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1 Oil and Gas Pathways

Pathways

- Mechanical Maintenance Technician
  - Core Units
  - Advanced Award
  - Three Mandatory Units plus Two Optional
  - Advanced Award
  - Any Two Optional Units
  - FULL AWARD

- Electrical Maintenance Technician
  - Core Units
  - Advanced Award
  - Three Mandatory Units plus Two Optional
  - Advanced Award
  - Any Two Optional Units
  - FULL AWARD

- Instrumentation Maintenance Technician
  - Core Units
  - Advanced Award
  - Three Mandatory Units plus Two Optional
  - Advanced Award
  - Any Two Optional Units
  - FULL AWARD

- Process Technician
  - Core Units
  - Advanced Award
  - Two Mandatory Units
  - Advanced Award
  - Two Mandatory Units
  - FULL AWARD

FULL AWARD

IVQ Oil and Gas (8510) 5
2 Assessment methods

Introduction
The purpose of the assessment guide is to:

- assist Assessors, Internal Verifiers and External Verifiers
- ensure and promote consistent assessment of the qualification
- promote cost effective assessment strategies
- promote the use of the external quality control of assessment methods

The assessment guide also specifies:

- the qualifications and experience required for Assessors and Verifiers
- the standard of the assessment environment and equipment that should be used
- access arrangements for the qualification
- the evidence required to support capable performance against the standards
- methods of assessing knowledge and understanding

Qualification structure
Candidates must complete common mandatory units, followed by a choice of pathways. Candidates will then be required to complete further mandatory units within their chosen pathway, followed by a number of optional units from a provided selection.

The recommended guided learning hours for candidates to complete any of the four pathways available is 270 hours per pathway.

Access to assessment
There are no formal entry requirements for candidates undertaking this qualification. However, centres must ensure that candidates have the potential and opportunity to be successfully gain the qualification.

Candidates must have an adequate level of English speaking, reading, listening and writing skills to competently cover aspects of this qualification such as answering underpinning knowledge questions orally and/or in writing, and reading assessor notes regarding their observations.

Aids or appliances which are designed to alleviate disability may be used during assessment providing they do not compromise the standard required.

Accreditation of Prior Learning (APL) and Accreditation of Prior Experience and Learning (APEL) recognise the contribution a person’s previous experience might contribute to a qualification. Accreditation of prior experience and learning for the International Vocational Qualification (IVQ) in Oil and Gas may be available where a candidate is able to provide appropriate evidence of prior learning to the outcomes with the same organisation within the last two years.
3 Roles and occupational expertise requirements

Staff delivering must satisfy the requirements for occupational expertise for this qualification. They should be technically competent in the areas for which they are delivering training and have experience of providing training.

Assessor
Assessors are required to make accurate and objective decisions as to whether the candidate’s performance meets the standards laid out in units of capability.

The requirements of the Assessor are to
- hold the IVQ in Oil and Gas, or an equivalent qualification
- have at least two years’ recent relevant experience in the specific area they will be assessing
- have relevant current industrial experience at or above the level they will be assessing
- demonstrate continuing professional development to ensure that their knowledge of the occupational area and of best practice in mentoring, assessment and verification remains current, and takes account of any national/international or legislative developments
- be able to read, write and speak English, to the equivalent level of IESOL (common B1/B2).

The role of the Assessor is to
- plan, manage and assess the qualification
- devise a suitable assessment for the mandatory and optional units
- ensure that each candidate is aware of the assessment requirements throughout their programme of learning
- provide guidance and support to candidates on the assessment and evidence requirements for each unit
- ensure that the assessment and evidence requirements have been met by the candidate
- observe delivered sessions or nominate a suitable observer, maintaining details of all Nominated Observers
- complete relevant records and pro formas.

Further details of centre staff roles are provided under Section 2 Key Roles in Centre guide – Delivering International Qualifications.

Expert witness
Where observation of process is used to obtain the performance evidence, this observation must be carried out against the standards. Best practice would require that such observation is carried out by a qualified Assessor. If this is not practicable then alternative sources of evidence may be used.

This could be a supervisor, mentor or manager, who may be regarded as a suitable witness to the candidate’s capability. However, the witness must be technically capable in the process or skills that they are providing testimony for to at least the same level of expertise as that required of the candidate and also understand the requirements of the standards. It is the responsibility of the Assessor to ensure sure that any witness testimonies accepted as evidence of a candidate’s capability are valid to the standards by which the candidate is being assessed.
Nominated Observer
The role of the Nominated Observer is to:
• ensure that they are familiar with the requirements of the units
• observe delivered sessions according to the evidence requirements
• complete and maintain relevant records and pro formas and pass to the Assessor
• liaise with the Assessor.

Internal Verifier (IV)
An IV’s role is to ensure consistency and quality of assessment within the centre. The IV will monitor assessment activities, co-ordinate standardisation and provide guidance to Assessors. IV’s should demonstrate sufficient and current understanding of the qualification to be internally verified and know how they are applied in the sector area(s) concerned, to the satisfaction of the EV.

