

Performance Descriptions for Foundation, Advanced and Higher Principal Learning qualifications in Engineering



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Phase 1 Lines of Learning

Performance descriptions are statements that describe typical performance of candidates at the top and bottom of an acceptable range. They relate to whole principal learning qualifications rather than specific units.

Their purpose is to:

- help awarding organisations in designing mark band statements that reflect agreed standards, thus helping to ensure parity across awarding organisations;
- help awarding organisations in designing principal learning qualifications that are pitched at the right level; and
- contribute towards contextualising the Qualifications and Credit Framework (QCF) level descriptions for specific lines of learning.

The performance descriptions describe two levels of performance.

Pass

At the bottom of the acceptable range, this is the minimum level of performance for a learner to pass a principal learning qualification.

Top

At the top of the acceptable range, this is what can reasonably be expected of a high attaining learner who has followed an appropriate course.

Performance descriptions are not competency definitions and need to have sufficient latitude to allow for 'best fit' marking grids to be written.

Performance descriptions have been written by awarding organisations and Diploma Development Partnerships against the relevant lines of learning criteria.

Performance descriptions are not intended to summarise the content of line of learning topics. Awarding organisations are required to ensure that full topic content is accurately reflected in specifications.

Specifications are issued as they stand so that awarding organisations can begin using them as soon as possible to develop their principal learning qualifications.

Please note: the numerical references used for performance descriptions do not bear any relationship to those used for lines of learning criteria or those which may be used in subsequent qualifications.

Level 1 Grade B

Candidates characteristically:

- demonstrate basic knowledge from some areas of the specification.
- demonstrate a basic understanding of some engineering principles through simple practical investigation in routine engineering situations.
- demonstrate basic skills in a limited range of predictable and structured engineering contexts.
- use, with direction, tools and equipment to carry out basic routine tasks.
- work in a safe and appropriate manner with some supervision.
- record, sort and use straightforward information from a limited number of readily available sources.
- use some basic and simple means of engineering communication (e.g. drawings and diagrams).
- require support and guidance to carry out straightforward tasks and procedures.

Level 1 Grade A*

Candidates characteristically:

- demonstrate basic knowledge of most areas of the specification with some accuracy.
- demonstrate basic understanding of engineering principles through simple practical investigations and application of knowledge in well-defined and routine engineering situations.
- demonstrate basic skills and relevant techniques in a range of predictable and structured engineering contexts.
- use conventional tools, equipment and basic procedures to carry out and complete routine tasks to a basic standard.
- regularly work in a safe and appropriate manner after initial instruction.
- gather, record and use straightforward information from a range of sources.

- produce and use simple means of engineering communication (e.g. drawings and diagrams).
- show some independence in carrying out straightforward tasks and procedures.

Level 2 Grade C

Candidates characteristically:

- select and use knowledge from some areas of the specification.
- demonstrate understanding of some key engineering principles through practical investigation and application of knowledge in routine engineering situations.
- demonstrate skills in a limited range with some accuracy and consistency in familiar engineering contexts.
- use a range of conventional tools and equipment appropriately to carry out routine and non-routine tasks to a basic standard.
- recognise some of the strengths and limitations of engineering solutions.
- work in a safe and appropriate manner with some close supervision.
- gather, record and analyse straightforward information from a limited range of sources.
- produce and use different means of engineering communication (e.g. drawings and diagrams).
- show independence in carrying out familiar tasks and procedures but need support and guidance in less-familiar activities.

Level 2 Grade A*

Candidates characteristically:

- select and use detailed knowledge accurately from most areas of the specification.
- demonstrate understanding of engineering principles through practical investigation and application of knowledge to engineering problems in routine and non-routine engineering situations.

- demonstrate skills and techniques (including computer-based technologies) with accuracy, precision and consistency in a variety of familiar and unfamiliar engineering contexts.
- use a range of tools and equipment to carry out routine and non-routine tasks in a planned, accurate and organised manner to correct standards.
- select, produce and use a range of means of engineering communication (e.g. drawings and diagrams).
- demonstrate how engineering solutions can be reviewed and adapted to changing circumstances.
- work in a safe and appropriate manner that considers the needs of others.
- gather, record, organise and analyse relevant information, some of which is complex, from a wide range of appropriate sources.
- show independence in carrying out a range of tasks and procedures and seeks support and guidance where needed.

Level 3 Grade E

Candidates characteristically:

- apply detailed knowledge with some accuracy for most areas of the specification.
- apply some theoretical understanding in practical investigations of engineering problems in a variety of routine and non-routine engineering situations.
- understand some appropriate mathematical techniques and scientific principles used in engineering.
- demonstrate appropriate skills and techniques (including computer-based technologies) with some precision and consistency in a variety of familiar and unfamiliar engineering contexts.
- select and employ a range of engineering procedures and processes.
- employ a limited range of responses to unfamiliar engineering problems and show some awareness of how engineering solutions can be reviewed and adapted to changing circumstances.
- work in a safe and appropriate manner, showing some consideration for the needs of others, together with some consideration of the environment.
- independently gather, record and analyse information, some complex, from a range of relevant sources to formulate reasoned, straightforward judgements in a range of engineering contexts.
- are able to take a proactive approach to seeking guidance, requiring little or no supervision to carry on and complete straightforward tasks and problems.

Level 3 Grade A*

Candidates characteristically:

- apply detailed knowledge relevantly and accurately from most areas of the specification.
- apply theoretical understanding and make reasoned judgements in practical investigations of engineering problems in a broad range of engineering contexts.

- understand and apply a wide range of mathematical techniques and scientific principles to solve engineering problems.
- demonstrate skills and techniques (including computer-based technologies) with precision, accuracy and consistency in a variety of familiar and unfamiliar engineering contexts.
- select, justify and use an appropriate and diverse range of engineering procedures and processes to address engineering tasks including complex and non-routine problems.
- devise a relevant range of responses to unfamiliar engineering problems, demonstrating how engineering solutions can be reviewed and adapted to changing circumstances.
- work independently in a safe and appropriate manner, showing thorough consideration for the needs of others with regular consideration of the environment.
- independently gather, record and analyse complex information, from a range of sources, to formulate well-reasoned judgements in a range of engineering contexts.
- independently complete complex tasks and problems to a high standard taking a proactive approach, when needed, to seeking support and guidance.

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