

Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Installation Management

Specification

Competence-based qualifications

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Issue 1

Edexcel, BTEC and LCCI qualifications

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Welcome

With a track record built over 40 years of learner success, our BTEC International qualifications are recognised internationally by governments, industry and higher education.

What are BTEC International Specialist and Professional qualifications?

These BTEC qualifications are available at Levels 1–3 (Specialist) and at Levels 4–7 (Professional). The qualifications are designed to have one of two different purposes: some aim to give learners the knowledge and/or skills that they need to prepare for employment in a sector or job role; others are competence-based qualifications.

What are competence-based qualifications?

Competence-based qualifications are work-based qualifications that allow learners to develop and demonstrate their competence in the area of work or job role to which the qualification relates. Completing the qualification therefore provides evidence that learners are fully competent in the job role.

Learners will work towards their qualification in the workplace or (if permitted by the assessment requirements) in settings that replicate the working environment. Colleges, training centres and/or employers can offer these qualifications as long as they have access to appropriate physical and human resources and have the necessary quality assurance systems in place.

Sizes of qualification

Pearson estimates the number of guided learning hours (GLH) that will be needed for centre staff to deliver the qualification. This includes all training that involves centre staff in teaching and supervising learners, as well as all assessment activities.

BTEC Specialist and Professional qualifications are available in the following sizes:

Award – a qualification with a GLH value of 10–120 hours

Certificate – a qualification with a GLH value of 121–369 hours

Diploma – a qualification with a GLH value of 370 or above.

Collaborative development

These qualifications have been developed with input from industry experts. We are grateful to all the individuals and organisations who generously shared their time and expertise to help us develop these new qualifications.

Contents

Welcome	1
What are BTEC International Specialist and Professional qualifications?	1
What are competence-based qualifications?	1
Sizes of qualification	1
Collaborative development	2
Introduction to BTEC International competence qualifications for the oil and gas sector	1
What other qualifications are available?	1
What else does this specification contain?	1
Overview of qualification sizes and purposes in the oil and gas suite	2
1 Qualification purpose and progression	4
Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Installation Management	4
2 Qualification summary and key information	5
3 Structure	6
Qualification structure	6
4 Units	7
Understanding your units	7
Index of units	9
Unit 1: Manage Emergency Responses	11
Unit 2: Manage Health, Safety, Environment and Security	19
Unit 3: Manage Information and Decision Making	29
Unit 4: Manage Production and Maintenance Operations	35
Unit 5: Manage Simultaneous Operations	43
Unit 6: Manage Finance and Human Resources	49
Unit 7: Manage Operations and Production Plans	55

5	Assessment	60
	Internal assessment	60
	Assessment rules	61
	Types of evidence	61
	Assessment of knowledge and understanding	61
6	Administrative arrangements	62
	Introduction	62
	Learner registration and entry	62
	Access to assessment	62
	Administrative arrangements for assessment	63
	Dealing with malpractice in assessment	64
	Certification and results	66
	Additional documents to support centre administration	66
7	Quality assurance	67
	Centre and qualification approval	67
	Continuing quality assurance and standards verification	67
	Appendix A: Assessment rules	69
	Appendix B: Structures of the oil and gas qualification suite at a glance	73

Introduction to BTEC International competence qualifications for the oil and gas sector

This specification contains the information you need to deliver the Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Installation Management.

This qualification is part of a suite of oil and gas qualifications offered by Pearson.

The suite of oil and gas frontline production operations qualifications has been developed in collaboration with industry experts. The qualifications are designed to cover the minimum competence standards to meet the job requirements for key health, safety and environmental (HSE)-critical roles in the oil and gas industries.

What other qualifications are available?

In the oil and gas sector, the other qualifications are:

- Pearson BTEC International Level 2 Specialist Diploma for Process Technicians in Oil and Gas Facilities
- Pearson BTEC International Level 2 Specialist Diploma for Electrical Technicians in Oil and Gas Facilities
- Pearson BTEC International Level 2 Specialist Diploma for Instrument Technicians in Oil and Gas Facilities
- Pearson BTEC International Level 2 Specialist Diploma for Mechanical Technicians in Oil and Gas Facilities
- Pearson BTEC International Level 3 Specialist Diploma in Control Room Operations in Oil and Gas Facilities
- Pearson BTEC International Level 3 Specialist Diploma in Electrical Engineering Operations in Oil and Gas Facilities
- Pearson BTEC International Level 3 Specialist Diploma in Instrument Engineering Operations in Oil and Gas Facilities
- Pearson BTEC International Level 3 Specialist Diploma in Mechanical Engineering Operations in Oil and Gas Facilities
- Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Facility Management.

These qualifications are not regulated in England.

What else does this specification contain?

This specification signposts the other essential documents and support that you need as a centre in order to deliver, assess and administer the Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Installation Management, including the staff development required. A summary of all essential documents is given in *Section 6 Administrative arrangements*.

The information in this specification is correct at the time of publication.

Overview of qualification sizes and purposes in the oil and gas suite

Level 2 qualifications

Title	Size and structure	Summary purpose
Pearson BTEC International Level 2 Specialist Diploma for Process Technicians in Oil and Gas Facilities	605 GLH. Six mandatory units.	This qualification allows learners to demonstrate their occupational competence as a process technician.
Pearson BTEC International Level 2 Specialist Diploma for Electrical Technicians in Oil and Gas Facilities	540 GLH. Six mandatory units.	This qualification allows learners to demonstrate their occupational competence as an electrical technician.
Pearson BTEC International Level 2 Specialist Diploma for Instrument Technicians in Oil and Gas Facilities	550 GLH. Six mandatory units.	This qualification allows learners to demonstrate their occupational competence as an instrument technician.
Pearson BTEC International Level 2 Specialist Diploma for Mechanical Technicians in Oil and Gas Facilities	610 GLH. Six mandatory units.	This qualification allows learners to demonstrate their occupational competence as a mechanical technician.

Level 3 qualifications

Title	Size and structure	Summary purpose
Pearson BTEC International Level 3 Specialist Diploma in Control Room Operations in Oil and Gas Facilities	630 GLH. Three mandatory units plus optional units worth at least 280 GLH.	This qualification allows learners to demonstrate their occupational competence as a control room operator.
Pearson BTEC International Level 3 Specialist Diploma in Electrical Engineering Operations in Oil and Gas Facilities	500 GLH. Five mandatory units.	This qualification allows learners to demonstrate their occupational competence as an electrical technician engineer.
Pearson BTEC International Level 3 Specialist Diploma in Instrument Engineering Operations in Oil and Gas Facilities	460 GLH. Four mandatory units.	This qualification allows learners to demonstrate their occupational competence as an instrument technician engineer.
Pearson BTEC International Level 3 Specialist Diploma in Mechanical Engineering Operations in Oil and Gas Facilities	480 GLH. Four mandatory units.	This qualification allows learners to demonstrate their occupational as a mechanical technician engineer.

Level 4 qualifications

Title	Size and structure	Summary purpose
Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Facility Management	At least 810 GLH. Four mandatory and two optional units.	This qualification allows learners to demonstrate their occupational competence when managing oil and gas production facilities. It also prepares them to deputise for the installation manager in emergencies.
Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Installation Management	1020 GLH. Seven mandatory units.	This qualification allows learners to demonstrate their occupational competence as the manager of oil and gas installations. This includes managing production facilities on-site and any supporting facilities on- and off-site.

An overview of the structures of these qualifications can be found in *Appendix B: Structures of the qualification suite at a glance*.

1 **Qualification purpose and progression**

Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Installation Management

Who is this qualification for?

This qualification is for learners who are working as an acting or deputy operations installation manager (OIM) in oil and gas installations. They will be working towards becoming an operations installation manager when they have completed the qualification. This role includes managing production facilities on-site and any supporting facilities on- and off-site.

Completing Units 1–3 fulfils the minimum requirements for an individual to assume the roles of site emergency coordinator (SEC) or on-scene commander (OSC) in the event of major emergencies.

What could this qualification lead to?

This qualification supports career progression. The main progression route is to operations installation manager, but learners who have completed the qualification may also progress on to other senior management positions in the organisation, such as senior operations or asset manager, responsible for a cluster of assets and installations.

2 Qualification summary and key information

Qualification title	Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Installation Management
Operational start date	1 April 2020
Entry requirements	<p>Learners must be employed in a role that allows them to demonstrate the knowledge and skills as part of their normal work activities.</p> <p>Learners must also have:</p> <ul style="list-style-type: none"> an undergraduate engineering degree (BSc/BEng or equivalent) with a minimum of three years' experience working in the oil and gas sector <p>OR</p> <ul style="list-style-type: none"> an engineering diploma (Level 3 or equivalent) with a minimum of 10 years' experience working in the oil and gas sector.
Guided Learning Hours (GLH)	1020
Assessment	Portfolio of evidence (internal assessment)
Grading information	The qualification and units are graded pass/fail.

3 Structure

Qualification structure

Learners will need to meet the requirements outlined in the table below before the qualification can be awarded.

Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Installation Management		
Unit number	Unit title	GLH
Mandatory units - learners must achieve all seven units		
1	Manage Emergency Responses	150
2	Manage Health, Safety, Environment and Security	150
3	Manage Information and Decision Making	140
4	Manage Production and Maintenance Operations	150
5	Manage Simultaneous Operations	150
6	Manage Finance and Human Resources	130
7	Manage Operations and Production Plans	150

4 Units

Understanding your units

The units in this specification set out our expectations of assessment in a way that helps you to prepare your learners for assessment. The units help you to undertake assessment and quality assurance effectively.