The requirements of the IV are to
• hold the IVQ in Oil and Gas, or an equivalent qualification
• have at least four years’ recent relevant experience in the specific area they will be responsible for within a senior role
• have relevant current industrial experience at or above the level they will be responsible for
• demonstrate continuing professional development to ensure that their knowledge of the occupational area and of best practice in delivery, mentoring, assessment and verification remains current, and takes account of any national or legislative developments
• know where and when to access specialist industry advice (where additional specialist or technical knowledge relating to assessment and verification decisions)
• be able to read, write and speak English, this should be to the equivalent level of IESOL (common B1/B2).

The role of the Internal Verifier (IV) is to liaise with City & Guilds and ensure that
• there are adequate resources, both staff, materials and equipment
• each candidate undergoes an initial assessment and induction, leading to an agreed individual learning plan (ILP)/action plan
• the work of all personnel contributing to the delivery and assessment of the programme is sampled by a range of methods
• records of all sampling activities are monitored, maintained and made available for external verification
• where several members of staff are involved in the delivery and assessment of the qualifications, there is a consistent interpretation of the requirements through standardisation activities and that these are documented
• all staff carrying out delivery and assessment are familiar with and understand the unit requirements
• an appropriate referral policy is in place
• candidate evidence is clearly organised, accessible and translated (if required) into English for the External Verifier.

Further details of centre staff roles are provided under Section 2 Key Roles in Centre guide – Delivering International Qualifications.

External Verifier (EV)
External quality assurance for the qualification will be provided by the City & Guilds external verification process.

EVs are appointed by City & Guilds to approve centres, and to monitor the assessment and internal quality assurance carried out by centres. External verification is carried out to ensure that assessment is valid and reliable, and that there is good assessment practice in centres. When required, EVs should be able to communicate to candidates via a translator.
To carry out their quality assurance role, EVs must have appropriate occupational and verifying knowledge and expertise. They attend training and development designed to keep them up-to-date, facilitate standardisation between Verifiers and share good practice.

The role of the EV is to

- make approval visits/recommendations to confirm that centres can satisfy the approval criteria
- help centres to develop internal assessment and evidence evaluation systems that are fair, reliable, accessible and non-discriminatory
- ensure that IV’s are undertaking their duties satisfactorily
- monitor internal quality assurance systems and sampling, including direct observation, assessment activities, methods and records
- approve centre set model questions to knowledge questions
- sample knowledge answers, reports and evidence requirements
- check claims for certification to ensure they are authentic, valid and supported by auditable records
- act as a source of advice and support to centres, including help with interpretation of standards
- promote best practice
- provide prompt, accurate and constructive feedback to all relevant parties on the operation of centres’ assessment systems
- confirm that centres have implemented any corrective actions required
- report back to City & Guilds’ head office or the relevant Branch Office
- maintain records of centre visits and make these available for auditing purposes.
4 Recording assessment and evidence

Simulation
Evidence for this award should be obtained from the workplace where the activities or outcomes can be assessed and are clearly attributable to the candidate. However, in certain circumstances, replication of work activities may be acceptable. Simulation is allowed for any of the units in this qualification, and if deemed necessary, Assessors must be confident that the environment replicates the workplace to such an extent that skills gained will be fully transferable to the workplace.

Assessors must clearly identify those aspects of the workplace that are critical to performance, and make sure that they have been replicated satisfactorily. Where replication is involved, Assessors must obtain agreement with Internal and External Verifiers before assessing any candidates.

Examples of critical aspects include
- environmental conditions such as noise levels, lighting conditions and the presence of hazards
- the use of industrial equipment and procedures
- pressure of work, such as time constraints and repetitive activities
- carrying out work on actual products and the consequences of making mistakes
- customer/supplier/departmental relationships.

Performance evidence requirements
Usually evidence of candidate performance will be derived from Assessor observation and/or testimony from an expert witness of the candidate carrying out work activities in the workplace.

Practical evidence must be the main form of evidence gathered. In order to demonstrate consistent, capable performance for a unit, a minimum of two separate practical observations will be required to show that the tasks reflected by the unit have been carried out to the stated standards. The knowledge and outcomes specified for each unit must be covered (e.g. four from a choice of six). It is possible that some of the outcomes in each unit are covered more than once. If, however, the two examples of practical evidence are not sufficient to cover all the specified outcomes, then further examples of practical evidence will be required to ensure that coverage is achieved.

Assessors must make sure that the evidence provided reflects the candidate's capability and not just the achievement of the training programme.

In cases of emergency, a breach of confidentiality/privacy or a dangerous working environment the following evidence can be used with agreement from the EV
- products of the candidate's work, such as items that have been produced or worked on, documents produced as part of a work activity, records or photographs of the product.

If there is any doubt as to what constitutes suitable evidence, the EV should be consulted.

