Australian Government

LGAPLEM508A Manipulate and analyse data within geographic information systems

INDUSTRY
SKILLS
COUNCILS
Creating Australia's Future

LGAPLEM508A Manipulate and analyse data within geographic information systems

Modification History

LGAPLEM508A Release 2:   Layout adjusted.
LGAPLEM508A Release 1:   Primary release.

Unit Descriptor

This unit relates to extracting, comparing and manipulating data in response to customer requests.

Application of the Unit

This unit supports the attainment of skills and knowledge required for competent workplace performance in councils of all sizes. Knowledge of the legislation and regulations within which councils must operate is essential. The unique nature of councils, as a tier of government directed by elected members and reflecting the needs of local communities, must be appropriately reflected.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

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 Range Statement. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Develop procedures for manipulation and analysis of data	1.1 Desired data format is specified and based on job requirements.
	1.2 Parameters are specified for manipulation of the data sets.
	1.3 New procedures are documented clearly explaining the procedure and rationale for development.
2 Establish models required to provide outcome	2.1 Applicability of existing tools, models, theories, applications and solutions is evaluated.
	2.2 Feasible parameters, equations and assumptions are specified.
	2.3 Models required to provide specified outcome are established.
3 Analyse data	3.1 Steps to be undertaken to analyse and manipulate data are specified.
	3.2 ***Source data limitations*** and other restricting ***factors*** are taken into account when selecting techniques for analysis.
	3.3 Data is isolated and retrieved from its source.
	3.4 Data is interrogated to ensure reliability.
	3.5 Data is prepared for presentation media.

Required Skills and Knowledge

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

Required Skills

- analysing options
- using tools within software to manipulate data
- reading external data sets into data model

Required Knowledge

- database structures
- scripting and commands
- line instructions and programming
- operating systems:
- range of tools, models, theories, applications and solutions
- data analysis and manipulation techniques.
- UNIX
- DOS
- Windows
- NT

Evidence Guide

Overview of assessment requirements	A person who demonstrates competency in this unit will be able to perform the outcomes described in the Elements to the required performance level detailed in the Performance Criteria. The knowledge and skill requirements described in the Range Statement must also be demonstrated. For example, knowledge of the legislative framework and safe work practices that underpin the performance of the unit are also required to be demonstrated.
Critical aspects of evidence to be considered	Suitable procedures are developed. New procedures are documented. Appropriate models are used and/or created.
Context of assessment	On the job or in a simulated work environment.
Method of assessment	The following assessment methods are suggested: - observation of the learner performing a range of workplace tasks over sufficient time to demonstrate handling of a range of contingencies - written and/or oral questioning to assess knowledge and understanding - completion of workplace documentation - third-party reports from experienced practitioners - completion of self-paced learning materials including personal reflection and feedback from trainer, coach or supervisor
Evidence required for demonstration of consistent performance	Evidence will need to be gathered over time across a range of variables.
Resource implications	Access to geographic information systems databases and operating systems.

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.

Source data limitations may include:	• currency • structure • accuracy • source of data
Factors may include:	• time • command line operation • menu drivers options

Unit Sector(s)

Planning

Government Skills Australia