Each unit in the specification is set out in a similar way. This section explains how the units work. It is important that all teachers, assessors, internal verifiers and other staff responsible for the programme review this section.

Section	Explanation
Unit number	The number is in a sequence in the specification. Where a specification has more than one qualification, numbers may not be sequential for an individual qualification.
Unit title	This is the formal title that we always use, and it will appear on learners' certificates.
Level	All units and qualifications have a level assigned to them. The levels correspond with the levels used in the UK's Regulated Qualification Framework.
Unit type	This says if the unit is mandatory or optional for the qualification.
Guided Learning Hours (GLH)	Guided Learning Hours (GLH) is an estimate of the number of hours that will be needed for a typical learner to achieve the unit. GLH include all training involving centre staff in teaching and supervising learners, as well as all assessment activities.
Unit summary	This summarises the purpose of the unit.
Unit assessment requirements	This section outlines any requirements for the assessment of the unit.
Range statements	Range statements specify the scope and contexts to which the assessment criteria apply. All items in the range must be covered, except for items that follow an 'e.g.'
Learning outcomes	The learning outcomes set out what a learner must know, understand or be able to do as the result of a process of learning.
Assessment criteria	The assessment criteria specify the standard the learner is required to meet to achieve a learning outcome. Space is provided to record the date and type of evidence when the assessment criteria have been evidenced.
Declarations	This section is signed and dated by the learner and assessor after all the assessment criteria have been evidenced. If sampled, it must be signed and dated by the internal verifier.

Index of units

This section contains all the units developed for these qualifications. Please refer to *page 6* to check which units are available.

Unit 1:	Manage Emergency Responses	11
Unit 2:	Manage Health, Safety, Environment and Security	19
Unit 3:	Manage Information and Decision Making	29
Unit 4:	Manage Production and Maintenance Operations	35
Unit 5:	Manage Simultaneous Operations	43
Unit 6:	Manage Finance and Human Resources	49
Unit 7:	Manage Operations and Production Plans	55

Unit 1: Manage Emergency Responses

Level: 4

Unit type: **Mandatory**

Guided learning hours: **150**

Unit summary

Oil and gas installation managers may, from time to time, be faced with situations where an emergency response is required, and, as the most senior member of staff in the facility, it will be their responsibility to manage the response.

The complex products, processes and technologies used within the oil and gas industry will affect the nature of emergencies and the type of response that is required. Oil and gas installation managers must be able to assess situations accurately and respond accordingly. They also need to ensure the effectiveness of others who have specific responsibilities to provide emergency responses. By managing emergency responses successfully, oil and gas installation managers can control situations and minimise the problems that arise.

Unit assessment requirements

All learning outcomes

For all assessment criteria, evidence must relate to at least **three** of the following:

- fire
- explosion
- high-pressure release of hydrocarbons
- structural failure
- adverse weather conditions
- helicopter incidents
- vessel collisions
- well blowout and well control failures
- failure of safety-critical equipment/systems.

Learning outcomes 2, 3, 4 and 5

Simulation is permitted in learning outcomes 2, 3, 4 and 5, but it must be carried out in a realistic working environment in line with the requirements of Section 2 of the *Assessment Rules* (see *Appendix A*).

Learners must be assessed on **three** types of scenario in each of these learning outcomes, defined as follows:

- Type A: major incidents
- Type B: escalating major incidents
- Type C: incidents that lead to prepare-to-abandon platform.

Range statements

The range statements must be read in conjunction with the assessment criteria to which they relate. All items in the range must be covered, except for items that follow an 'e.g.'

1 Be able to manage emergency response preparations in an oil and gas production facility

1.1 Supply information to personnel:

- accurate description of incidents
- summary of actions taken by self
- clear expectations of actions required by personnel, both emergency team members and staff.

1.2 Perform drills:

- to test the readiness of emergency response team members
- ensure effective communication during emergency drills
- maintained and up-to-date competence records
- conducted emergency responses regularly to ensure staff are prepared for worst case scenario.

1.3 Assess personnel during drills:

- all search and rescue team (SERT) members, including muster checkers, coxswain, radio operator, first aiders, first aid firefighters and medics.

1.4 Action plan for potential emergencies:

- major emergencies
- readiness of action plans to be tested during emergency drills as part of assessment criteria 1.2 and 1.3.

*(Note: The action plan must cover a combination of at least **three** types of the emergency. For the other types of emergency, learners must explain what the action plan would contain.)*

1.5 Assess readiness of equipment for emergency responses:

- first aid firefighting facilities
- breathing apparatus (BA) sets, including emergency back ups
- liferaft
- liftboat
- escape rope
- first aid facilities.

2 Be able to communicate effectively during an emergency situation in an oil and gas production facility

2.1 Issue information:

- clear at point of issuing
- respond quickly and efficiently.

2.2 Respond to information received:

- initiate platform alarm in a timely manner
- provide regular updates to relevant people, including emergency supports.

2.3 Use suitable tools:

- public address (PA) system
- radios
- satellite phones.

2.4 Barriers to effective communication:

- information overload
- stressed staff
- alarms (noises)
- taking time out during emergencies.

2.5 Report critical events:

- clear and concise updates of incident
- to personnel on board (POB)
- to emergency coordinator at the control centre
- in accordance with company policies and guidelines.

3 Be able to maintain an understanding of emergency situations in an oil and gas production facility

3.1 Emergencies and potential escalations:

- recognise changes to emergency situations
- recognise escalations to emergency situations, e.g. from Type A to Type B, or Type B to Type C
- evaluate impact of changes on personnel, environment and facilities.

3.2 Impact of changes on critical situations:

- location, e.g. process areas, wellheads vs living accommodation modules
- effects on personnel movement, e.g. escape routes
- actions required of emergency response personnel.

3.3 Assessment of casualties:

- number
- location
- condition.

3.4 Assess evacuations:

- potential escape routes
- choice of alternative mustering point for evacuation
- best methods, e.g. lifeboat or standby boat.

3.5 Records:

- accurate record of incidents
- up-to-date status of emergency support, e.g. availability of helicopter, specialist supports.

4 Be able to implement an effective response to an emergency situation in an oil and gas production facility

4.1 Critical situations:

- actual
- developing
- potential.

4.2 Activate alarms:

- in a timely manner
- clear and concise instructions via public address (PA) system.

4.3 Instructions to control emergency situations:

- response to emergencies
- response accordance to emergency response and contingency plan
- clear understanding of own role and priorities during emergencies to protect lives, environment and facilities.

4.4 Monitor emergencies to minimise further risks:

- personnel
- facility
- environment.

4.5 Direct personnel to handle emergency situation:

- clear strategy to control the situation
- command and control mode with instructions
- utilise resources effectively within the team.

5 Be able to maintain own effectiveness and that of others when dealing with an emergency situation in an oil and gas production facility

5.1 Communicate authoritatively to personnel:

- communicate confidently
- use a clear strategy and plan to deal with situation
- adopt a command-and-control approach when communicating.

5.2 Take action to deal with impaired function of team members:

- recognise issues with team members with impaired capacity, e.g. stressed or panic responses
- take immediate action to remove individuals with impaired capacity
- replace emergency response roles using back up.

5.3 Control factors that reduce the capacity of individuals:

- stress management of self and others
- recognition of sources of stress in others, e.g. fear and other factors that might jeopardise the emergency situation
- isolation of sources of stress to the individual by reassigning roles.

5.4 Demonstrate leadership:

- demonstrate a clear understanding of emergency situation
- communicate the strategy and plan to deal with emergencies effectively
- remove non-essential personnel from high risk areas, e.g. to safe haven at facility
- exercise command-and-control strategy for effective execution of instructions
- display effective demeanour throughout the emergency to instil confidence in others.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to manage emergency response preparations in an oil and gas production facility	1.1	Supply information to relevant personnel for the preparation of emergency responses			
		1.2	Perform drills and exercises regularly in accordance with oil and gas site-specific emergency procedures			
		1.3	Assess personnel that have been coached in emergency responses during drills and exercises			
		1.4	Action plan for potential emergencies for relevant personnel			
		1.5	Assess readiness of equipment for emergency responses in accordance with relevant procedures			
2	Be able to communicate effectively during an emergency situation in an oil and gas production facility	2.1	Issue information and instructions to relevant personnel during an emergency situation			
		2.2	Respond to information received in an emergency situation			
		2.3	Communicate authoritatively using suitable tools in an emergency situation			
		2.4	Resolve barriers to effective communication in an emergency situation			
		2.5	Report critical events in accordance with oil and gas company policies			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Be able to maintain an understanding of emergency situations in an oil and gas production facility	3.1	Recognise emerging emergencies and signs that situations are escalating			
		3.2	Monitor changes to critical situations and their impact during emergency			
		3.3	Assess casualties in emergency situations			
		3.4	Assess evacuation options in emergency situations			
		3.5	Maintain an accurate record of events during emergency situations			
4	Be able to implement an effective response to an emergency situation in an oil and gas production facility	4.1	Identify critical situations in an emergency response			
		4.2	Activate alarms in relevant areas within the facility			
		4.3	Issue instructions to control the emergency in accordance with operating and contingency plan requirements			
		4.4	Monitor emergencies to minimise further risk			
		4.5	Direct personnel to handle an emergency situation in an effective manner			
5	Be able to maintain own effectiveness and that of others when dealing with an emergency situation in an oil and gas production facility	5.1	Communicate authoritatively to emergency response personnel in an emergency situation			
		5.2	Take action when the capacity of individuals to function in an emergency is impaired			
		5.3	Control factors that reduce the capacity of individuals to function in an emergency			
		5.4	Demonstrate leadership and instil confidence in others during emergencies			

Declarations

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

Learner name: _____

Learner signature: _____ Date: _____

I confirm that the evidence for this unit is authentically that of the learner whose name and signature appears above. The assessment has been carried out in accordance with any specified assessment requirements for the unit and qualification.

