



Australian Government

MEM234030 Provide specialised technical and engineering guidance to other technical employees

Release: 1

MEM234030 Provide specialised technical and engineering guidance to other technical employees

Modification History

Release 1. Supersedes and is equivalent to MEM234030A Provide specialised technical and engineering guidance to other technical employees.

Application

This unit of competency defines the skills and knowledge required to provide technical advice, including mentoring, to other technical and paraprofessional employees, usually but not always, working in the same technical field or discipline.

It applies across all forms of manufacturing and engineering where an individual is using their professional skills and knowledge to provide engineering and technical guidance to other technical employees within the organisation. Examples of technical guidance situations include acting as a technical resource person to other technical employees or teams or mentoring of other technical employees because of specialised skill and knowledge.

The emphasis in this unit is on the provision of technical advice usually as part of day-to-day operations where the person is not in a formally designated managerial or leadership role. The unit assumes technical competence to Advanced Diploma of Engineering level or equivalent industrial experience.

Where formal leadership and management of engineering and related projects or operations applies, unit MEM234001 Plan and manage engineering-related projects or operations should also be selected.

Where the management of the installation, commissioning or modification of machines or equipment is required, unit MEM234031 Manage installation, commissioning or modification of machines and equipment should also be selected.

Where the management of fluid power technologies is required, unit MEM234032 Manage fluid power related technologies in an organisation should also be selected.

Where leading engineering-related quality operations is required, unit MEM234033 Lead engineering-related quality operations in an organisation should also be selected.

This unit does not cover the giving of general advice associated with conditions of employment including career planning and wages.

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

Pre-requisite Unit

Nil

Competency Field

Engineering science

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Respond to requests for technical advice or assistance	1.1 Confirm that request for assistance is of an engineering nature and the engineering-related outcomes required 1.2 Identify extent of engineering information currently known 1.3 Define issue or problem in engineering-related terms 1.4 Identify whether request is within own discipline and skills and knowledge or should be referred to other expert technical or professional assistance 1.5 Assist individuals or technical team to identify stakeholders to engineering issues and practice in the organisation 1.6 Assist individuals or team to identify constraints and solution steps 1.7 Verify solution
2. Identify other situations where current practice may be inadequate within the department or team	2.1 Identify technical, engineering or sustainability-related risk factors in workplace 2.2 Identifies risks associated with professional and ethical practice, work health and safety (WHS) and other statutory responsibilities and liabilities 2.3 Identify risk situations without adequate preventative and contingency planning 2.4 Identify technical individuals or teams responsible for management of risks without adequate preventative and contingency planning 2.5 Offer assistance and advice to resolve inadequacy in accordance with organisational procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Expert technical and professional assistance includes:	• technical support and advice relating to elements which have intrinsic dangers • professional support for technologies • professional advice on issues that can overlap with: • finance, accounts and tax • insurance and legal • training and HR.
WHS requirements, codes of practice, regulations, standards and other regulatory requirements and organisational procedures include:	• WHS acts, regulations and relevant standards • industry codes of practice • risk assessments • registration requirements • safe work practices • state and territory regulatory requirements.
Legislative requirements include:	• industrial law and awards • consumer protection law • restrictive trade practice • environmental protection • workers compensation • equality and antidiscrimination • contract law.
Sustainability issues include:	• consideration of economic, social, ecological and resources implications of activities • resources and energy: • sources, access, processing and consumption • food security and agriculture, health, education and shelter • land, energy and water • social and economic factors affecting design of machines and equipment • life cycle design of product (manufacture to re-manufacture or recycle) • raw material, solids and hazardous waste, and production by-products • contamination of land, air and stormwater pollutants, and discharge to sewerage • climate change.
Planning and scheduling techniques include:	• critical path or Pert network plans • Gantt charts.

Software and validation techniques include:	• software employed for performance analysis and modelling including program techniques and algorithms and the use of failure effects analysis (FEA) and numerical methods within object-oriented modelling techniques • comparison of traditional solutions for simple design problems with software solutions to the same design problems • review of previously implemented design challenges which were completed using the software.
---	---

Unit Mapping Information

Release 1. Supersedes and is equivalent to MEM234030A Provide specialised technical and engineering guidance to other technical employees.

Links

Companion Volume Implementation Guides are available on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b7050d37-5fd0-4740-8f7d-3b7a49c10bb2>