



Australian Government

Department of Education, Employment and Workplace Relations

PUAOPE003B Navigate in urban and rural environments

Revision Number: 1

PUAOPE003B Navigate in urban and rural environments

Modification History

Not applicable.

Unit Descriptor

Unit Descriptor

This unit covers competency required to navigate in urban and rural environments and inland waterways.

Application of the Unit

Application of the Unit

The application of this unit in the workplace - the environments, complexities and situations involved - will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

This text will be useful for the purposes of job descriptions, recruitment advice or job analysis; where possible, it will not be too job specific to allow other industries to import it into other Training Packages, where feasible.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite Unit/s

Nil

Employability Skills Information

Employability Skills

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a Unit of Competency.

Performance Criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the Required Skills and Knowledge and/or the Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Determine current location, destination and resources	1.1 Incident and/or task location/requirements are obtained 1.2 Relevant maps and navigation equipment are gathered and checked 1.3 Cartographic information and navigation techniques are applied to plot positions on a map, and determine current location and destination within accepted tolerances
2. Determine and plan a safe route	2.1 Navigation records are prepared according to organisation's practices 2.2 Cartographic information, navigation techniques, local and environmental conditions are interpreted to determine and plan a safe and timely route 2.3 Potential access restrictions which may limit thoroughfare are identified and arrangements made to gain access in accordance with organisation's policies and practices and regulatory requirements
3. Navigate to destination	3.1 Record of proposed route and navigation aids are used to maintain compliance with planned route 3.2 Driver is directed to follow indicated route as required 3.3 Current location is regularly verified within accepted tolerances 3.4 Route is modified to address prevailing conditions and, if required, alternate strategies are initiated 3.5 Lost en-route procedures are implemented if required 3.6 Unanticipated access difficulties are reported in accordance with organisation's policies and procedures 3.7 En-route and arrival reporting information is communicated in accordance with organisation's policies and procedures
4. Complete post navigational activities	4.1 Navigation or nominated reports are completed in accordance with organisation's policies and procedures 4.2 Navigational equipment is recovered, reset, updated and serviced according to operational

ELEMENT**PERFORMANCE CRITERIA**

standards and manufacturer's specifications

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This describes the essential skills and knowledge and their level, required for this unit.

Required Skills

- identifying natural and cultural features for transport modes
- problem solving
- using navigation aids
- verbal communication

Required Knowledge

- cartographic symbols and legends
- grid/magnetic conversion
- map and chart types
- methods for determining current location
- route planning techniques and calculations

Evidence Guide

EVIDENCE GUIDE

EVIDENCE GUIDE

Critical aspects for assessment and evidence required to demonstrate competency in this unit

It is essential for this unit that competence be demonstrated in practical plotting of a navigation route maintaining accuracy within accepted tolerances when following a route, and in demonstrated ability to maintain positional awareness. Evidence should also be sought concerning the ability to effectively react to changes in the operating environment necessitating re-planning of course

Consistency in performance

Evidence should be gathered over a period of time in a range of actual or simulated workplace environments

Context of and specific resources for assessment

Context of assessment

A real life incident, exercise or simulation or series of tasks are required to demonstrate competence in this unit

Urban or rural navigation

Navigation with electronic aids

Specific resources for assessment

Access to equipment used in operational navigation is essential

Guidance information for assessment

Information that will assist or guide assessment will be written during Phase II of the Review of the PUA00 Public Safety Training Package.

Range Statement

RANGE STATEMENT

The Range Statement relates to the Unit of Competency as a whole. It allows for different work environments and situations that may affect performance. ***Bold italicised*** wording in the Performance Criteria is detailed below.

Use of maps may include

- defining or plotting incident location
- delineation of search areas
- planning access and egress routes
- plotting of areas subject to hazard impact such as flood inundation
- plotting and calculation of areas of fire damage

Navigational maps may include

- street directories
- topographic maps
- aerial photographs
- local authority maps
- navigational charts
- cadastral maps
- orthophoto maps
- satellite imagery

Map features include

- date of map
- legend
- contours
- scale
- north Point
- grid references
- latitude and longitude
- magnetic variation
- contour intervals
- datum information
- northings and eastings
- hill shading
- vegetation types
- cultural information

RANGE STATEMENT**Navigational equipment may include**

transport routes
protractors
scale rules
global positioning systems (GPS)
geographical information systems (GIS)
magnetic compasses
planimeters
romers
area plotters
watch/stopwatch
communications equipment
computers
writing equipment

Incident and task information may include

search operation
data gathering
establishing radii
areas of probability
plotting fire fronts
flood height predictions
rates of fireline constructions

Communication may include

verbal instructions
radio system
intercom system
hand signals
written instructions
en-route and arrival information

Navigation techniques may include

resection and triangulation
plotting
route-time calculations
magnetic conversions
grid and latitude/longitude conversions

RANGE STATEMENT

	bearings and back bearings
Potential access restrictions may include	military areas Aboriginal and Torres Strait Islander sacred sites other areas of cultural significance seasonal factors wilderness areas hazardous areas other areas requiring permission and/or authorisation to enter agency and regulatory requirements
Environmental conditions may include	flood or fire road conditions including vehicle height and/or width clearance requirements time of day need to match transportation mode to terrain atmospheric conditions hazardous materials storm damage
Accepted tolerance may include	relating the margin of error allowable as determined by the nature of the task/incident terrain prevailing weather and environmental conditions
Cartographic may include	the interpretation of cartographic symbology including contour lines scale magnetic variation information
Organisational arrival procedures may include	confirmation of timely safe arrival appropriate to the incident/task
Alternate route strategies may include	lost procedures dispatch of additional teams use of additional/alternate vehicles
Reporting requirements may include	pre-departure briefing

RANGE STATEMENT

input to debriefs
completion of logs
sitreps
journal records
assessment of safety procedures utilised

Unit Sector(s)

Not applicable.

Corequisite Unit/s

Co-requisite Unit/s	Nil
----------------------------	-----