Assessor name: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____

(if sampled)

Unit 2: Manage Health, Safety, Environment and Security

Level: 4

Unit type: **Mandatory**

Guided learning hours: **150**

Unit summary

The unit allows learners to develop the knowledge, understanding and skills that a manager needs to deal effectively with health, safety, environment and security.

Oil and gas facilities are hazardous environments and need to function safely and securely. Policies and procedures in relation to health and safety need to be implemented rigorously. Oil and gas production facilities use equipment that needs to be secured against accidental and malicious damage. Procedures must be enforced to ensure that only authorised personnel are allowed in the facilities or specific areas within the facilities.

Managers may find that they are the most senior member of staff in the facility and need to understand the arrangements for dealing with incidents and accidents that may occur. By managing health, safety and security in the environment, managers will be able to promote efficient oil and gas facility production operations.

Unit assessment requirements

This unit must be assessed using evidence from real work activities. For further details, please refer to *Appendix A: Assessment rules*.

Simulation is **not** permitted for this unit.

Range statements

The range statements must be read in conjunction with the assessment criteria to which they relate. All items in the range must be covered, except for items that follow an 'e.g.'

1 Be able to manage safety within an oil and gas production environment

1.1 Safe working practices:

- apply company safety management systems at work, including:
 - hazards and effects management procedure (HEMP)
 - job hazards analysis
 - Permit to Work system
 - frontline barrier management (FLBM)
 - HSE procedures and guidelines
- conduct inspections, reviews and safety audits of own installation.

1.2 Hazard elimination:

- apply job hazards analysis
- ensure effectiveness of toolbox meetings
- ensure location of HSE safety cases are updated and applied
- strict compliance with Permit to Work system.

1.3 Lead safety inspection, reviews and audits:

- comply with company HSE audit plan for own installation
- lead inspections, reviews and safety audits of own installation
- share outcomes of lessons learnt from inspections, reviews and audits.

1.4 Close action points arising from inspection, reviews and audits:

- allocate resources to ensure the close up of all action items arising from inspections, reviews and audits
- monitor action items based on agreed priorities.

1.5 Promote contractor safety:

- ensure the same standards of safety standard for contractors working in own installation
- actively promote safety management systems and culture in contractor teams through regular safety talks, sharing of safety news, alerts and updates
- ensure visible management involvement through regular walkabouts among contractor teams.

1.6 Application of hazard management during simultaneous operations (SIMOPS) planning:

- operations input into SIMOPS plan
- formal endorsement of SIMOPS by operations installation manager prior to implementation
- in accordance with company guidelines for SIMOPS activities.

1.7 Check that facility HSE case is:

- up to date
- used by staff.

2 Be able to manage occupational health in an oil and gas production environment

2.1 Instructions to comply with company occupational health standards:

- engage staff with organisational health standards
- set clear individual targets to achieve health standards, e.g. BMI, noise compliance
- display support and guidance materials.

2.2 Promoting health awareness:

- regular personal medical health checks for all staff working in fields
- regular exercise and organise team sport events
- body mass index (BMI) target for individuals
- exposure to noises
- exposure to hydrocarbon gases and solvents.

2.3 Lead occupational health inspections:

- allocate resources to monitor occupational health standards at the installation
- lead audit to evaluate hygiene in living quarters, kitchen and food storage areas
- regular training to ensure staff are aware of potential health and occupational health hazards.

2.4 Assess noise levels on-site:

- allocate resource to map noise levels on-site
- share findings of noise mapping.

2.5 Handling of toxic chemicals:

- store chemicals according to MSDS standards
- ensure toxic chemicals are clearly and visibly marked with warning signs.

2.6 Awareness of occupational health hazards:

- implementation of occupational health programmes
- share company occupational health standards and requirements.

2.7 Occupational health audits and follow-up:

- allocate resources for location occupational health audit
- identify follow-up actions and ensure timely close-up
- share findings with staff.

3 Be able to manage environmental quality processes within an oil and gas production site

3.1 Report unplanned discharges:

- spills
- sludges
- gases.

3.2 Verify controlled discharges:

- track controlled discharges from own installation against agreed limits
- report non-compliance in relation to controlled discharges.

3.3 Execute agreed environmental quality procedures:

- communicate agreed environmental quality procedures to staff
- manage operations in strict compliance with agreed procedures
- report compliance and monitor deviations.

3.4 Segregation of materials for disposal on-site:

- in accordance with company requirements
- compliance with any regulatory requirements.

3.5 Lead environment audits:

- allocate resources for environment audits of own installation
- identify areas for improvement and follow-up actions
- monitor audit follow-up until all action items are resolved
- share learning from audits.

3.6 Report all environmental issues:

- in a timely manner
- via company environment focal points.

4 Be able to investigate incidents and accidents within an oil and gas production environment

4.1 Incident classifications:

- evaluate incidents at own location based on risk matrix
- determine classification of incident (class 1, 2, 3, or 4)
- incident types (loss of personnel, assets, environment or near misses)
- classification of injury (fatality, permanent or partial disability, lost time, restricted or medical treatment case or first aid cases)
- determine individual involvement, e.g. report only, lead or participate in investigation.

4.2 Notify relevant parties of incidents:

- notify relevant parties based on incident classification
- within timeframe stipulated in Incident reporting guidelines, e.g. within 24 hours for level 1 incidents and 14 days for level 2 incidents
- in accordance with company policy and procedures for incident and accident investigation and reporting guidelines.

4.3 Conduct preliminary investigations:

- allocate resources for preliminary investigation
- lead and conduct site investigations and obtain first-hand site evidence
- compile initial report and submit to relevant parties based on incident classification.

4.4 Incidents investigated as per company guidelines:

- all incidents are investigated
- reported
- follow through
- shared.

4.5 Report near misses:

- ensure all near misses are reported
- near miss incidents are tracked and monitored
- high potential (HIPO) near miss incidents investigated as per company guidelines.

4.6 Lead incident investigation:

- within area of own responsibility
- attended formal training on how to lead incident investigation.

5 Be able to manage the security of assets within the facility

5.1 Verify the passage of personnel on board:

- appoint focal point to check passage of all personnel to own installations
- track and maintain up-to-date information about personnel on board (POB)
- manage records of all personnel on board in accordance with company policy and guidelines.

5.2 Monitor movement of personnel between and within facilities:

- monitor movement of personnel between main facility and satellite facilities
- control journey management of personnel in transit between facilities.

5.3–5.4 Maintain security measures:

- maintain high alert
- monitor illegal trespassing by third parties
- ensure all fishing and other unauthorised vessels are prevented from encroaching within approved limits of all facilities.

5.5 Report all security matters:

- report breaches in accordance with company guidelines.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to manage safety within an oil and gas production environment	1.1	Ensure personnel use safe working practices in compliance with company policies			
		1.2	Take action to eliminate hazards to ensure safety			
		1.3	Lead on safety inspections, reviews and audits, in accordance with organisational plans			
		1.4	Close action points resulting from inspections, reviews and audits with minimum delay			
		1.5	Promote contractor safety within the production facility			
		1.6	Apply principles of hazard management in a structured manner during the planning of simultaneous operations			
		1.7	Check that the facility safety case is up to date with relevant information			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Be able to manage occupational health in an oil and gas production environment	2.1	Instruct personnel in how to comply with company occupational health standards			
		2.2	Promote personal health awareness			
		2.3	Lead on occupational health inspections			
		2.4	Assess noise levels against accepted levels for safe working			
		2.5	Ensure toxic chemicals are handled appropriately			
		2.6	Raise awareness with personnel of hazards that are injurious to health			
		2.7	Complete occupational health audits on a regular, scheduled basis identifying any follow-up actions			
3	Be able to manage environmental quality processes within an oil and gas production site	3.1	Report unplanned discharges in accordance with operational requirements			
		3.2	Verify that controlled discharges from the production site are achieved within prescribed limits			
		3.3	Carry out agreed environmental quality procedures in accordance with company policy			
		3.4	Ensure compliance with the requirements for the segregation of materials for disposal on-site			
		3.5	Lead on environmental audits on a regular, scheduled basis identifying any follow-up actions			
		3.6	Report all matters relating to environmental issues			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
4	Be able to investigate incidents and accidents within an oil and gas production environment	4.1	Classify incidents for investigation in accordance with company procedures			
		4.2	Notify relevant parties of incidents in accordance with company procedures			
		4.3	Complete preliminary investigations of incidents			
		4.4	Ensure all incidents are investigated, reports submitted to management and all action items are completed			
		4.5	Check that all near misses relating to incidents and accidents are reported			
		4.6	Lead incident investigations			
5	Be able to manage the security of assets within facility	5.1	Verify that the passage of personnel to facilities is in line with company policy			
		5.2	Monitor the movement of personnel between and within facilities			
		5.3	Maintain security measures to prevent trespassing to the facilities			
		5.4	Control fishing and other unauthorised vessels from encroaching within approved limits of all facilities			
		5.5	Report all security matters according to company procedures			

Declarations

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

Learner name: _____

Learner signature: _____ Date: _____

I confirm that the evidence for this unit is authentically that of the learner whose name and signature appears above. The assessment has been carried out in accordance with any specified assessment requirements for the unit and qualification.

