



Australian Government

CPPSIS5060A Use complex spreadsheets for spatial information

Release 1

CPPSIS5060A Use complex spreadsheets for spatial information

Modification History

Version	Comment
1	This version first released with CPP07 Property Services Training Package Version 12.

Unit Descriptor

This unit of competency specifies the outcomes required to use spreadsheet software to complete spatial tasks using complex spatial data. The skills and knowledge required in this unit focus on creating complex spreadsheets to store and retrieve spatial data.

Application of the Unit

This unit of competency supports the application of planning, organising, problem-solving, error analysis and accuracy; designing and interpreting technical documentation; and a practical understanding of technology. Those undertaking the unit may work in an administrative support role in an enterprise, or may work independently in designing and working with spreadsheets.

Licensing/Regulatory Information

No licensing, legislative and regulatory requirements apply to this unit at the time of endorsement.

Pre-Requisites

Nil

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 required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

- | | | |
|---|---|--|
| 1 | Prepare the task. | <p>1.1 Personal work environment is organised in line with <i>ergonomic requirements</i>.</p> <p>1.2 <i>End users, clients</i> or colleagues are consulted to clarify mathematical formulas, task requirements and spreadsheet specification requirements, which may involve trigonometrical functions.</p> <p>1.3 Organisational and task requirements for spatial data entry, storage, output, reporting and presentation are identified.</p> <p>1.4 <i>Work organisation strategies</i> and <i>energy and resource conservation techniques</i> are applied when planning work activities.</p> |
| 2 | Evaluate and standardise spreadsheet operation. | <p>2.1 Tasks are evaluated to identify where automation would increase efficiency.</p> <p>2.2 <i>Templates</i> are developed and edited to ensure consistency of design and layout for forms and reports according to organisational requirements.</p> |
| 3 | Develop a linked worksheet solution. | <p>3.1 <i>Spreadsheet design</i> software <i>functions</i> and <i>formulas</i> are used to meet identified requirements.</p> <p>3.2 Worksheets are linked according to software procedures.</p> <p>3.3 Worksheets are formatted in a manner that incorporates cells and data attributes, as well as angles and <i>graphs</i> with labels and titles.</p> |

- 3.4 Formulas are tested to confirm that output meets task requirements.
- 4 Use spreadsheets.
 - 4.1 Data is entered, checked and amended according to task and organisational requirements.
 - 4.2 Data is imported and exported between compatible spreadsheets and host documents are adjusted according to software and systems procedures.
 - 4.3 Manuals, user documentation and online help are used to overcome problems with spreadsheet design and production.
 - 4.4 Spreadsheets are previewed, adjusted and printed according to organisational and task requirements.
 - 4.5 **Spreadsheets are named and stored** according to organisational requirements and the application is exited without data loss or damage.
 - 4.6 Completed spreadsheet is protected to prevent accidental corruption.
 - 4.7 Graphs are saved, viewed and printed.
- 5 Finalise the task.
 - 5.1 Completed spreadsheets are archived according to project specifications.
 - 5.2 Required documentation is completed according to organisational guidelines.
 - 5.3 Relevant personnel are informed of the results according to organisational guidelines.

Required Skills and Knowledge

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

Required skills

- communication skills to:
 - consult effectively with relevant personnel
 - impart knowledge and ideas through oral, written and visual means
- initiative and enterprise skills to:
 - apply logic to interpret and analyse spatial tasks
 - interpret project requirements
- literacy skills to:
 - evaluate the purposes and uses of various features of spreadsheets
 - use a variety of strategies for planning and reviewing own work
- numeracy skills to:
 - apply trigonometrical functions when using spreadsheets
 - collate and present data, graphs and related references
 - solve spatial and surveying computations
- planning and organising skills to:
 - plan and prioritise activities to meet contractual requirements
 - conduct project activity
 - manage information
- proofreading and editing skills to check for accuracy and consistency of information, consulting additional resources where required
- technology skills to use computers for spreadsheet operations

Required knowledge

- advanced functions of spreadsheet software applications
- display principles, including:
 - colour
 - composition
 - font type
 - legends
 - media
 - scale
 - size
 - text and line style
- database structures, including the relationship of spatial features of database
- formatting and design of spreadsheets and their impact on the presentation and readability of data
- surveying and spatial information services (SSIS) reference systems

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, the range statement and the Assessment Guidelines for this Training Package.

Overview of assessment This unit of competency could be assessed on its own or in combination with other units relevant to the job function.

