



Australian Government

Department of Education, Employment and Workplace Relations

PSPSOHS604A Apply ergonomic principles to control OHS risk

Release 3

PSPSOHS604A Apply ergonomic principles to control OHS risk

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 outcomes required to apply ergonomic knowledge, principles and techniques to control OHS risk.

In practice, applying ergonomic principles to control OHS risk may overlap with other generalist or specialist public sector work activities such as promoting ethical practice, applying government systems, influencing opinion, fostering leadership, managing resources, managing compliance with legislation.

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

Application of the Unit

The unit addresses the principles, processes and techniques of ergonomics including the study of the interaction between people, the equipment they use and their general environment. The unit focuses on aspects of work design and work planning such as work layout, work flow, skills, individual variations and environmental factors.

Underpinning knowledge and skills for this unit are addressed in PSPSOHS504A Apply principles of OHS risk management and PSPSOHS505A Manage hazards in the work environment, and include a knowledge of systematic approaches to OHS.

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 Assess the degree of match between people and their activities, equipment, environment and systems	1.1 The extent of human variability in the organisation is identified. 1.2 Demands placed on people in the organisation by their activities, equipment, environment and systems are determined. 1.3 People's capacity to interact optimally with their activities, equipment, environment and systems is determined. 1.4 The match between people and their activities, equipment, environment and systems is determined. 1.5 Specialist advisers and relevant stakeholders are identified for sources of information and data, and consulted during the assessment process.
2 Design ergonomic interventions to enhance the match between people and their activities, equipment, environment and systems	2.1 Ergonomic interventions in the design process to optimise the match between people and their activities, equipment, environment and systems are identified. 2.2 The work environment is designed to optimise the match between people, their activities, equipment, environment and systems. 2.3 Tools and databases are used to assess tasks and designs to minimise risk. 2.4 Recommendations are made to optimise the integration of controls and displays into the decision making processes within the work system.
3 Implement ergonomic interventions to enhance the match between people and their activities, equipment, environment and systems	3.1 Advice is provided on the impact of legislation, codes of practice and standards on the selection and implementation of ergonomic interventions. 3.2 Key personnel, stakeholders and users are consulted when developing, selecting and implementing ergonomic interventions. 3.3 Links are made with other functional areas and management systems. 3.4 Implementation of the agreed intervention is facilitated. 3.5 Training needs are identified and documented. 3.6 Resources necessary to introduce and maintain the agreed interventions are identified and documented. 3.7 The outcomes of ergonomic assessments and interventions are reported to key personnel and stakeholders.
4 Evaluate ergonomic interventions	4.1 Quality and outcomes of ergonomic interventions are evaluated in consultation with stakeholders and users. 4.2 Modification of interventions is facilitated as required as a result of the evaluation findings. 4.3 Recommendations are made regarding future interventions as a result of the evaluation.

Required Skills and Knowledge

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

Required skills:

Look for evidence that confirms skills in:

- relating to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities
- communicating effectively with personnel at all levels of organisation and OHS specialists and, as required, emergency service personnel
- preparing reports for a range of target groups including OHS committee, OHS representatives, managers, supervisors and other stakeholders
- applying continuous improvement and action planning processes
- achieving change using project management processes
- managing own tasks within time frame
- using consultation and negotiation skills, particularly in relation to developing plans and implementing and monitoring designated actions
- contributing to the assessment of the resources needed to systematically manage OHS and, where appropriate, access resources
- analysing relevant workplace information and data, make observations including of workplace tasks and interactions between people, their activities, equipment, environment and systems
- carrying out simple arithmetical calculations (eg % change), and producing graphs of workplace information and data to identify trends and recognise limitations of information and data
- interpreting information and data to identify areas for improvement
- using a range of communication media
- conducting effective formal and informal meetings
- using language and literacy skills appropriate to the workgroup and the task
- using computer and information technology skills to access internal and external information and data on OHS
- undertaking basic research to access relevant information and data
- using anthropometric tables effectively
- paying attention to detail when making observations and recording outcomes

Required knowledge:

Look for evidence that confirms knowledge and understanding of:

- roles and responsibilities under OHS legislation of employees including supervisors, contractors, OHS inspectors etc
- principles of duty of care including concepts of causation, foreseeability, preventability
- legislative requirements for OHS information and data, and consultation
- difference between hazard and risk
- risk as a measure of uncertainty and the factors that affect risk

- requirements under hazard-specific OHS legislation and codes of practice
- characteristics, mode of action and units of measurement of major hazard types
- physiology and functional anatomy relevant to identifying and controlling ergonomic hazards
- human error and implications for design of equipment, work practices and controlling ergonomic hazards
- the basics of anthropometry and biomechanics
- basic human cognitive and perceptual capabilities relevant to the design of human/machine interfaces
- risk factors for manual handling injury and risk assessment techniques for manual handling
- principles of human behaviour and response to interactions with human, physical and task environment to identify psychosocial hazards
- direct and indirect influences that impact on OHS and the environment in the design of product/s
- interdependent relationships between ergonomics and workplace stressors such as psychosocial factors, occupational violence, shiftwork, repetitive work, awkward postures, lighting, thermal environment and work layout
- hierarchy of control and considerations for choosing between different control measures, such as possible inadequacies of particular control measures
- standard industry controls for a range of hazards
- strategies for minimising risk through application of ergonomic design and engineering, work layout, work processes, work organisation
- types of hazard identification tools including JSA
- limitations of generic hazard and risk checklists and risk ranking processes
- pertinent sections of relevant Australian and other standards such as AS/NZS 4360: Risk management, National Standard for the Storage and Handling
- principles and practices of a systematic approach to managing OHS
- other function areas that impact on the management of OHS
- internal and external sources of OHS information and data
- how the characteristics and composition of the workforce impact on risk and the systematic approach to managing OHS e.g.
 - labour market changes
 - structure and organisation of workforce e.g. part-time, casual and contract workers, shift rosters, geographical location
 - language, literacy and numeracy
 - communication skills
 - cultural background/workplace diversity
 - gender
 - workers with special needs
- organisational behaviour and culture as it impacts on OHS and on change
- ethics related to professional practice