Assessor name: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____

(if sampled)

Unit 3: Manage Information and Decision Making

Level: 4

Unit type: **Mandatory**

Guided learning hours: **140**

Unit summary

This unit gives learners the knowledge, understanding and skills that a manager in the oil and gas industry needs to exchange, use and manage information to support decision making and solve problems.

Oil and gas production activities are complex and generate a significant amount of information. Managers must deal with a large quantity of information and assess the quality of the information to support the decisions they make. Work is generally planned using information from different teams. This information needs to be communicated to appropriate personnel in a clear, timely and efficient manner to ensure continuity of operations.

Unit assessment requirements

This unit must be assessed using evidence from real work activities. For further details, please refer to *Appendix A: Assessment rules*.

Simulation is **not** permitted for this unit.

Range statements

The range statements must be read in conjunction with the assessment criteria to which they relate. All items in the range must be covered, except for items that follow an 'e.g.'

1 Be able to lead meetings on oil and gas production activities

1.1 Organise meetings:

- plan a clear agenda and invite attendees
- allocate resources to ensure successful meeting outcomes
- distribute materials before the meeting to avoid information download during meeting.

1.2 Purpose of meeting:

- identify issues for group discussion leading to problem solving.

1.3 Chair meetings:

- ensure sufficient time for discussion
- consider inputs from all parties
- invite contributions from all personnel
- allocate time for discussing topics in accordance with importance, urgency and complexity.

1.4 Leadership style:

- able to adapt leadership approach to address different issues, e.g. dominant versus consensus styles
- open to different views on issues
- good listening skills
- able to control time appropriately.

1.5 Communicate location work plans:

- clearly and in a timely manner
- secure commitment from all action parties to achieve plan.

1.6 Resolve problems:

- focus on meeting agenda for problem solving
- allow issue owners to explain causes of problem
- lead on problem solving to address issues
- identify action parties and follow-up.

1.7 Ensure appropriate recording:

- allocate resources to record notes/minutes
- ensure accurate and concise record of agreed action parties and timeline
- issue notes/minutes of meeting in a timely manner.

2 Be able to manage information to aid decision making for oil and gas production activities

2.1 Obtain accurate information relating to:

- future business operations, e.g. planned turnaround or simultaneous operations in own installation
- existing production operations, including issues and limitations, e.g. bottlenecks, availability of hardware and resources.

2.2 Interpret complex information:

- consider all options related to technical, engineering or production operations
- facilitate brainstorming of options to address issues
- prioritise options.

2.3 Decision making:

- establish selection criteria for possible options
- select and decide on options
- confirm choice and get commitment of all action parties to follow up
- allocate action parties with clear deadlines.

3 Be able to communicate information relating to oil and gas production decisions to relevant personnel

3.1 Share information with staff on production decisions from meetings:

- orally to staff affected for urgent action items
- written – the timely issue of meeting notes/minutes.

3.2 Advice to staff:

- in a timely manner
- current, relevant and accurate
- aligned to business requirements
- consistent with company policy, cost and resource constraints.

3.3 Share lessons learnt and best practice:

- lessons learnt from audits and reviews
- share HSE incidents, e.g. HSE alerts
- best practice from industry including competitors, e.g. production and maintenance practices, HSE performance
- presented in a manner, level and pace that is appropriate to the receiver.

4 Be able to use information technology to improve business operations

4.1 Use of information technology systems:

- recognise availability of IT data affecting own work
- analyse data trending
- use available IT systems to generate reports and analysis
- use of available IT resources, e.g. IT hardware and staff.

4.2 Use of computerised control system:

- extract appropriate reports from the computerised control system
- analyse process trends to identify plant process bottlenecks
- improve plant process operations by de-bottlenecking identified process issues.

4.3 Use of network systems:

- be fully aware of company approved network tools and systems
- use network tools to improve own and staff productivity, e.g. meetings, reports, information sharing.

4.4 Computer issues:

- awareness of IT capability and its associated IT security and data privacy issues
- timely recognition of IT breaches
- report and allocate resources to resolve IT issues.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to lead meetings on oil and gas production activities	1.1	Organise meetings with personnel who have a stake in the content of the meeting			
		1.2	Establish the purpose of meetings in relation to oil and gas production activities with other personnel			
		1.3	Chair meetings by controlling the focus of discussions			
		1.4	Demonstrate a leadership style that is appropriate for meetings			
		1.5	Communicate location work plans relating to oil and gas production activities			
		1.6	Resolve problems relating to oil and gas production activities in the meeting			
		1.7	Ensure appropriate recording of meeting outcomes			
2	Be able to manage information to aid decision making for oil and gas production activities	2.1	Obtain accurate information on factors affecting current and future business oil and gas production operations			
		2.2	Interpret complex information from all aspects affecting its production operations			
		2.3	Evaluate the validity and reliability of oil and gas production activity information to enable effective decision making			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Be able to communicate information relating to oil and gas production decisions to relevant personnel	3.1	Disseminate information to staff based on oil and gas production decisions agreed at meetings			
		3.2	Provide advice to staff that is consistent with business requirements			
		3.3	Share lessons learnt and best practice with peers and senior management			
4	Be able to use information technology to improve business operations	4.1	Use information technology systems for planning future work			
		4.2	Use computerised control systems within the oil and gas facility process control to enhance data acquisition			
		4.3	Use network systems for reporting and communication purposes			
		4.4	Direct all computer issues through the appropriate personnel			

Declarations

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

Learner name: _____

Learner signature: _____ Date: _____

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Assessor name: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____

(if sampled)

Unit 4: Manage Production and Maintenance Operations

Level: 4

Unit type: **Mandatory**

Guided learning hours: **150**

Unit summary

This unit gives learners the knowledge, understanding and skills a manager needs to ensure safe hydrocarbon extraction and production operations, including ensuring safe and efficient oil and gas production while the installation is undergoing major maintenance.

The installation manager must maintain a total overview of maintenance and production operations to ensure that all work is carried out safely and according to plan.

The installation manager needs to ensure that all personnel on board are informed of activities that are being carried out, including any preparations for emergency responses. The manager will make the installation safe so that work can be carried out, including isolation of the oil and gas installation facility to ensure technical integrity of the assets. The manager will also check and manage the reinstatement of oil and gas production facilities so that the installation is safe for start-up, including documenting all changes.

Unit assessment requirements

This unit must be assessed using evidence from real work activities. For further details, please refer to *Appendix A: Assessment rules*.

Simulation is **not** permitted for this unit.

Range statements

The range statements must be read in conjunction with the assessment criteria to which they relate. All items in the range must be covered, except for items that follow an 'e.g.'

1 Be able to manage the technical integrity of assets in an oil and gas production facility

1.1 Safeguarding of assets:

- in accordance with asset criticality
- assets to include process plant, trunk lines, wellhead, standby equipment and back-up systems.

1.2 Maintenance of assets:

- allocate resources to ensure timely implementation of maintenance (planned and corrective) of assets as per computerised maintenance schedules
- in accordance with company maintenance approach and procedures.

1.3 Functional testing of safeguarding systems:

- allocate resources to schedule and plan functional testing of all safeguarding systems
- prioritise functional tests according to criticality of equipment, e.g. safety-critical elements (SCE) must be tested without any compromise of quality or time
- ensure all staff involved in the functional testing of safeguarding systems and equipment are competent and where necessary certified.

1.4 Delays of production due to safeguarding testing:

- evaluate consequences of potential deferment as a result of activities, including unforeseen events, to safeguard the technical integrity of assets.

1.5–1.6 Perform functional testing and plan for repair of safeguarding systems:

- functional test critical equipment and systems as per agreed schedule
- record all functional test results and verify
- highlight deviations and issues with safeguarding systems that require changes
- plan for repair and improvement as required.

1.7 Obtain formal approval for changes:

- initiate appropriate plant change request (PCR)
- follow up changes after plant change request has been approved
- information on changes made and submitted in accordance with company procedures.

1.8 Documentation after changes:

- record all changes in red line mark-up drawings
- send mark-up drawings to office support staff for changes to drawings
- update installation record.

2 Be able to manage the shutdown and isolation of oil and gas production facilities

2.1 Enforce Permit to Work prior to shutdown and isolation of facilities:

- lead pre-activity meeting with shutdown teams
- reinforce importance of safety and allocate resource to ensure compliance
- enforce Permit to Work system in accordance with company requirements.

2.2 Pre-shutdown tests:

- hazards identified and controlled
- safety controls in place
- Permit to Work system enforced in accordance with company requirements
- check that controls are in place and relevant actions are taken to protect against shut down hazards.

2.3 Facility-specific briefing:

- site personnel briefed and roles clearly defined and allocated to ensure effective shutdown plan execution
- participate in site toolbox meeting.

2.4 Shut down facilities:

- activities executed in accordance with agreed plans.

2.5 Carry out positive isolation of the oil and gas facility:

- spading and positive isolation carried out and confirmed prior to shutdown activities
- plan of action created without causing danger or damage to the total field operation.

3 Be able to manage the reinstatement of oil and gas facilities after major maintenance

3.1 Hazard identification after major maintenance work:

- joint asset and maintenance teams carry out a post-activity review to confirm all maintenance activities are completed
- any outstanding items are identified with a clear follow-up plan to close
- identify any potential hazards arising from the major maintenance works.

