



Australian Government

Department of Education, Employment and Workplace Relations

MEM234028A Produce and manage technical documentation

Release: 1

MEM234028A Produce and manage technical documentation

Modification History

New unit

Unit Descriptor

This unit of competency covers the skills and knowledge required to develop and produce engineering-related technical documentation and to manage documentation distribution and use within an organisation.

Application of the Unit

This unit applies where engineering skills and knowledge are required for the production and management of technical documentation for use within an organisation and by other users, such as contractors and dealers. Technical documentation may include production control records, work instructions and standard operating procedures, process specifications, occupational health and safety (OHS) procedures, quality procedures, contractor instructions, and documentation required to comply with legislative and regulatory requirements.

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 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

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| 1 | Develop technical documentation | 1.1 | Evaluate the requirement for technical documentation, including purpose, scope and intended audience |
| | | 1.2 | Consult original sources of engineering and other technical data |
| | | 1.3 | Determine the required layout, style, content and resources required for production of documentation |
| | | 1.4 | Draft technical documentation and verify for accuracy against standards and other original sources |
| | | 1.5 | Develop review and version control procedures |
| | | 1.6 | Submit technical documentation, version control and review procedures for approval |
| | | 1.7 | Develop and apply a technical documentation archiving system that complies with organisational policy and applicable legislative and regulatory requirements |
| 2 | Produce and distribute technical documentation | 2.1 | Produce technical documentation and apply version and distribution controls |
| | | 2.2 | Distribute technical documentation |
| 3 | Monitor usage and revise technical documentation | 3.1 | Monitor the usage of technical documentation |
| | | 3.2 | Revise and improve technical documentation, when necessary |
| | | 3.3 | Apply version and distribution controls to revised technical documentation |

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- identifying the requirement for technical documentation
- determining original sources for researching and verifying engineering-related technical content
- determining the style and layout of technical documentation
- analysing, designing, planning, executing and verifying content requirements against engineering and other technical data from original sources
- determining procedures for review and amendment
- developing and applying version control procedures
- effectively controlling technical documentation distribution and archiving of completed documentation
- using oral and written communication to convey broad and specialised information in a variety of media and formats

Required knowledge

Required knowledge includes:

- word processing, spreadsheet and database software to produce technical documentation
- typical sources for researching engineering and technical data for applications and discipline area
- types of technical documentation
- layouts for technical documentation
- version and distribution control systems
- archiving systems
- legislative and regulatory requirements associated with technical documentation that are relevant to the organisation

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.

Critical aspects for assessment and evidence required to demonstrate competency in this unit	Assessors must be satisfied that the candidate can competently and consistently: • identify and establish engineering and organisation goals and requirements for the project or operation that may bear on the production of technical documentation • establish resources required for the research, production, distribution and ongoing maintenance of technical documentation, including labour, materials, and equipment within budgets and procedures • identify and consult original sources of engineering and technical data • produce technical documentation and verify for technical accuracy and suitability for application • distribute technical documentation to users • arrange for handling of enquires, updates and version control.
Context of and specific resources for assessment	• This unit may be assessed on the job, or a combination of both on and off the job assessment based on appropriate project and simulation activities. Where assessment occurs off the job, that is, the candidate is not in productive work, then a simulated working environment must be used where the range of conditions reflects realistic workplace situations. Where simulation is used for this unit, it is important that the simulation includes appropriate testing of the suitability of the produced documentation for user groups. For example, production of standard operating procedures should include testing of the standard operating procedures for ease of use by operators or other target groups and accuracy of description of the process or equipment covered by the standard operating procedures. • 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.
Method of assessment	• Assessment must satisfy the endorsed Assessment Guidelines of the MEM05 Metal and Engineering Training Package.

	• Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with application of underpinning engineering knowledge to technical documentation production. • Assessment methods should include questioning or other assessment method on sources and extent of engineering knowledge to ensure ability interpret, apply and verify engineering content for documents. • Assessment may be applied under project-related conditions (real or simulated) and require evidence of process. • Assessment must confirm a reasonable inference that competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances. • Assessment may be in conjunction with assessment of other units of competency where required.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the language and literacy capacity of the candidate and the work being performed.

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, if used in the performance criteria, is detailed below. 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) may also be included.

The requirement for technical documentation	The requirement for technical documentation may arise from: • organisational policy • standard procedures • quality procedures • production and process control requirements • the need to specify procedures and requirements for contractors • the need to comply with legislative requirements and associated regulations
Types of technical documentation	Types of technical documentation may include:

	• production and process control records • process specifications • work instructions, standard operating procedures and checklists • certification documents • OHS procedures • quality procedures • contractor instructions • processes or records for compliance with legislation and/or regulations • tender/contract deliverable requirements
Original sources	Original sources provide the engineering and other technical information used to inform and verify the technical documentation being produced. The sources may include: • standards, codes, Acts and regulations • manufacturer's instructions and manuals • engineering-related textbooks and journals • professional engineers, scientists and other technical experts • technical drawings and other design information • customer brief • production records and schedules
Version control	Version control: • is required whenever technical documentation may be subject to revision • may take the form of either a date or issue number (or both) inserted in the document header or footer • should include a formal recording process that could take the form of a version control database
Distribution control	Distribution control may consist of: • a listing of recipients of each type of document and, where required, a document tracking system
Archiving of technical documentation	Archiving of technical documentation: • may be required to comply with legislative or regulatory requirements, and/or with organisational policy • should include an indexing system that specifies the period for which the document is to be retained • should comply with relevant requirements regarding physical storage and security
Regulatory requirements, and organisational policies and	Regulatory requirements, and organisational policies and

procedures	procedures may be found in: • organisational policy manuals • procedures manuals • quality manuals • Commonwealth and state/territory OHS legislation • industrial law and awards • customer protection law • environmental protection • workers compensation • contract law
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Unit Sector(s)

Engineering practice

Custom Content Section

Not applicable.