



Australian Government

PSPSCI010 Develop and undertake scientific/technological research

Release: 1

PSPSCI010 Develop and undertake scientific/technological research

Modification History

Release	Comments
1	This unit was released in PSP Public Sector Training Package release 1.0 and meets the Standards for Training Packages. This unit supersedes and is equivalent to PSPSCI503A Develop and undertake scientific/technological research. • Unit code updated • Content and formatting updated to comply with new standards • All PC transitioned from passive to active voice

Application

This unit describes the skills required to conduct scientific and/or technological research at a broadly recognised level where considerable initiative and independent judgment are used within generally directed strategic programs. It includes framing the research question, developing the research methodology, undertaking and managing the research and disseminating the results.

This unit applies to those working in scientific/technological research.

The skills and knowledge described in this unit must be applied within the legislative, regulatory and policy environment in which they are carried out. Organisational policies and procedures must be consulted and adhered to.

Those undertaking this unit would work autonomously with supervisory responsibilities, while performing sophisticated tasks in a range of familiar contexts.

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

Competency Field

Government Science and Technology

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
Elements describe the essential outcomes	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the range of conditions section.
1. Frame research question	1.1 Identify viable research questions through industry experience, industry analysis and consultation. 1.2 Consult with possible funding bodies to identify issues which may attract external funding. 1.3 Frame a research question to capture key issue/s with supporting information. 1.4 Demonstrate the benefit of the research question to the industry and its relevance to the organisation's objectives and timeframes. 1.5 Identify and manage issues relating to intellectual property. 1.6 Identify current information relevant to the research question by accessing research and professional networks and analysing published and unpublished materials.
2. Develop research methodology	2.1 Determine objectives that represent logical and effective aspects of the question to be researched and meet organisational and funding requirements. 2.2 Select research methodology and analytical techniques to meet objectives and funding requirements. 2.3 Formulate a hypothesis that is plausible, relevant and of benefit. 2.4 Determine risk management strategies and lay out activities. 2.5 Record the hypothesis, methodology, supporting information and activities.
3. Undertake and manage research	3.1 Seek resources to conduct the research. 3.2 Schedule, assign and carry out tasks. 3.3 Monitor research performance, analyse and interpret data and deal with contingencies. 3.4 Determine and document research results. 3.5 Prepare research report/s within specified timeframes in accordance with or funding body requirements.
4. Disseminate research results	4.1 Disseminate research results within the organisation, to any external funding body, the scientific community and/or the industry via publications and presentations. 4.2 Protect intellectual property.

Foundation Skills

Foundation skills are embedded within the elements and performance criteria of this unit.

Unit Mapping Information

This unit supersedes and is equivalent to PSPSCI503A Develop and undertake scientific/technological research.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=bebbece7-ff48-4d2c-8876-405679019623>

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Assessment Requirements for PSPSCI010 Develop and undertake scientific/technological research

Modification History

Release	Comments
1	These Assessment Requirements were released in PSP Public Sector Training Package release 1.0 and meet the Standards for Training Packages. • Assessment Requirements created drawing upon specified assessment information from superseded unit

Performance Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the candidate must demonstrate evidence of performance of the following on at least one occasion.

- using problem-solving techniques
- working in and facilitating teams
- using technology for data input, analysis and preparation of reports
- interpreting and preparing reports containing scientific research information using communication styles to suit different audiences and purposes
- presenting research results tailored to different audiences

Knowledge Evidence

Evidence required to demonstrate competence must satisfy all of the requirements of the elements and performance criteria. If not otherwise specified the depth of knowledge demonstrated must be appropriate to the job context of the candidate.

- research methodologies
- scientific process
- statistics
- the use of sophisticated statistical models
- specialist area of expertise
- possible sources of external funding
- reporting requirements for scientific research, requiring precision of expression and using communication styles to suit different audiences and purposes
- work health and safety, environmental protection and other public sector legislation, public sector standards and organisational code of practice as they relate to work in a scientific research and/or technological environment

Assessment Conditions

This unit contains no specific industry-mandated assessment conditions. Guidance on suggested and recommended conditions and methods can be found in the Implementation Guide.

Assessors must satisfy the NVR/AQTF mandatory competency requirements for assessors.

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