3.2 Perform tests to confirm facility is safe:

- pre-start-up tests carried out to confirm that the facility and equipment are safe to return to service
- remedial actions for any defects identified and defects rectified
- tests carried out in accordance with operational requirements and safe working practice, including receiving and signing for handover certificates.

3.3 Reinstatement of facilities:

- start up facility in accordance with operational requirements and safe work practices.

3.4 Monitor actions taken in the reinstatement of facilities:

- monitor key process parameters to ensure full reinstatement of facilities
- in accordance with company procedures for reinstatement, e.g. duration of uninterrupted operations or run-in hours of major equipment.

3.5 Permit to Work audit after major maintenance work:

- allocate resources for on-site Permit to Work audit
- lead location Permit to Work audit and review findings
- share lessons learnt.

3.6 Documentation of facility changes after major maintenance:

- record all changes in red line mark-up drawings
- send marked up drawings to office support staff for changes to drawings
- update installation records.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to manage the technical integrity of assets in an oil and gas production facility	1.1	Prioritise safeguarding of assets			
		1.2	Manage maintenance of assets in accordance with operational procedures			
		1.3	Produce a plan for functional testing of all safeguarding systems that follows operation procedure guides			
		1.4	Account for delays relating to production and maintenance activities in appropriate plans			
		1.5	Manage functional testing of critical equipment in accordance with agreed schedules			
		1.6	Plan for repairs or improvements to equipment and systems after functional testing			
		1.7	Follow guidelines to obtain formal approval for change to the oil and gas facility before any improvements are carried out			
		1.8	Ensure all documentations is updated to include any changes in facilities			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
2	Be able to manage the shutdown and isolation of an oil and gas production facilities	2.1	Enforce a Permit to Work system prior to shutdown and isolation			
		2.2	Ensure that all tests and precautions are completed in preparation for shutdown			
		2.3	Carry out facility-specific briefings with relevant site personnel			
		2.4	Follow prescribed plan of action for shutdown of oil and gas facilities			
		2.5	Carry out positive isolation of the oil and gas facility following an approved spading plan			
3	Be able to manage the reinstatement of oil and gas production facilities after major maintenance	3.1	Check that the oil and gas facility is free of hazards after the completion of major maintenance work			
		3.2	Perform tests to confirm that the facility is safe to return to service			
		3.3	Implement the reinstatement of oil and gas facilities in accordance with operational requirements and safe working practices			
		3.4	Monitor actions taken in the reinstatement of facilities to minimise impact on the rest of the field operation			
		3.5	Conduct reviews and audits to ensure that a Permit to Work system is enforced in accordance with company requirements			
		3.6	Verify that all oil and gas facility changes are documented accurately and appropriately			

Declarations

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Learner name: _____

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Assessor name: _____

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(if sampled)

Unit 5: Manage Simultaneous Operations

Level: 4

Unit type: **Mandatory**

Guided learning hours: **150**

Unit summary

This unit gives learners the knowledge, understanding and skills that a manager in the oil and gas industry needs to manage simultaneous oil and gas operations to meet the requirements of safe hydrocarbon extraction and production operations.

The oil and gas installation manager has a key role during simultaneous operations as the 'person in charge' covering production, engineering and drilling operations. It is critical that the manager has a total overview of the entire operation and the capacity to direct all activities, to ensure safe operations within their area of accountability. The manager needs to ensure that all activities are planned and executed carefully with full input from their team.

Unit assessment requirements

This unit must be assessed using evidence from real work activities. For further details, please refer to *Appendix A: Assessment rules*.

Simulation is **not** permitted for this unit.

Range statements

The range statements must be read in conjunction with the assessment criteria to which they relate. All items in the range must be covered, except for items that follow an 'e.g.'

1 Be able to manage preparations for simultaneous operations (SIMOPS) activities

1.1–1.3 Preparation for SIMOPS activities:

- communicate key requirements on approved activities as outlined in the manual of permitted operations (MOPO)
- provide operation input to SIMOPS or relocation activities to ensure compliance with operations and health, safety and environment (HSE) requirements
- conduct emergency shutdown (ESD) functional tests to ensure compliance
- conduct joint pre-activity reviews with SIMOPS project team, including the need for securing integrity of current and adjacent wells and process systems
- conduct emergency drills based on SIMOPS scenarios and evaluate readiness of all personnel on board
- ensure all emergency response team members are trained and certified competent before SIMOPS commences.

1.4 Requirements during SIMOPS activities:

- operations – compliance with MOPO, recovery during concurrent activities, isolation and de-isolation requirements and key handover documents during SIMPOPS
- HSE – risks and barriers, safeguarding systems, security of installation (multiple facilities not under direct supervision) and risks associated with environment and health
- emergency response, including preparedness of SIMOPS crews and equipment.

2 Be able to manage the execution of SIMOPS activities

2.1 Approved procedures:

- SIMOPS or relocation procedures based on MOPO guidelines
- provide operations inputs to review SIMOPS or relocation documentation
- explain different SIMOPS and relocation requirements, e.g. simultaneous production and drilling (SIPROD), simultaneous production and commissioning (SIPCOM), simultaneous production and construction (SIPCON).

2.2 Control hazards:

- hand over affected operations facilities to execution project leader in accordance with handover procedures and guidelines, e.g. wells to drilling or wireline supervisors, production facilities to engineering company site representative (CSR)
- clarify roles of various parties from production, drilling and engineering departments during SIMOPS activities
- monitor cross functional activities to ensure all hazards are identified promptly and controlled
- chair cross functional location HSE meetings to include SIMOPS and support teams.

2.3 Communicate requirements:

- to all staff on agreed roles and responsibilities
- how simultaneous teams will interface with existing crews
- inform all personnel, including contractor staff, on emergency response requirements.

2.4–2.5 Conform with Permit to Work and operational requirements:

- single Permit to Work coordinator
- trained and certified Permit to Work applicants
- daily operational meeting with SIMOPS teams to cover all SIMOPS activities, including HSE issues and resource requirements.

3 Be able to manage the commissioning of new oil and gas production facilities

3.2 Pre-commissioning of new facilities:

- manage HSE during commissioning of new facilities, including relocation activities where applicable
- pre-activity shutdown review to include purging, spading list, hydrocarbon introduction, equipment endurance lists and acceptance requirements
- pre-commissioning checks of new facilities in accordance with operational requirements and safe working practices
- verify all specification data for new equipment before commissioning new oil and gas facilities.

3.3 Review interface of old and new facilities:

- technical integrity, e.g. no structural overload due to new integrated facilities
- operations integrity, e.g. no excessive pressure losses or incompatible back pressure
- ensure existing staff are trained on new equipment and facilities
- update operating procedures manual.

3.4 Commissioning new facilities:

- ensure compliance with safe working practices
- in accordance with company commissioning plan and guidelines
- confirm new facilities operate as per design, and agreed during pre-activity shutdown reviews
- sign and confirm handover of new facility.

3.5 Communications:

- with site teams on issues and progress for the commissioning of new facilities
- with office support staff on documentation of as-built new facilities and/or decommissioned facilities.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to manage preparations for simultaneous operations (SIMOPS) activities	1.1	Prepare for simultaneous activities based on the manual of permitted operations (MOPO) for scheduled activities within an oil and gas facility			
		1.2	Review planned work to ensure compliance with operational requirements within an oil and gas facility			
		1.3	Carry out necessary preparation to protect integrity of the facility during SIMOPS			
		1.4	Explain the requirements including those relating to operations and health, safety, environment (HSE) during SIMOPS activities			
2	Be able to manage the execution of SIMOPS activities	2.1	Manage work in accordance with approved procedures			
		2.2	Control all hazards in relation to simultaneous activities within the oil and gas facility			
		2.3	Communicate to all relevant personnel the requirements of simultaneous interfaces			
		2.4	Demonstrate that SIMOPS activities conform to current Permit to Work system and operational procedures			
		2.5	Exchange information during SIMOPS activities with relevant personnel			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Be able to manage the commissioning of new oil and gas production facilities	3.1	Issue work permits for the commissioning of new systems in accordance with the overall oil and gas facility commissioning plan			
		3.2	Carry out pre-commissioning of systems in accordance with operational requirements			
		3.3	Review interfaces with existing systems and equipment to ensure technical integrity and operations of the newly integrated facilities			
		3.4	Commission new facility as per commissioning plan			
		3.5	Communicate with relevant personnel to maintain safe operations			

Declarations

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Learner name: _____

Learner signature: _____ Date: _____

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Assessor name: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____

(if sampled)

Unit 6: Manage Finance and Human Resources

Level: 4

Unit type: **Mandatory**

Guided learning hours: **130**

Unit summary

This unit gives learners the knowledge, understanding and skills that a manager needs to exercise budgetary control and manage teams to ensure that work objectives are met.

Oil and gas installation managers need financial skills to set and manage budgets to ensure that operations are run within identified financial constraints. They also need to use these skills to take corrective or exploitative action and to report information accordingly.

Oil and gas installation managers need to build and maintain teams of employees who are responsible for undertaking tasks delegated to them. They need to understand how teams function and how best to manage them. Occasionally, managers need to deal with discipline and grievance issues in line with company policy and legal and regulatory frameworks.

Unit assessment requirements

This unit must be assessed using evidence from real work activities. For further details, please refer to *Appendix A: Assessment rules*.

Simulation is permitted for assessment criteria 2.2, 2.3 and 2.5. If simulation is *not* used, it is essential that steps must be taken to maintain the confidentiality of any evidence relating to individuals, for example by removing information that could result in identifying an individual.

