
Overview

This standard identifies the competences you need to advise and guide others in work-related engineering technical matters, in accordance with approved procedures. You will be expected to provide technical advice and guidance to others involved in engineering activities, such as design, installation, manufacturing, production, operational support activities, maintenance, or equipment capability/performance measurement. You will be required to identify suitable opportunities for offering technical guidance, to plan and apply appropriate methods in such guidance, and to keep your methods under review so that you can modify your approach where necessary.

Your responsibilities will require you to comply with organisational policy and procedures when providing technical guidance, and to report any problems with these activities that you cannot personally resolve, or that are outside your permitted authority, to the relevant people. You will be expected to work with a minimum of supervision, taking personal responsibility for your own actions and for the quality and accuracy of the guidance you give.

Your underpinning knowledge will provide a good understanding of your work, and will provide an informed approach to the methods, techniques and procedures for providing technical advice and guidance. You will understand the engineering activities and their application and will know about them in adequate depth to provide a sound basis for giving the technical advice.

You will understand the safety precautions required in the work area where you provide technical guidance. You will be required to demonstrate safe working practices throughout and will understand the responsibility you owe to yourself and others in the work area.

Performance criteria

You must be able to:

1. work safely at all times, complying with health and safety legislation, regulations, directives and other relevant guidelines
2. ensure that you have accurate and up-to-date information on the engineering activities for which advice and guidance is being sought
3. determine the extent of the advice and guidance required
4. provide valid and up-to-date information, technical advice and guidance, as necessary
5. analyse any problems in full and provide effective advice that will maintain the quality and progress of the work

Knowledge and understanding

You need to know and understand:

1. the specific safety precautions to be taken in the work areas where technical guidance is being given
2. the importance of wearing protective clothing and other appropriate safety equipment (PPE) in hazardous or clean area environments when giving technical guidance
3. how to obtain the relevant personal protective equipment (PPE), and how to check that it is in a safe and usable condition
4. the regulations and guidelines that are relevant to the work area
5. how to obtain information on regulations and guidelines
6. how to obtain and interpret drawings, charts, specifications and other documents that can be used when giving technical advice and guidance
7. a sound understanding of the activities in which the technical guidance is being given
8. how to identify opportunities for giving technical advice, guidance and support
9. how to plan and prepare for providing technical guidance
10. the methods and techniques involved in problem solving
11. how to deal with customer complaints and requests
12. how to review and adjust approaches to the provision of technical guidance, in the light of experience gained (such as offering written summaries of guidance)
13. the techniques for offering and providing technical guidance (such as verbally, one to one, one to many, in written form, using diagrams, drawings or other technical information)
14. how to use a variety of presentation methods, in appropriate combination (such as verbal, verbal/written combinations)
15. the organisational reporting processes and procedures to be observed
16. the extent of your own responsibility, and whom you should report to if you have problems that you cannot resolve

Scope/range

1. Carry out all of the following when providing technical advice and guidance:
 1. Use the correct issue of organisation information
 2. check that all essential information and data needed to identify the technical requirements is available
 3. ensure that health and safety regulations and safe working practices are considered
 4. resolve any problems as they occur, within your level of responsibility
2. Provide technical advice and guidance for two of the following groups of people:
 1. colleagues
 2. contractors
 3. customers (such as distributors, end users, clients)
 4. others working on related technical activity areas
3. Provide technical advice and guidance for one of the following engineering activities:
 1. drawing/design activities (such as mechanical, electrical/electronic, motor vehicle, aerospace, marine)
 2. manufacturing activities (such as machining, detail fitting, fabrication of components, pressing)
 3. material processing activities (such as heat treatment, casting, injection moulding, purification)
 4. composite manufacture (such as wet lay-up, pre-preg laminating, resin infusion, blow moulding)
 5. finishing activities (such as stripping finishes, painting, plating, anodising, veneering, lacquering)
 6. assembly activities (such as mechanical, structural, fluid power, electrical/electronic, woodworking)
 7. installation activities (such as mechanical, electrical/electronic, avionic, structural, environmental equipment)
 8. plant and equipment (such as site preparation, plant layout, equipment changeover, equipment replacement)
 9. equipment capability studies/performance measurement
 10. movement of materials, components or finished goods
 11. business improvement activities
 12. engineering safety audits or risk assessments
 13. quality control/quality assurance
 14. maintenance activities

15. modification and repair activities
16. commissioning/decommissioning
17. research and development
18. testing and trialling
19. engineering support services

4. Provide technical advice and guidance on four of the following:

1. equipment operating detail (function)
2. specific or specialist equipment required
3. equipment performance parameters
4. materials required/used
5. physical characteristics (such as dimensions, weight)
6. timing/delivery details
7. environmental considerations/operating conditions
8. cost/budget estimation/details
9. manufacturing methods
10. aesthetics/finish details
11. manufacturing detail
12. quality requirements/control
13. processing requirements
14. monitoring/servicing frequency
15. work instructions or procedures
16. training required
17. number/volume required
18. customer interface requirements
19. resource requirements
20. safety regulations and requirements
21. equipment/component interfacing

5. Deal accordingly with all of the following:

1. reported problems found during the engineering activity
2. recorded deviations from agreed plans and schedules
3. customer requests/complaints

6. Provide technical advice and guidance by the following methods:

1. specific organisation documentation

Plus by one other method from the following:

2. verbally
3. written/typed report
4. electronic mail
5. computer based presentation

7. Ensure that the technical guidance complies with one of the following:

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1. organisational guidelines and codes of practice
 2. equipment manufacturer's requirements
 3. recognised compliance agency/body's requirements
 4. customer standards and requirements
 5. BS and/or ISO requirements
 6. health, safety and environmental requirements

SEMETS356

Providing technical advice and guidance on engineering activities



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