



Australian Government

Department of Education, Employment and Workplace Relations

MEM234029A Produce and manage technical publications

Release: 1

MEM234029A Produce and manage technical publications

Modification History

New unit

Unit Descriptor

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

Application of the Unit

This unit applies where engineering skills and knowledge are required for the production and management of technical publications for use within the organisation and by downstream users, such as contractors and final customers.

Applications include workshop manuals, operating instructions, parts catalogues, procedures manuals and related technical publications.

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 publications | 1.1 Identify the requirement for technical publications |
| | | 1.2 Determine the required medium, style and layout |
| | | 1.3 Obtain or access relevant data |
| | | 1.4 Identify potential problems and consult relevant experts involved in product engineering design and/or production |
| | | 1.5 Determine resolution strategies |
| | | 1.6 Draft the publication using relevant guidelines and specified or selected software package |
| | | 1.7 Select required graphics and raise illustrator briefs |
| | | 1.8 Observe copyright legislation |
| | | 1.9 Insert completed graphics into the draft and add annotations/labels |
| | | 1.10 Prepare the draft for publishing and submit for editorial review |
| 2 | Produce and distribute technical publications | 2.1 Submit proof copy of the publication or publication amendment for client acceptance |
| | | 2.2 Arrange publication |
| | | 2.3 Update distribution records, as required, and arrange delivery or distribution of the completed publication |
| 3 | Manage the amendment of technical publications | 3.1 Identify the need for publication amendment action |
| | | 3.2 Initiate amendment action |
| | | 3.3 Produce or edit draft amendments |
| | | 3.4 Arrange production and distribution of amendments |

- 4 Manage the distribution and control of technical publications
 - 4.1 Establish a publication distribution and amendment control system
 - 4.2 Manage publications in accordance with regulatory requirements, and organisational policies and procedures
 - 4.3 Monitor the operation of the publication distribution and control system

Required Skills and Knowledge

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

Required skills

Required skills include:

- researching engineering design, production and issues, such as end use, environment and related technical maintenance and product support policies
- using oral and written communication to convey broad and specialised information in a variety of media and formats
- analysing, designing, planning and implementing amendment generation, approval, recording and distribution procedures
- solving problems
- selecting and using word processing software and graphics packages
- specifying the style and layout of technical publications
- controlling procedures for technical publication distribution

Required knowledge

Required knowledge includes:

- word processing and graphics packages used for technical publication and publication amendment drafting
- publication writing conventions, standards and specifications
- the use of style guides
- illustration techniques
- reading of engineering drawings, including:
 - standard drawing sheets and drawing layouts
 - types of drawing
 - engineering standards and specifications
 - technical terms and abbreviations
 - sectioned views
 - dimensioning
 - tolerancing of dimensions
 - types of fit
 - standard hardware
 - screw threads
 - threaded components and washers
 - locking devices

- rivets
- special structural fasteners
- spur gears
- welding symbols and geometry tolerancing
- surface texture
- material specifications and metal surface treatment
- reading of electrical and electronic circuits and wiring diagrams
- development of system schematics
- development of block diagrams
- sketching
- use and development of logic charts
- development of fault diagnosis guides
- the preparation of illustrators' briefs
- the preparation of indexes to publication contents
- problem solving methodology
- regulations relevant to technical publications
- OHS legislation
- for print-based publications, procedures for processing drafts through desktop publishing to printing, binding and distribution
- for electronic format publications, the principles for publication database systems and the development of input data
- requirements for, and methods of, maintaining publication records
- applicable publication standards and systems
- copyright legislation
- desktop publishing software systems
- printing methods
- binder systems
- management methods for amendment, custody and distribution of technical publications
- version control procedures which will normally consist of a recording system for amendment distribution and incorporation

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.

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| Critical aspects for assessment and evidence required to demonstrate competency in this unit | Assessors must be satisfied that the candidate can competently and consistently: <ul style="list-style-type: none"> • identify requirements for drafting and amendment of technical publications |
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| | <ul style="list-style-type: none"> • conduct research and gather required data from engineering records and relevant engineering staff and managers • select appropriate publication media and publication style and format • use selected software packages to draft technical publications • prepare illustrator briefings and observe copyright legislation • prepare proof copies of publications and obtain client approval • manage the production and devise distribution, amendment and version control systems. |
| Context of and specific resources for assessment | <ul style="list-style-type: none"> • 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. 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 | <ul style="list-style-type: none"> • 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 knowledge. • Assessment methods must be by direct observation of tasks and include questioning on underpinning knowledge to ensure its correct interpretation and application. • Assessment may be applied under project-related conditions (real or simulated) and require evidence of process. • Assessment must confirm a reasonable inference that |

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| | <p>competency is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances.</p> <ul style="list-style-type: none"> 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.

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| Technical publications | <p>Technical publications may include:</p> <ul style="list-style-type: none"> workshop manuals operating instructions assembly instructions parts catalogues technical specifications technical brochures for sales/marketing procedures manuals |
| The required medium | <p>The required medium may be:</p> <ul style="list-style-type: none"> print-based electronic microfiche |
| <ul style="list-style-type: none"> Style and layout | <p>Style and layout may be determined from:</p> <ul style="list-style-type: none"> an applicable style guide contract requirements industry standards and specifications |
| Relevant data sources | <p>Relevant data sources may include:</p> <ul style="list-style-type: none"> design and production data and drawings parts and materials listings engineering specifications operating procedure documentation |

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| | <ul style="list-style-type: none"> • component assembly procedures • maintenance schedules • manufacturer and trade catalogues • relevant legislation and regulations |
| <ul style="list-style-type: none"> • Relevant experts | <p>Relevant experts may include:</p> <ul style="list-style-type: none"> • the client • design engineers and staff • production staff • maintenance managers and staff • component and material suppliers • regulator representatives |
| <ul style="list-style-type: none"> • The requirement for publication amendment action | <p>The requirement for publication amendment action may arise from:</p> <ul style="list-style-type: none"> • publication user feedback • modifications to systems or components • test procedure development or refinement • quality system audits • compliance with regulatory requirements |
| The editing process | <p>The editing process may involve checking for:</p> <ul style="list-style-type: none"> • compliance with the style guide • completeness and ease of understanding • appropriate use of graphics • observance of applicable regulations and legislation including copyright • final draft mark-up for desktop publishing • application of version control procedures |
| Regulatory requirements, and organisational policies and procedures | <p>Regulatory requirements, and organisational policies and procedures may be found in:</p> <ul style="list-style-type: none"> • organisational policy manuals • procedures manuals • quality manuals • Commonwealth and state/territory legislation and regulations in areas, such as OHS and environmental protection • sustainability requirements |

Unit Sector(s)

Engineering practice

Custom Content Section

Not applicable.