



Australian Government

AHCNRM513 Manipulate and analyse data within geographic information systems

Release: 1

AHCNRM513 Manipulate and analyse data within geographic information systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Release 11.0.

Application

This unit of competency describes the skills and knowledge required to extract, compare and manipulate data within a geographic information system (GIS).

The unit applies to individuals who apply specialised skills and knowledge to manipulate and analyse data within a range of geographic information systems. They take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

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

Pre-requisite Unit

Nil

Unit Sector

Natural Resource Management (NRM)

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Develop procedures for manipulation and analysis of data	1.1 Specify desired data format based on job requirements 1.2 Specify parameters for the manipulation of data sets 1.3 Document procedures and rationale for the manipulation and analysis of data

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
2. Establish models required to provide outcome	2.1 Evaluate applicability of existing tools, models, theories, applications and solutions 2.2 Specify parameters, equations and assumptions 2.3 Establish models required to achieve desired outcome
3. Analyse data	3.1 Specify steps to be undertaken and computer operating systems and applications to be used to analyse and manipulate data 3.2 Consider restricting factors when selecting techniques for analysis 3.3 Isolate and retrieve data from its source 3.4 Interrogate data to ensure reliability 3.5 Prepare data for presentation

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
Writing	Use clear language, accurate industry terminology and logical structure to document procedures and prepare data for presentation
Numeracy	Record, calculate and interpret data, and present data using graphs and charts

Unit Mapping Information

Code and title current release	Code and title previous release	Comments	Equivalence status
AHCNRM513 Manipulate and analyse data within geographic information systems	AHCNRM507 Manipulate and analyse data within geographic information systems	Minor changes to application Minor changes to elements and performance criteria	Equivalent

		Foundation skills added Assessment requirements updated	
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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 AHCNRM513 Manipulate and analyse data within geographic information systems

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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 the individual has extracted, compared and manipulated data within geographic information systems (GIS) on at least two occasions, and has:

- developed and documented suitable procedures for data collection, manipulation and analysis
- used or created appropriate models
- used operating systems and computer applications for data analysis and report writing, according to workplace requirements
- prepared data presentations in required format.

Knowledge Evidence

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

- database structures
- scripting and commands
- line instructions and programming
- operating systems used by workplace for data analysis and storage, including:
 - UNIX
 - DOS
 - Windows
 - NT
- range of tools, models, theories, applications and solutions
- data analysis and manipulation techniques
- data reporting and presentation formats.

Assessment Conditions

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

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - GIS data
 - hardware and software applicable to GIS systems
- time frames:
 - according to job requirements.

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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