Range statements

The range statements must be read in conjunction with the assessment criteria to which they relate. All items in the range must be covered, except for items that follow an 'e.g.'

1 Be able to develop and control oil and gas production facility operating budgets

1.1 Develop structured budgets:

- annual operating budgets
- capital expenditure budgets
- methodologies based on historic expenditures and/or zero-based approach based on needs
- cost elements, to include direct and indirect costs.

1.2 Monitor and control expenditure:

- monitor operating expenditures
- challenge indirect expenditures as appropriate
- propose and justify variance when needed
- be aware of own financial limits
- refer to superior when financial limits exceed own authority for approval.

1.3 Review and modify own budgets based on variance:

- track and review actual expenditures against plan
- adjust budgets to reflect realistic expenditures within company approved variance, e.g. change in business activities due to unforeseen changes
- seek leadership approval if own financial accountability is exceeded.

1.4 Ensure competitive pricing:

- comply with company guidelines for all price quotations, e.g. online bidding for selected fast-moving items
- ensure competitive price quotations for items not listed under online bidding
- record all selection decisions for future audit reference.

2 Be able to operate disciplinary and grievance procedures

2.1 Inform staff of company disciplinary and grievance procedures:

- timely communication to all staff on key HR procedures, e.g. alcohol and drug abuse, poor performance, absenteeism
- involve HR specialists and union representatives where applicable.

2.2 Identify and act promptly on staff discipline and grievance issues:

- early detection of issues
- confront and counsel individuals and prevent escalation of issues
- document improvements of individuals.

2.3 Carry out serious discipline and grievance proceedings:

- involve HR, legal and union staff as appropriate
- take appropriate action, e.g. initiate performance improvement process.

2.5 Documentation to ensure that information:

- is accurate, complete and accessible to authorised personnel
- is agreed by individuals and witness
- meets organisational HR procedures and guidelines.

3 Be able to manage human resources capability and performance to achieve overall work objectives

3.1 Assessment of team and individuals against work requirements:

- develop accurate job competence profiles for own installation
- conduct baseline competence assessment of individuals against job competence profile
- ensure sufficient competence within the team to cover all critical roles and jobs
- systematically develop competence of individuals and team to ensure workforce flexibility to achieve business goals
- learning budget and plan in place.

3.2–3.3 Group and individual contribution to performance assessment:

- introduce mechanism to encourage open feedback on performance for development, e.g. 360-degree feedback
- regular team performance review as a group in terms of achieving business goals
- regular and honest feedback by self to team on overall team performance
- introduce open scorecard concept if the workplace culture permits.

3.4–3.5 Implement and monitor team building strategy:

- team building development plan in place
- lead by example
- recognise staff based on team contributions
- review achievement of team culture using impartial third-party facilitator.

3.6 Coaching and counselling of staff:

- monitor staff development plan and coach as appropriate
- counsel staff with performance and/or development issues.

3.7 Conflicts between staff:

- deal with potential and actual conflicts
- demonstrate professionalism
- coach and counsel as appropriate.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to develop and control oil and gas production facility operating budgets	1.1	Prepare structured budgets that take account of current and future operational requirements			
		1.2	Monitor and control expenditure within agreed limits that conform to operational business plans			
		1.3	Modify an agreed budget during the accounting period when budgets are reviewed			
		1.4	Ensure competitive pricing from vendors to ensure value for money and fitness for purpose			
2	Be able to operate disciplinary and grievance procedures	2.1	Inform staff of company disciplinary and grievance procedures			
		2.2	Identify and act promptly on staff disciplinary and grievance issues			
		2.3	Carry out serious disciplinary and grievance proceedings with minimum delay			
		2.4	Recommend improvements to disciplinary and grievance procedures to the appropriate personnel			
		2.5	Document details of disciplinary and grievance proceedings and outcomes			

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
3	Be able to manage human resources capability and performance to achieve overall work objectives	3.1	Assess strengths and weaknesses of teams and individuals against work requirements			
		3.2	Implement mechanisms to encourage teams and individuals to contribute to performance assessment			
		3.3	Provide feedback on team and individual performance			
		3.4	Produce and implement a team building strategy that is aligned with overall business objectives			
		3.5	Monitor the team development strategy on a regular basis			
		3.6	Provide coaching and counselling to improve the performance of subordinates			
		3.7	Deal with conflicts between staff			

Declarations

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

Learner name: _____

Learner signature: _____ Date: _____

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Assessor name: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____

(if sampled)

Unit 7: Manage Operations and Production Plans

Level: 4

Unit type: **Mandatory**

Guided learning hours: **150**

Unit summary

Oil and gas installation managers need to constantly implement and manage improvements to oil and gas production and maintenance procedures. Reviews of operations and changes in technology and regulation, internal and external to the business, require changes to how operations and maintenance are carried out. Operational constraints provide parameters within which plans have to be formulated and implemented to optimise production and maintenance. Oil and gas operations need to be monitored and managed to ensure that production continues as planned and that problems within a manager's own area of responsibility are resolved.

This unit requires oil and gas installation managers to take proactive steps and improve the facility, production and maintenance performance of their own installation during normal operations. Managers will analyse all the relevant data that may be available to them either directly or indirectly through support functions.

Unit assessment requirements

This unit must be assessed using evidence from real work activities. For further details, please refer to *Appendix A: Assessment rules*.

Simulation is **not** permitted for this unit.

Range statements

The range statements must be read in conjunction with the assessment criteria to which they relate. All items in the range must be covered, except for items that follow an 'e.g.'

1 Be able to manage improvements in oil and gas operations within own area of accountability

1.1 Alterations to improve facility performance, e.g.:

- to improve plant operability due to facility design and products, e.g. high H₂S, CO₂
- to address equipment incompatibility due to changes in products, e.g. high sand or water content
- to reduce excessive unplanned discharges.

1.2 Impact:

- benefit analysis, e.g. financial, operations and/or technical integrity and safety
- assess the impact of improvements on department budget forecasts
- improvement in plant availability
- improvement to key maintenance indicators.

1.3 Implement agreed quality initiatives:

- issues and facility/system improvement identification of facility design or equipment
- facility improvement proposals (FIP) and management of change (MOC) request raised and approved
- implement improvement initiatives
- documentation and records.

2 Be able to optimise oil and gas production and maintenance activities within operational constraints

2.1 Facility optimisation initiatives:

- production improvements, e.g.:
 - process and production de-bottlenecking
 - improve availability of facility and systems
 - improve operations integrity
- maintenance improvements to improve operations integrity based on:
 - analysis of maintenance records from computerised management system, e.g. corrective to preventive maintenance (CM/PM) ratios, backlogs
 - analysis of data and trends of distributed control system.

2.2 Obtain approval for improvement initiatives:

- identify issues and operations optimisation initiatives
- raise facility improvement proposals (FIP) and management of change (MOC) request for approval.

2.3 Implement improvement initiatives:

- in accordance with company procedures and HSE practice
- ensure production availability is maintained throughout the implementation of optimisation initiatives
- update operations procedures following improvement initiatives
- communicate and record all changes.

3 Be able to monitor facility performance for optimum oil and gas production

3.1 Control facility system throughput:

- facility performance through key performance indicators, e.g. production rate, products qualities, HSE
- analyse improvement areas
- seek approval for changes
- monitor and implement changes.

3.2 Critical situations for **one** of the following:

- offshore: lower production due to poor reservoir performance (wells)
- terminals: tanker loading delays or tank top
- FLNG/FSO/FPSO: tanker loading delays or tank top.
- 3.3 Ensure production supply reliability for **one** of the following:
- offshore: validate well parameters against plan through well test and target letter
- terminal: tank management and offtake loading planning
- FLNG or FSO or FPSO: tank management, offtake loading planning.

Learning outcomes and assessment criteria

To pass this unit, the learner needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria outline the requirements that the learner is expected to meet to achieve the learning outcomes and the unit.

Learning outcomes		Assessment criteria		Evidence type	Portfolio reference	Date
1	Be able to manage improvements in oil and gas operations within own area of accountability	1.1	Propose alterations to the design of the facility and equipment to improve facility performance, using relevant procedures			
		1.2	Evaluate the impact of proposed improvements made to an oil and gas facility against overall field operation			
		1.3	Implement agreed quality initiatives as soon as practicable			
2	Be able to optimise oil and gas production and maintenance activities within operational constraints	2.1	Plan facility optimisation initiatives to minimise the impact on the rest of the field			
		2.2	Obtain approval through the formal change control process for optimisation initiatives before implementing			
		2.3	Implement optimisation initiatives			
		2.4	Supply information to appropriate departments as a result of changes introduced following optimisation initiatives			
3	Be able to monitor facility performance for optimum oil and gas production	3.1	Control facility systems throughput in a steady state condition to meet customer specifications			
		3.2	Maintain key process parameters in the event of critical situations			
		3.3	Ensure production supply reliability			

Declarations

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

Learner name: _____

Learner signature: _____ Date: _____

I confirm that the evidence for this unit is authentically that of the learner whose name and signature appears above. The assessment has been carried out in accordance with any specified assessment requirements for the unit and qualification.

Assessor name: _____

Assessor signature: _____ Date: _____

Internal verifier signature: _____ Date: _____

(if sampled)

5 Assessment

To achieve a pass for qualifications in this suite, the learner must achieve all the units required in the qualification structure.

Internal assessment

The units are assessed through an internally- and externally quality-assured Portfolio of Evidence, consisting of evidence gathered during the course.

