash |
| 3 Apply specialist physics and mathematics to a pedestrian or bicycle crash | 3.1 | Identify and apply specialist analysis methodologies to pedestrian or bicycle crash analysis |
| | 3.2 | Analyse damage to correlate interaction of vehicles and pedestrians or bicycles |
| | 3.3 | Analyse human movement and interaction to sequence impacts and events during crash |
| | 3.4 | Examine road evidence to determine crash dynamics and speeds |

Foundation Skills

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

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Non-essential conditions may be found in the POL Police Training Package Companion Volume Implementation Guide.

Unit Mapping Information

This is a new unit. No equivalent unit.

Links

Companion Volume Implementation Guides can be found on VETNet - -

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

Assessment Requirements for POLINV019 Analyse crashes involving pedestrians and bicycles

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- analysing crashes involving bicycles
- analysing crashes involving pedestrians
- analysing human kinematics
- applying human evidence to a crash investigation
- applying specialist physics and mathematics calculations and principles relevant to pedestrian and bicycle crashes
- calculating speed and dynamics of vehicles
- collating and reviewing medical records of persons in a crash incident
- examining if human and environmental factors impact on crash incident
- inspecting and analysing bicycle and rider safety equipment features
- interpreting statements and interviews to corroborate analysis.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- bicycle faults and defects impacting operations
- crash analysis methodologies
- environmental factors that may contribute to a pedestrian or bicycle crash incident including:
 - geographic location
 - hazards and obstructions
 - lighting
 - road design, safety features and maintenance
 - roadside furniture
 - weather conditions
- factors impacting human ability to operate a bicycle including:
 - distraction
 - experience

- fatigue
- impairment
- medical conditions
- features of a pedestrian including:
 - age
 - distraction or impairment
 - height
 - physical mobility
 - weight
 - medical information
- interview evaluation techniques
- jurisdictional regulations of bicycle road use
- road laws
- medical reports and injury reporting
- operational features of bicycles including:
 - balance
 - bicycle helmets
 - control
 - motion
 - safety equipment
 - steering
- organisational policies and procedures related work health and safety (WHS)
- pedestrian location and road use
- physics and mathematical formulas specific to pedestrian and bicycle crash impacts
- road evidence
- sources of electronic data.

Assessment Conditions

Assessors must hold credentials specified within the Standards for Registered Training Organisations current at the time of assessment.

Assessment must satisfy the Principles of Assessment and Rules of Evidence and all regulatory requirements included within the Standards for Registered Training Organisations current at the time of assessment.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Assessment must occur in workplace operational situations. Where this is not appropriate, such as in situations that can affect safety or occur only rarely, assessment can occur in simulated workplace operational situations that reflect workplace conditions.

Resources for assessment must include access to:

- a range of relevant exercises, case studies and/or other simulations
- relevant and appropriate materials, tools, equipment and personal protective equipment (PPE) currently used in industry
- applicable documentation, including workplace procedures, regulations, codes of practice and operation manuals.

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