Knowledge evidence
In addition to the knowledge requirements being positively inferred from an Assessor or expert witness observing the practical tasks the candidate must be formally questioned on knowledge and understanding, using either short written answer or oral types of questions. The questions should only relate to the specific areas defined by the outcomes for this unit.
Assessors must carefully plan all types of questioning procedures beforehand. The actual questions (oral and written) must be kept under secure conditions and only made available to the candidates during the assessment process. Assessors should ask enough questions to be able to determine that the candidate has an appropriate level of knowledge and understanding as required by the unit, examples of these questions can be found below

Unit 003
Element: Explain their responsibilities where health, safety and the environment are concerned, including the limits of their personal and legal responsibility. The candidate must have experience of the relevant regulations, safe working practices and procedures needed within the workplace.
Question: What regulations and legislation cover your employment?

Unit 041
Element 7: Explain the suitable processes and waste disposal procedures in relation to procedures, legislation and regulation for waste removal.
Question: Why are these controls related to waste disposal?

Unit 054
Element: Explain engineering illustrations and all related specifications.
Question: What is the purpose of engineering specifications?

The candidates will retain a copy of their results, including comments made by the Assessor during oral questioning. Assessors must make the questions available to Verifiers so that the latter can compare them against the results sheets held by the candidates.

The knowledge evidence should be referenced in a similar fashion to that used for practical evidence.

Oral questions need to be recorded with their answers within the candidate’s file/portfolio of evidence. An Evidence Reference Form (Appendix 1) and an Underpinning Knowledge Recording Form (Appendix 2) must be completed to identify to which unit evidence is referenced and to ensure quality for verification purposes. All evidence should be presented to the EV in English.

Completing the unit checklists
The candidate must carry out at least two separate assessment tasks. All evidence of the candidate meeting the practical and knowledge requirements for each unit must be clearly recorded and referenced on the Evidence Reference Form (Appendix 1). In addition to the unit checklist, the required evidence must also contain

- actual product evidence where practicable— e.g. if it is an actual product for customer use. Photographs or videos may be used in lieu provided they show the skill areas in sufficient detail for the Verifiers (Internal and External) to make a decision regarding the practical standards achieved
- a work sheet (centre set) that clearly lays down the required product specification in terms of materials, tolerances and any time restrictions, plus a drawing.

Note: in cases of industrial confidentiality or sensitivity then it may be permissible to exclude certain items from the evidence, but a description of the general nature of the work/activity must be provided. In cases of doubt the EV should be consulted about the validity of a proposed assessment before the candidate commences any such work.
A report that clearly identifies that the product has been reliably tested against the specification. If there are any discrepancies of a non-critical nature then the assessment may be deemed acceptable provided that there is a statement to this effect signed by a duly appointed and responsible person.

A brief report, prepared by the candidate, that identifies any hazards or difficulties associated with the work and how these were dealt with. It should also highlight any specific requirements or special skill areas that were involved e.g. Non standard tools, tool and work holding methods (use of jigs and fixtures etc.) Note that, where relevant, some aspects of this report could also form part of the required knowledge evidence and should be signed and dated by the candidate.
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## Appendix 1  Evidence Reference Sheet

Candidate name ................................................................. ................................................................. .................................................................

City & Guilds enrolment number ................................................................. ................................................................. .................................................................

Unit number/title .................................................................................................................. ................................................................. .................................................................

<table>
<thead>
<tr>
<th>Unit /outcome</th>
<th>Evidence item no.</th>
<th>Practical skills (✓)</th>
<th>Unit /outcome</th>
<th>Evidence item no.</th>
<th>Evidence Type (W/O)</th>
<th>Underpinning knowledge (✓)</th>
</tr>
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<td>1 2 3 4 5 6 7 8 9 10</td>
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<td>1 2 3 4 5 6 7 8 9 10</td>
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<td>1 2 3 4 5 6 7 8 9 10</td>
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**Key:**  
W=Written Questioning  O=Oral Questioning

Assessor name: ................................................................. Assessor/Nominated Observer’s signature: ................................................................. Date: .................................................................

Candidate name: ................................................................. Candidate signature: ................................................................. Date: .................................................................
## Appendix 2  Underpinning Knowledge Recording Form

<table>
<thead>
<tr>
<th>Unit/outcome</th>
<th>Question</th>
<th>Answer</th>
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Assessor Name: ......................................................

Assessor/Nominated Observer's signature: ........................................... Date: .........................

Candidate Name: .................................................................

Candidate signature: ............................................................ Date: .............................
Appendix 3  Verification Declaration Form

I confirm that the evidence listed for this unit is authentic and a true representation of my own work.

Candidate signature: ……………………………………………………………………………… Date: …………………………………..

I confirm that the candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.

Assessor/Nominated Observer's signature: …………………………………………………………….. Date: …………………………………..

I confirm that the candidate’s sampled work meets the standards specified for this unit and may be presented for external verification and/or certification.

Internal verifier signature: ……………………………………………………………….. Date: …………………………………..
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