



Australian Government

AHCECR307 Read and interpret maps

Release: 1

AHCECR307 Read and interpret maps

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to read and interpret road and topographical maps for navigation or positioning and plotting purposes.

The unit applies to individuals who work under broad direction and take responsibility for their own work. They use discretion and judgement in the selection, allocation and use of available resources and for solving problems.

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

Pre-requisite Unit

Nil

Unit Sector

Ecological Restoration (ECR)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Plan a route using a map	1.1 Select maps, equipment and navigation aids and check for accuracy, currency and operational effectiveness for intended use 1.2 Identify relevant symbols, information and navigation on map 1.3 Identify and locate current position in the field on map using geographical features 1.4 Identify and locate required destination on map 1.5 Assess and select route to destination using map data

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	1.6 Plan a safe route to destination 1.7 Measure and estimate distance to destination using map scale for selected route
2. Navigate using a map	2.1 Navigate and traverse a route according to plan 2.2 Orient the map or plan to surroundings and planned route 2.3 Use navigation aids to assist progress according to manufacturer instructions 2.4 Plan and navigate alternative routes to avoid inefficient route progress
3. Plot sites and locations using maps and Global Positioning System (GPS)	3.1 Identify and locate point on map using landmarks and key geographical features 3.2 Use GPS in conjunction with paper maps and charts according to workplace procedures 3.3 Adjust GPS settings to required datum and measurement units 3.4 Use GPS data to precisely record locations 3.5 Document navigation activity

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Read and interpret symbols and features on maps to assist in navigating routes
Numeracy	Perform mathematical calculations to interpret map spatial measurements and determine navigation routes and distances

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCECR307 Read and interpret maps	AHCNAR307 Read and interpret maps	Changed unit code to reflect new unit sector Minor changes to Performance Criteria for clarity Added Performance Criteria to clarify GPS use Removed reference to Core Skills for Work from Foundation Skills Updated Performance Evidence, Knowledge Evidence and Assessment Conditions	Equivalent

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCECR307 Read and interpret maps

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that, on at least one occasion, the individual has read and interpreted maps, including:

- identified, selected and checked maps and equipment suitable for the navigation activity
- interpreted map data, symbols, lines and features on maps to identify locations
- assessed and selected routes to a location using a map
- navigated and traversed a route of at least 2km using maps and navigational aids
- identified current position by comparing nearby geographic features on maps, and recorded details with datum in coordinate system
- identified impediments to efficient navigation, and planned alternative routes
- interpreted map scale and estimated route distances
- marked location points on a map using map geographical features
- transferred information between Global Positioning System (GPS) and paper maps/charts, including:
 - adjusted GPS settings to required datum and measurement units
 - used GPS data to precisely record locations
 - entered point data from map/chart to GPS
- documented navigation activity.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- principles and practices of maps and map reading
- types of maps and their use
- symbols and representations of topographical and geographical information used on maps, including:

- date of information
- common scales used on maps, and their purpose
- datums
- geographic coordinate system
- horizontal and vertical datum and production information dates
- features and use of common navigational aids, including:
 - map distance meter (analogue and digital)
 - compasses and dividers
 - rulers and protractors
- operation and functions of GPS navigation equipment
- transferring geographic information between paper maps and charts, and GPS systems
- advantages and disadvantages of different map and chart types, and sources of error
- techniques for determining routes and estimating distances.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an outdoor setting suitable for map reading and navigational purposes or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - maps and navigational charts
 - navigational aids for map reading
 - GPS
- specifications:
 - manufacturer instructions for navigation aids.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>