Each unit has learning outcomes and assessment criteria. To pass each unit, learners must:

- achieve **all** the learning outcomes
- satisfy **all** the assessment criteria by providing sufficient and valid evidence for each criterion, including meeting any range statements
- prove that the evidence is their own.

The learner must have an assessment record that identifies the assessment criteria that have been met. The assessment record should be cross-referenced to the evidence provided. The assessment record should include details of the type of evidence and the date of assessment. Suitable centre documentation should be used to form an assessment record.

Valid is relevant to the standards for which competence is claimed

Authentic is produced by the learner

Current is sufficiently recent to create confidence that the same skill, understanding or knowledge persists at the time of the claim

Reliable indicates that the learner can consistently perform at this level

Sufficient fully meets the requirements of the assessment criteria, including any range statements

Learners can provide evidence of occupational competence from:

- **current practice** – where evidence is generated from a current job role
- a **programme of development** – where evidence comes from assessment opportunities built into a learning programme. The evidence provided must meet the assessment requirements for the qualification and reflect current practice in the sector
- the **Recognition of Prior Learning (RPL)** – where a learner can demonstrate that they can meet a unit's assessment criteria through knowledge, understanding or skills they already possess. The assessor must be confident that the same level of skill, understanding and knowledge exists at the time of the claim as existed at the time the evidence was produced. RPL is acceptable for accrediting part of a unit, one or more units, or a whole qualification

Further guidance is available in our *Recognition of Prior Learning Policy and Process* document, available on our website.

- a combination of the above.

Assessment rules

The assessment rules for the qualifications in this sector are included in *Appendix A*. They set out the principles for assessing the units to ensure that the qualifications remain valid and reliable.

Types of evidence

To achieve a unit, the learner must gather evidence that shows that they have met the required standard specified in the assessment criteria, Pearson's quality assurance arrangements (please see *Section 7 Quality assurance*) and the requirements of the assessment rules given in *Appendix A*.

In line with the assessment rules, evidence for internally-assessed units can take a variety of forms as indicated below:

- direct observation of the learner's performance by their assessor (O)
- outcomes from oral or written questioning (Q&A)
- products of the learner's work (P)
- personal statements and/or reflective accounts (RA)
- outcomes from simulation (S)
- professional discussion (PD)
- witness testimony (WT)
- expert witness testimony (EWT)
- evidence of Recognition of Prior Learning (RPL).

Learners can use the abbreviations in their portfolios for cross-referencing purposes.

Learners can also use one piece of evidence to prove their knowledge, skills and understanding across different assessment criteria and/or across different units. One piece of evidence may be used to demonstrate achievement of several assessment criteria in the same or different units.

Any specific evidence requirements for a unit are given in the *Unit assessment requirements* section of the unit.

Further guidance on centre quality assurance and internal verification processes can be found in *Section 7 Quality Assurance*.

Assessment of knowledge and understanding

Knowledge and understanding are key components of competent performance, but it is unlikely that performance evidence alone will provide sufficient evidence for knowledge-based learning outcomes and assessment criteria. Where the learner's knowledge and understanding is not apparent from performance evidence, it must be assessed through other valid methods, listed above.

6 Administrative arrangements

Introduction

This section focuses on the administrative requirements for delivering a BTEC qualification. It is of particular value to Quality Nominees, Lead IVs and Programme Leaders.

Learner registration and entry

Shortly after learners start the programme of learning, you need to make sure that they are registered for the qualification. You need to refer to the *International Information Manual* for information on making registrations for the qualification.

Learners can be formally assessed only for a qualification on which they are registered. If learners' intended qualifications change, for example if a learner decides to choose a different pathway specialism, then the centre must transfer the learner appropriately.

Access to assessment

Assessments need to be administered carefully to ensure that all learners are treated fairly, and that results and certification are issued on time to allow learners to progress to their chosen progression opportunities.

Pearson's *Equality Policy* requires that all learners should have equal opportunity to access our qualifications and assessments, and that our qualifications are awarded in a way that is fair to every learner. We are committed to making sure that:

- learners with a protected characteristic are not, when they are undertaking one of our qualifications, disadvantaged in comparison to learners who do not share that characteristic
- all learners achieve the recognition they deserve for undertaking a qualification and that this achievement can be compared fairly to the achievement of their peers.

Further information on access arrangements can be found in the Joint Council for Qualifications (JCQ) document *Access Arrangements, Reasonable Adjustments and Special Consideration for General and Vocational Qualifications*.

Administrative arrangements for assessment

Records

You are required to retain records of assessment for each learner. Records should include decisions reached and any adjustments or appeals. Further information can be found in the *International Information Manual*. We may ask to audit your records, so they must be retained as specified.

Reasonable adjustments to assessment

To ensure that learners have fair access to demonstrate the requirements of the assessments, a reasonable adjustment is one that is made before a learner is assessed. You are able to make adjustments to internal assessments to take account of the needs of individual learners. In most cases, this can be achieved through allowing the use of assistive technology or adjusting the format of evidence. Any reasonable adjustment must reflect the normal learning or working practice of a learner in a centre or working within the occupational area. We can advise you if you are uncertain as to whether an adjustment is fair and reasonable. You need to plan for time to make adjustments if necessary.

Further details on how to make adjustments for learners with protected characteristics are given on our website, in the document *Supplementary guidance for reasonable adjustment and special consideration in vocational internally-assessed units*.

Appeals against assessment

Your centre must have a policy for dealing with appeals from learners. These appeals may relate to assessment decisions being incorrect or assessment not being conducted fairly. The first step in such a policy could be a consideration of the evidence by a Lead IV or other member of the programme team. The assessment plan should allow time for potential appeals after assessment decisions have been given to learners. If there is an appeal by a learner, you must document the appeal and its resolution. Learners have a final right of appeal to Pearson but only if the procedures that you have put in place have not been followed. Further details are given in the document *Enquiries and appeals about Pearson vocational qualifications and end point assessment policy*.

Dealing with malpractice in assessment

Malpractice means acts that undermine the integrity and validity of assessment, the certification of qualifications and/or may damage the authority of those responsible for delivering the assessment and certification.

Pearson does not tolerate actual or attempted actions of malpractice by learners, centre staff or centres in connection with Pearson qualifications. Pearson may impose penalties and/or sanctions on learners, centre staff or centres where malpractice or attempted malpractice has been proven.

Malpractice may occur or be suspected in relation to any unit or type of assessment within a qualification. For further details on malpractice and advice on preventing malpractice by learners, please see Pearson's *Centre Guidance: Dealing with Malpractice*, available on our website.

The procedures we ask you to adopt vary between units that are internally assessed and those that are externally assessed.

Centres are required to take steps to prevent malpractice and to investigate instances of suspected malpractice. Learners must be given information that explains what malpractice is for internal assessment and how suspected incidents will be dealt with by the centre. The *Centre Guidance: Dealing with Malpractice* document gives full information on the actions we expect you to take.

Pearson may conduct investigations if we believe a centre is failing to conduct internal assessment according to our policies. The above document gives further information and examples, and details the penalties and sanctions that may be imposed.

In the interests of learners and centre staff, centres need to respond effectively and openly to all requests relating to an investigation into an incident of suspected malpractice.

Learner malpractice

The head of centre is required to report incidents of suspected learner malpractice that occur during Pearson qualifications. We ask centres to complete JCQ Form M1 (www.jcq.org.uk/malpractice) and email it with any accompanying documents (signed statements from the learner, invigilator, copies of evidence, etc.) to the Investigations Processing team at candidatemalpractice@pearson.com. The responsibility for determining appropriate sanctions or penalties to be imposed on learners lies with Pearson.

Learners must be informed at the earliest opportunity of the specific allegation and the centre's malpractice policy, including the right of appeal. Learners found guilty of malpractice may be disqualified from the qualification for which they have been entered with Pearson.

Failure to report malpractice constitutes staff or centre malpractice.

Teacher/centre malpractice

The head of centre is required to inform Pearson's Investigations team of any incident of suspected malpractice (which includes maladministration) by centre staff, before any investigation is undertaken. The head of centre is requested to inform the Investigations team by submitting a JCQ M2 Form (downloadable from www.jcq.org.uk/malpractice) with supporting documentation to pqsmalpractice@pearson.com. Where Pearson receives

allegations of malpractice from other sources (for example Pearson staff, anonymous informants), the Investigations team will conduct the investigation directly or may ask the head of centre to assist.

Pearson reserves the right in cases of suspected malpractice to withhold the issuing of results/certificates while an investigation is in progress. Depending on the outcome of the investigation, results and/or certificates may not be released or they may be withheld.

We reserve the right to withhold certification when undertaking investigations, audits and quality assurance processes. You will be notified within a reasonable period of time if this occurs.

Sanctions and appeals

Where malpractice is proven, we may impose sanctions or penalties, such as:

- mark reduction for affected external assessments
- disqualification from the qualification
- debarment from registration for Pearson qualifications for a period of time.

If we are concerned about your centre's quality procedures we may impose sanctions such as:

- working with centres to create an improvement action plan
- requiring staff members to receive further training
- placing temporary blocks on the centre's certificates
- placing temporary blocks on registration of learners
- debarring staff members or the centre from delivering Pearson qualifications
- suspending or withdrawing centre approval status.

The centre will be notified if any of these apply.

Pearson has established procedures for centres that are considering appeals against penalties and sanctions arising from malpractice. Appeals against a decision made by Pearson will normally be accepted only from the head of centre (on behalf of learners and/or members or staff) and from individual members (in respect of a decision taken against them personally). Further information on appeals can be found in the JCQ Appeals booklet (<https://www.jcq.org.uk/exams-office/appeals>).

