Australian Government

Department of Education, Employment and Workplace Relations

MEM09201A Work effectively in an engineering drafting workplace

Release: 1

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Modification History

Release 1 - New unit of competency

Unit Descriptor

This unit of competency covers the skills and knowledge required to provide drafting services according to the systems and standards expected in industry. It includes understanding work contexts, stakeholder needs, employment conditions and expectations, and the way drafting is used across different engineering disciplines.

Application of the Unit

This unit is suitable for those working within a computer-aided design (CAD) or drafting work environment. It includes the acceptance of responsibility for own work, working in a team and working to meet established industry standards.

Licensing/Regulatory Information

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

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 performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Identify the work context and setting	1.1	Identify the scope and nature of the organisation and describe key products and services
		1.2	Identify legislation, enterprise procedures and industry standards relevant to the workplace
		1.3	Describe the work flow in the organisation
		1.4	Identify key personnel and describe their role and relationship to own work
		1.5	Evaluate impact of trends, such as technology change, work processes and environmental issues, on work practices
2	Examine role of drafting	2.1	Describe roles and key responsibilities in drafting work, including processes involved in detail and design drafting work
		2.2	Identify organisation stakeholders of drafting projects and their information and service needs
		2.3	Interpret and use industry terminology
		2.4	Determine the needs and features of drafting work undertaken for different engineering disciplines
		2.5	Describe the role of computer programs in 2-D and 3-D design and detail drafting work
3	Accept responsibility for own work	3.1	Identify own work responsibilities, obligations, employment conditions and role within work group or area
		3.2	Determine work priorities and deadlines and plan work activity accordingly
		3.3	Apply enterprise work and safety procedures when conducting work and ensure quality standards are met
		3.4	Access and use work information, technology and resources to complete work
		3.5	Apply time-management skills to ensure work deadlines are met and communicate with appropriate personnel if

			timelines are compromised
		3.6	Identify skill development needs and seek assistance with supervisor or other appropriate personnel
		3.7	Minimise impact of work on the environment and conduct housekeeping to maintain workplace
4	Work with others	4.1	Identify roles of team members
		4.2	Participate in the development and review of team goals and activities and contribute to continuous improvements
		4.3	Contribute to team meetings using effective communication skills and with respect to varying opinions and differences
		4.4	Address work conflicts professionally using effective communication skills, and refer to appropriate personnel if necessary
5	Apply safe and sustainable work practices	5.1	Apply safety procedures and practices at all times
		5.2	Collaborate with others and contribute to positive work environment
		5.3	Identify and minimise resource use in own work, and contribute to efficiency improvements
		5.4	Comply with enterprise environmental regulations and report breaches and environmental hazards to designated personnel

Required Skills and Knowledge

Required skills

Required skills include:

- sourcing and disseminating information
- communicating verbally and in writing with team members, site/project managers and suppliers
- meeting skills
- organising skills to manage own workload and individual career planning activities
- interpersonal skills in dealing with team members and others

Required knowledge

Required knowledge includes:

- relevant legislation
- occupational health and safety (OHS) requirements for the engineering industry
- relevant statutory/regulatory authorities
- relevant codes of practice
- quality assurance procedures

Evidence Guide

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

Overview of assessment	A person who demonstrates competency in this unit must be able to perform work within a drafting context, according to industry standards and work expectations.

Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently perform all elements of the unit as specified by the criteria, including required knowledge, and be capable of applying the competency in new and different situations and contexts.
	Specifically the candidate must be able to:
	• work within typical site/teamwork structure and methods
	• apply worksite communication procedures
	• comply with organisational policies and procedures including quality requirements
	• participate in work meetings
	• comply with quality requirements
	• use industry terminology
	• apply appropriate safety procedures
	• demonstrate industry knowledge, including:
	  • industry size, scope of work and economic issues
	  • industry standards and codes relevant to organisation work
	  • relevant legislative and regulatory provisions covering drafting work, including discrimination and equal employment opportunity
	  • types of drafting in industry and work flow.

Context of and specific resources for assessment	This unit may be assessed on the job, off the job or a combination of both on and off the job. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by an individual working alone or as

	part of a team. Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability. Access must be provided to appropriate learning and/or assessment support when required. Where applicable, physical resources should include equipment modified for people with disabilities. This unit could be assessed in conjunction with any other units addressing the safety, quality, communication, materials handling, recording and reporting associated with drafting or other units requiring the exercise of the skills and knowledge covered by this unit.
Method of assessment	Assessors should gather a range of evidence that is valid, sufficient, current and authentic. Evidence can be gathered through a variety of ways, including direct observation, supervisor's reports, project work, samples and questioning. Questioning techniques should not require language, literacy and numeracy skills beyond those required in this unit of competency. The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Range Statement

Standards and codes	Standards and codes include, but are not limited to: • Australian drawing standards • third-party manufacturing and installation standards • company standards • project and industry guidelines • manufacturer catalogues and specifications
Stakeholders	Stakeholders may include: • clients • engineers • builders • architects • tradespeople • designers • management • team members
Engineering disciplines	Depending on the project and brief there may not be a clear discipline for any one task with many drawing tasks covering more than one discipline. The common engineering disciplines that may be covered by this unit include: • mechanical • air conditioning and mechanical services • mechatronics • electrical • manufacturing • fabrication • naval architecture • structural • civil • mining • materials handling
Responsibilities, obligations and employment conditions	Responsibilities, obligations and employment conditions will vary according to the organisation and project and may include: • job description and employment arrangements • organisation's policy relevant to work role • team structures • supervision and accountability requirements,

	including OHS • environmentally sustainable work practices • industrial awards • enterprise agreements • industry/workplace codes of practice • skills, training and competencies • codes of conduct
Communication skills	Communication skills may include: • active listening • numeracy skills to the level required to interpret workplace documents • verbal skills to convey meaning and add to discussion • reading and writing skills to the level required to interpret and contribute to work information • use of templates, conventions and communication protocols appropriate to the organisation, project and type of drawing
Efficiency improvements	Efficiency improvements are changes to work practices which result in: • reduction in resource consumption, including water, electricity or materials • waste minimisation or improved management • pollution controls • equipment maintenance and longevity • improved workplace layout • reduced transportation or movement • cost savings • increased re-use or recycling and use of renewable resources • greater education and understanding of sustainable work practices • greater measurement of resource use • selection of more environmentally friendly materials, resources or practices • prevention or minimisation of risks
Environmental hazards	Environmental hazards may include: • substances (e.g. resources, waste and by-products) that are dangerous to living things in the environment, such as humans, animals, plants and water, including storage, handling and disposal of the following substances:

	• toxic • corrosive • flammable • explosive • other infectious or dangerous substances

Unit Sector(s)

Drawing, drafting and design

Custom Content Section

Not applicable.