Critical aspects for assessment and evidence required to demonstrate competency in this unit A person who demonstrates competency in this unit must be able to provide evidence of:

- developing spreadsheets using complex mathematical formulas involving trigonometrical functions
- developing graphical representation of data contained in spreadsheets
- knowledge of spreadsheet software application.

Specific resources for assessment Resource implications for assessment include access to:

- assessment instruments, including personal planner and assessment record book
- assignment instructions, work plans and schedules, policy documents and duty statements
- registered training provider of assessment services
- relevant GIS data
- relevant guidelines, regulations and codes of practice
- suitable venue and equipment.

Access must be provided to appropriate learning and assessment support when required.
Where applicable, physical resources should include equipment modified for people with disabilities.

Context of assessment Holistic: based on the performance criteria, evidence guide, range statement, and required skills and knowledge.

Method of assessment Demonstrated over a period of time and observed by the assessor (or assessment team working together to conduct the assessment). Demonstrated competency in a range of situations, which may include customer/workplace interruptions and involvement in related activities normally experienced in the workplace. Obtained by observing activities in the field and reviewing induction information. If this is not practicable, observation in realistic simulated environments may be substituted.

Guidance information for assessment Assessment requires that the clients' objectives and industry expectations are met. If the clients' objectives are narrowly defined or not representative of industry needs, it may be necessary to refer to portfolio case studies of a variety of SIS

requirements to assess competency.

Oral questioning or written assessment and hypothetical situations (scenarios) may be used to assess underpinning knowledge (in assessment situations where the candidate is offered a preference between oral questioning or written assessment, questions are to be identical).

Supplementary evidence may be obtained from relevant authenticated correspondence from existing supervisors, team leaders or specialist training staff.

All practical demonstration must adhere to the safety and environmental regulations relevant to each State or Territory.

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. Add any essential operating conditions that may be present with training and assessment depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts.

Ergonomic requirements may include:

- avoiding radiation from computer screens
- chair height, seat and back adjustments
- document holder
- footrest
- keyboard and mouse position
- lighting
- noise minimisation
- posture
- screen position
- workstation height and layout
- measurements and dimensions for objects and space
- relevant statutory requirements
- scope for making adjustments.

End users may include:

- elected members
- general public
- land information authorities
- local government
- real estate agents
- residents
- state and federal government departments
- statutory bodies, including land titles office
- transport companies

- utilities.

- Clients** may include:
- customers with routine or special requests
 - external to organisation
 - internal to organisation
 - regular and new customers, including:
 - business enterprises
 - government agencies
 - members of the public
 - suppliers.
- Work organisation strategies** may include:
- exercise breaks
 - mix of repetitive and other activities
 - rest periods.
- Energy and resource conservation techniques** may include:
- paper use, including:
 - double-sided printing
 - re-using paper for rough drafts, while observing confidentiality requirements
 - shredding paper
 - recycling resources
 - using power-save options for equipment.
- Templates** may include:
- font types and sizes
 - forms
 - headers and footers
 - headings
 - page formats
 - reports.
- Spreadsheet design** may include:
- analysis of data
 - appropriateness
 - avoiding blank rows and columns
 - cell protection
 - embedding cell references in formulas
 - formulas, including linked formulas
 - formatting and reformatting
 - functions
 - headers and footers
 - headings and labels
 - identification and parameters
 - import and export of data
 - multi-page documents
 - pivot tables
 - relative and absolute cell references
 - split screen operation
 - use of colour.

- Functions** may include:
- date
 - logical:
 - choose
 - conditions
 - if
 - lookup
 - true/false
 - mathematical:
 - absolute
 - integer
 - round
 - square root
 - value
 - simple nested
 - statistical:
 - count
 - standard deviation
 - maximum
 - minimum
 - time
 - trigonometrical.

- Formulas** may include:
- addition
 - average
 - comparison
 - complex formula using trigonometrical functions
 - division
 - exponentiation
 - multiplication
 - percentage
 - subtraction
 - combinations of the above.

- Graphs** may include:
- bar
 - line
 - pie
 - scatter
 - stack
 - 3-D.

- Naming and storing of spreadsheets** may include:
- authorised access
 - file naming conventions
 - filing locations

- organisational policy for backing up files
- organisational policy for filing hard copies of spreadsheets
- security
- storage in folders and sub-folders
- storage on:
 - disk drives
 - tape back-up
 - server.

Unit Sector(s)

Surveying and spatial information services

Custom Content Section

Not applicable.