



Australian Government

Department of Education, Employment and Workplace Relations

PSPSCI501A Provide high-level scientific technical support

Revision Number: 3

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Modification History

Release	TP Version	Comments
3	PSP12V1	Unit descriptor edited.
2	PSP04V4.2.	Layout adjusted. No changes to content.
1	PSP04V4.1	Primary release.

Unit Descriptor

This unit covers the provision of high-level technical support at an experienced, unsupervised level with responsibility in a defined technical area for experimental, survey, sampling and/or analytical functions. It includes determining and organising high-level technical duties, obtaining and recording information, and assessing and reporting data.

In practice, the provision of high-level scientific technical support overlaps with other generalist or specialist work activities such as acting ethically, providing leadership, coordinating resources, gathering and analysing information, working safely.

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

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements are the essential outcomes of the unit of competency. Together, performance criteria specify the requirements for competent performance. Text in ***bold italics*** is explained in the Range Statement following.

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

1. Determine and organise high-level technical duties

- 1.1 Outputs for defined technical area are confirmed and ***technical duties*** and responsibilities are determined in accordance with organisational requirements.
- 1.2 ***Processes, resources***, timelines and ***equipment*** requirements are determined and technical duties are organised in accordance with organisational and task requirements.
- 1.3 Risk management strategies, occupational health and safety, environmental and ***other legislative requirements*** are determined and explained to junior staff as necessary.
- 1.4 Resources and equipment are organised and their preparation is supervised in accordance with organisational and task requirements.

2. Obtain and record information

- 2.1 Technical and supervisory duties are carried out independently in accordance with organisational requirements.
- 2.2 Technical leadership is provided and ***individuals*** are influenced to meet required outputs in accordance with organisational requirements.
- 2.3 Collection and recording of information are carried out and/or supervised in accordance with planned processes and timelines.
- 2.4 Information is monitored and contingencies are dealt with in accordance with organisational and task requirements.
- 2.5 Resources and equipment are used and maintained in accordance with organisational and task requirements.
- 2.6 Risk management strategies, occupational health and safety, environmental and other legislative requirements are followed in accordance with organisational requirements.

3. Assess and report data

- 3.1 Data input and records maintenance are monitored in accordance with organisational requirements.
- 3.2 Data is manipulated, results are assessed and ***irregularities*** dealt with in accordance with organisational and task requirements.
- 3.3 Reports are prepared and presented in accordance with organisational and task requirements.

Required Skills and Knowledge

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

Skill requirements

Look for evidence that confirms skills in:

- technical leadership to influence others to meet required outputs
- using a range of communication styles to suit different audiences and purposes
- responding to diversity, including gender and disability
- reading formal documents such as legislation and instructions and applying them in the workplace
- analysing/manipulating mathematical data and problem solving
- using technology for word processing and data management
- writing technical reports requiring precision of expression
- operating machinery and experimental equipment
- applying occupational health and safety and environmental requirements related to working in a scientific/technological research environment

Knowledge requirements

Look for evidence that confirms knowledge and understanding of:

- experimental procedures and scientific methods
- analytical techniques/statistical analysis
- the scientific area (broad understanding)
- legislation, public sector standards and organisational code of practice as they relate to work in a scientific research/technical environment
- standard operating procedures and/or work instructions
- leadership of others in a scientific/technical environment
- occupational health and safety, environmental protection and other public sector legislation
- technical support work relevant to specialist area (well-developed knowledge)

Evidence Guide

The Evidence Guide specifies the evidence required to demonstrate achievement in the unit of competency as a whole. It must be read in conjunction with the Unit descriptor, Performance Criteria, the Range Statement and the Assessment Guidelines for the Public Sector Training Package.

Units to be assessed together

- *Pre-requisite* units that must be achieved prior to this unit: *Nil*
- *Co-requisite* units that must be assessed with this unit: *Nil*
- *Co-assessed units* that may be assessed with this unit to increase the efficiency and realism of the assessment process include, but are not limited to:
 - PSPETHC501B Promote the values and ethos of public service
 - PSPGOV503B Coordinate resource allocation and usage
 - PSPGOV504B Undertake research and analysis
 - PSPGOV511A Provide leadership
 - PSPLEGN501B Promote compliance with legislation in the public sector
 - PSPOHS501A Monitor and maintain workplace safety

Overview of evidence requirements

In addition to integrated demonstration of the elements and their related performance criteria, look for evidence that confirms:

- the knowledge requirements of this unit
- the skill requirements of this unit
- application of the Employability Skills as they relate to this unit (see Employability Summaries in Qualifications Framework)
- provision of high-level scientific technical support at an experienced, unsupervised level with responsibility in a defined technical area, in a range of (3 or more) contexts such as experimental, survey, sampling and/or analytical tasks (or occasions, over time)

Resources required to carry out assessment

These resources include:

- legislation, procedures, guidelines and protocols
- operating procedures/work instructions
- industry standards
- scientific/technological equipment and machinery related to the research environment
- personal protective equipment
- case studies and workplace scenarios to capture the range of situations likely to be encountered when providing high-level scientific technical support

Where and how to assess evidence

Valid assessment of this unit requires:

- a workplace environment or one that closely resembles normal work practice and replicates the range of conditions likely to be encountered when providing high-level scientific technical support, including coping with difficulties, irregularities and breakdowns in routine
- provision of high-level scientific technical support at an experienced, unsupervised level with responsibility in a defined technical area, in a range of (3 or more) contexts such as experimental, survey, sampling and/or analytical tasks (or occasions, over time)

Assessment methods should reflect workplace demands, such as literacy, and the needs of particular groups, such as:

- people with disabilities
- people from culturally and linguistically diverse backgrounds
- Aboriginal and Torres Strait Islander people
- women
- young people
- older people
- people in rural and remote locations

Assessment methods suitable for valid and reliable assessment of this competency may include, but are not limited to, a combination of 2 or more of:

- case studies
- demonstration
- observation
- portfolios
- projects
- questioning
- scenarios
- authenticated evidence from the workplace and/or training courses

For consistency of assessment

Evidence must be gathered over time in a range of contexts to ensure the person can achieve the unit outcome and apply the competency in different situations or environments

Range Statement

The Range Statement provides information about the context in which the unit of competency is carried out. The variables cater for differences between States and Territories and the Commonwealth, and between organisations and workplaces. They allow for different work requirements, work practices and knowledge. The Range Statement also provides a focus for assessment. It relates to the unit as a whole. Text in ***bold italics*** in the Performance Criteria is explained here.

Technical duties may include

- surveys
- sampling
- experiments
- trials
- tests
- assays
- surveillance
- collecting specimens
- inspections
- identification of plants or animals
- identification of pests
- operation, calibration and maintenance of experimental equipment
- diagnostic processes
- producing specimen images

Processes may include:

- experimental processes
- observation
- field trials

Resources may include:

- design specifications
- technical manuals
- componentry
- radioactive samples
- specimens
- plants
- seeds
- chemicals
- personal protective equipment

Equipment may include:

- prototypes
- test rigs
- tools
- diagnostic instruments
- laboratory equipment

Other legislative requirements may include:

- experimental equipment
- farm equipment
- quarantine or protection requirements
- copyright and intellectual property legislation
- Australian standards

Individuals may include:

- other technical staff
- supervised staff
- contract workers
- super-ordinates
- research officers
- farmers

Irregularities may be dealt with by:

- problem solving
- checking source information
- checking data input
- repeating tests/trial measurements
- referring problem to other staff

Unit Sector(s)

Not applicable.

Competency field

Government Science & Technology.