- organisational OHS policies and procedures
- nature of workplace processes (including work flow, planning and control) and hazards relevant to the particular workplace
- key personnel, including identifying 'change agents', within workplace management structure
- formal and informal communication and consultation processes and key personnel related to communication
- language, literacy and cultural profile of the work group
- organisational culture as it impacts on the workgroup

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	Co-assessed units that may be assessed with this unit to increase the efficiency and realism of the assessment process include: • PSPETHC601B Maintain and enhance confidence in public service • PSPGOV605A Persuade and influence opinion • PSPLEGN601B Manage compliance with legislation in the public sector • PSPSOHS601A Develop a systematic approach to managing OHS • PSPSOHS603A Analyse and evaluate OHS risk • PSPSOHS605A Apply occupational hygiene principles to control OHS risk • PSPSOHS607A Advise on application of safe design principles to control OHS risk.
Overview of evidence requirements	In addition to integrated demonstration of the elements and their related performance criteria, look for evidence that confirms: • knowledge requirements of this unit • skill requirements of this unit • application of employability skills as they relate to this unit.
Resources required to carry out assessment	Resources essential for assessment include: • legislation, policy, procedures and protocols relating to the application of ergonomic principles to control OHS risk • workplace documentation, case studies and workplace scenarios to capture the range of situations likely to be encountered when applying ergonomic principles to control OHS risk to control OHS risk.
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 applying ergonomic principles to control OHS risk, including coping with difficulties, irregularities and breakdowns in routine • application of ergonomic principles to control OHS risk in a range of 3 or more contexts or occasions, over time. Assessment methods should reflect but not exceed workplace

demands, such as literacy, and the needs of individuals who might be disadvantaged.

Assessment methods suitable for valid and reliable assessment of this unit must use authenticated evidence from the workplace and/or training courses and may include a combination of two or more of:

- workplace projects
- simulation or role plays
- case studies and scenarios
- observation.
- portfolios.

The assessment environment should not disadvantage the candidate and where the person has a disability the principle of reasonable adjustment should be applied during assessment.

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.

Specialists advisors may include:

- specialist ergonomists
- occupational hygienists
- engineers (such as design, acoustic, safety, mechanical, civil)
- health professionals
- legal practitioners
- designers
- manufacturers and suppliers

Stakeholders may include:

- managers
- supervisors
- employees
- health and safety and other employee representatives
- OHS committees

Sources of information and data may include:

- external sources such as:
 - state and territory OHS regulatory bodies
 - National Occupational Health and Safety Commission (NOHSC)
 - relevant state or territory OHS legislation and codes of practice
 - international and Australian standards
 - National Plant and Certification Standards and associated guidance material
 - professional associations such as Ergonomics Society of Australia, Safety Institute of Australia, Institute of Engineers Australia, Design Institute of Australia and Building Design Professionals
 - employer groups, unions and industry bodies
 - OHS professionals, including those involved in safety engineering, occupational hygiene, occupational health, injury management, toxicology, ergonomics and epidemiology
- internal sources such as:
 - manufacturers' manuals and specifications
 - purchasing, contract and tendering procedures

- hazard, incident and investigation reports
- enforcement notices and actions
- workplace inspections
- minutes of meetings
- reports
- audits, questionnaires and surveys
- job and task statements
- documents describing how tasks, projects, inspections, jobs and processes are undertaken
- employees

Ergonomics interventions may include:

- design of tools
- design of workplaces
- design of products
- design of equipment
- design of work systems, processes or organisation including work flow, planning and control
- job design
- development of new decision making processes
- new forms and organisations of work

Tools and databases may include but are not limited to:

- engineering models
- Australian and international standards
- Australian and international anthropometric databases

Legislation, codes of practice and standards may include:

- current Commonwealth and relevant state/territory OHS legislation, regulations, codes of practice, associated standards and guidance material
- workers compensation
- privacy legislation
- contract law
- trade practices
- criminal law
- common law
- industrial relations law
- equal employment opportunity and anti-discrimination law
- Australian and international standards

Key personnel include:

- managers involved in OHS decision making or who may be impacted by decisions

Other functional areas and management systems may include:

- strategic planning
- purchasing, procurement and contracting
- logistics
- human resource, industrial relations and personnel management including payroll
- engineering and maintenance
- information and records management
- finance and auditing
- environmental management
- quality management

Resources may include:

- financial requirements
- personnel, including time allocation
- equipment

- specialised resources such as electronic management systems, communications media and information/data technology equipment

Unit Sector(s)

Not applicable.

Competency field

Specialist Occupational Health & Safety.