



Australian Government

POLINV041 Analyse crashes involving pedestrians and bicycles

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Modification History

Release	Comments
1	This unit of competency was first released in POL Police Training Package Release 10.0.

Application

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

This unit applies to those working as police employees involved in vehicle crash analysis involving pedestrians and bicycles.

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 or as part of a team while remaining responsible for reporting to senior staff. They would demonstrate the ability to perform analysis in a broad range of contexts.

Licensing/Regulatory Information

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

Pre-requisite unit(s)

No prerequisite units.

Competency field(s)

Investigation

Unit sector(s)

N/A

Elements and Performance Criteria

Elements	Performance criteria
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Elements describe the essential outcomes.		Performance criteria describe the performance needed to demonstrate achievement of the element.	
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 digital data recordings to determine factors contributing to crash incident.
2	Assess human and environmental factors in a pedestrian or bicycle crash incident	2 . 1	Assess medical records to analyse dynamics of persons involved in crash incident.
		2 . 2	Evaluate interviews and statements to determine factors contributing to crash incident.
		2 . 3	Analyse available digital data to corroborate crash analysis.
		2 . 4	Assess human factors to determine effect on crash.
		2 . 5	Assess environmental factors to determine effect on crash.
3	Apply physics and mathematics to a pedestrian or bicycle crash	3 . 1	Identify and apply analysis methodologies to determine causal factors in a pedestrian or bicycle crash.

		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.

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

Current Code and Title	Previous Code and Title	Comments	Equivalence
POLINV041 Analyse crashes involving pedestrians and bicycles	POLINV019 Analyse crashes involving pedestrians and bicycles	Changes include updates to: • Unit Code • Application • Element • Performance Criteria • Performance Evidence • Knowledge Evidence • Assessment Conditions	Not equivalent

Assessment Requirements for POLINV041 Analyse crashes involving pedestrians and bicycles

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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 physics and mathematical calculations and principles relevant to pedestrian and bicycle crashes
- calculating dynamics of vehicles
- assessing 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
- evaluating interviews and statements to determine factors contributing to a crash incident.

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
- bicycle and pedestrian 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
- human factors impacting ability to operate a bicycle including:
 - distraction
 - experience
 - fatigue
 - impairment
 - medical conditions
- features of a pedestrian including but not limited to:
 - age
 - distraction or impairment
 - height
 - physical mobility
 - weight
 - medical information
- applicable laws and legislation
- medical information and records
- operating features, standards and capabilities of bicycles including but not limited to:
 - balance
 - bicycle helmets
 - control
 - motion
 - safety equipment
 - steering
- legislation and organisational policies and procedures related to Work Health and Safety (WHS)
- pedestrian location and road use
- road evidence
- sources of digital data.

Assessment Conditions

Assessment must occur in operational workplace situations or, where this is not available, in simulated situations that replicate workplace conditions.

Assessors of this unit must satisfy relevant vocational education and training legislation, frameworks and/or standards.

Link

Companion volumes, including implementation guides, are found on the national training register - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=98c3984e-2cf1-48a8-8ed1-85e4b92e7351>.