Certification and results

Once a learner has completed all the required components for a qualification, the centre can claim certification for the learner, provided that quality assurance has been successfully completed. For the relevant procedures, please refer to our *International Information Manual*. You can use the information provided on qualification grading to check overall qualification grades.

Additional documents to support centre administration

As an approved centre, you must ensure that all staff delivering, assessing and administering the qualifications have access to the following documentation. These documents are reviewed annually and are reissued if updates are required.

- *Pearson International Quality Assurance Handbook*: this sets out how we will carry out quality assurance of standards and how you need to work with us to achieve successful outcomes.
- *International Information Manual*: this gives procedures for registering learners for qualifications, transferring registrations and claiming certificates.
- *Regulatory policies*: our regulatory policies are integral to our approach and explain how we meet internal and regulatory requirements. We review the regulated policies annually to ensure that they remain fit for purpose. Policies related to this qualification include:
 - adjustments for candidates with disabilities and learning difficulties, access arrangements and reasonable adjustments for general and vocational qualifications
 - age of learners
 - centre guidance for dealing with malpractice
 - recognition of prior learning and process.

This list is not exhaustive and a full list of our regulatory policies can be found on our website.

7 Quality assurance

Centre and qualification approval

As part of the approval process, your centre must make sure that the resource requirements listed below are in place before offering the qualification.

- Centres must have access to appropriate physical resources (for example equipment, IT, learning materials, teaching rooms) to support the delivery and assessment of the qualification. This may include a workplace in line with industry standards and/or a Realistic Working Environment (RWE) where this is permitted in the units. This must comply with the requirements specified in the assessment rules in *Appendix A*.
- Staff involved in the assessment process must have relevant expertise and/or occupational experience specified in the assessment rules.
- There must be systems in place to ensure continuing professional development for staff delivering the qualification.
- Centres must have in place appropriate health and safety policies relating to the use of equipment by learners.
- Centres must deliver the qualification in accordance with current equality and diversity legislation and/or regulations.

Continuing quality assurance and standards verification

On an annual basis, we produce the *Pearson International Quality Assurance Handbook*. It contains detailed guidance on the quality processes required to underpin robust assessment and internal verification.

The key principles of quality assurance are that:

- a centre delivering BTEC programmes must be an approved centre, and must have approval for the programmes or groups of programmes that it is delivering
- the centre agrees, as part of gaining approval, to abide by specific terms and conditions around the effective delivery and quality assurance of assessment; the centre must abide by these conditions throughout the period of delivery
- an approved centre must follow agreed protocols for standardisation of assessors and verifiers, for the planning, monitoring and recording of assessment processes, and for dealing with special circumstances, appeals and malpractice.

The approach of quality-assured assessment is through a partnership between an approved centre and Pearson. We will make sure that each centre follows best practice and employs appropriate technology to support quality-assurance processes, where practicable. We work to support centres and seek to make sure that our quality-assurance processes do not place undue bureaucratic processes on centres. We monitor and support centres in the effective operation of assessment and quality assurance.

The methods we use to do this include:

- making sure that all centres complete appropriate declarations at the time of approval
- undertaking approval visits to centres
- making sure that centres have effective teams of assessors and verifiers who are trained to undertake assessment
- assessment sampling and verification, through requested samples of assessments, completed assessed learner work and associated documentation
- an overarching review and assessment of a centre's strategy for delivering and quality assuring its BTEC programmes, for example making sure that synoptic units are placed appropriately in the order of delivery of the programme.

Centres that do not fully address and maintain rigorous approaches to delivering, assessing and quality assurance cannot seek certification for individual programmes or for all BTEC programmes. An approved centre must make certification claims only when authorised by us and strictly in accordance with requirements for reporting.

Centres that do not comply with remedial action plans may have their approval to deliver qualifications removed.

Appendix A: Assessment rules

The purpose of these assessment rules is to ensure that this suite of qualifications is assessed in a valid and reliable manner.

It covers:

1. Approaches to assessment
2. Simulation
3. Requirements for assessors and internal verifiers
4. Requirements for expert witnesses.

1 Approaches to assessment

- 1.1 Within the learning outcomes for the units, there may be a mix of assessment criteria that relate to **performance** and those that relate to **knowledge and understanding**. Assessment criteria relating to knowledge/understanding typically use words such as *identify, describe* and *explain*.
- 1.2 Most of the evidence for assessment criteria that relate to *performance* must derive from real work activities carried out in the workplace. In some circumstances, evidence may come from simulation in a realistic working environment (see section 2 below). For these assessment criteria, the preferred types of evidence are:
 - observation by the assessor of learner performance in the workplace
 - expert witness testimony relating to learner performance in the workplace. This is particularly useful for evidence that occurs when the assessor is not present. To be considered an expert witness, they must meet the definition outlined in section 4.
 - products of work done in the workplace, e.g. written records.
- 1.3 Assessment criteria that relate to knowledge and understanding can be assessed inside or outside the workplace, but the learner must relate their knowledge and understanding to the work environment. For these assessment criteria, evidence is likely to come mainly from:
 - learner reflective accounts
 - oral or written questioning, with questions and answers recorded by the assessor or candidate
 - professional discussion

2 Simulation

- 2.1 Where simulation is permitted, this is identified within the relevant unit.
- 2.2 Simulation is allowed only in situations where learners are required to respond to a situation that rarely occurs, for example emergencies or situations that would require a complete shutdown of production.
- 2.3 Where simulation is allowed, it must take place in a realistic working environment (RWE). In other words, the conditions should match those that would be normally found in the workplace, including:
 - facilities, equipment and materials
 - relationships with colleagues
 - pressures
 - relevant legislation, regulations and codes of practice.
- 2.4 Individuals involved in the simulation should be assigned roles, and, where appropriate, visual and sound effects should be used, e.g. to simulate explosions. To show their ability to shut down a facility, it is recommended that computer-based simulations can be used.
- 2.5 All simulations must be planned, delivered and documented by the centre in a way that ensures the simulation accurately reflects what the unit seeks to assess.

3 Requirements for assessors and internal verifiers

- 3.1 Assessors and internal verifiers (IVs) must be occupationally competent. This means that each assessor/IV must be competent in the functions covered by the units they are assessing/verifying. This competence must be current and verifiable, and must be sufficient to be effective and reliable when judging the learner's competence. This can be confirmed in various ways, for example through:
 - CV and references
 - possession of relevant qualification(s).
- 3.2 Assessors and IVs must provide evidence of maintaining their occupational competence, for example by maintaining a CPD log.
- 3.3 Assessors and IVs must:
 - understand the structure of the qualification
 - recognise acceptable sources of evidence for the qualification
 - implement the required assessment recording procedures
 - understand and comply with the quality assurance and administrative requirements for the qualification.

3.5 Assessors must have sufficient expertise in the internal verification of competence-based assessment. To evidence this, they must have, or be working towards, one of the following:

- Level 3 Award in Assessing Competence in the Work Environment
- Level 3 Certificate in Assessing Vocational Achievement
- relevant units from predecessor qualifications: D32 and D33; or A1, A2
- qualifications or training that can be demonstrated to be equivalent to one or more of the above.

3.6 Internal verifiers must have sufficient expertise in the internal verification of competence-based assessment. To evidence this, they must have, or be working towards, one of the following:

- Level 4 Award in the Internal Quality Assurance of Assessment Processes and Practice
- relevant units from predecessor qualifications: D34; or V1
- qualifications or training that can be demonstrated to be equivalent to one or more of the above.

4 Expert witnesses

4.1 Pearson supports the use of expert witness testimony as a natural and effective way of contributing to evidence of learners' competence. Nonetheless, the quality of this type of evidence will be affected by the witness's knowledge of the qualification and their own occupational competence. As a minimum, the expert witness must be:

- familiar with the part(s) of the qualification for which they are providing testimony
- occupationally competent – this means that they must be competent in the functions covered by the units they are witnessing
- fully briefed and clear about the purpose and use of the testimony.

Appendix B: Structures of the oil and gas qualification suite at a glance

The tables below show the units and the qualifications to which they contribute in this suite of oil and gas qualifications.

M	Mandatory units	O	Optional units
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Pearson BTEC International Level 2 Specialist Diplomas for Process, Electrical, Instrument and Mechanical Technicians in Oil and Gas Facilities	Unit size (GLH)	Pathway			
		Process	Electrical	Instrument	Mechanical
1 Control Frontline Barriers in Oil and Gas Operations	120	M	M	M	M
2 Respond and Recover in Emergencies and Incidents	60	M	M	M	M
3 Implement Process Safety	130	M	M	M	M
4 Operate and Monitor Oil Production Processes and Associated Systems	135	M			
5 Operate and Monitor Gas Processes and Dehydration Systems	110	M			
6 Operate and Monitor the Gas Condensate Process and System	50	M			
7 Perform Routine Operations and Maintenance of Electrical Drives and the Motor-control Centre	80		M		
8 Perform Routine Operations and Maintenance of Power Generation and Control Equipment	80		M		
9 Perform Routine Operations and Maintenance of Power Supplies and Lighting Systems	70		M		
10 Perform Routine Operations and Maintenance of Process Measuring and Analyser Devices	70			M	

Pearson BTEC International Level 2 Specialist Diplomas for Process, Electrical, Instrument and Mechanical Technicians in Oil and Gas Facilities	Unit size (GLH)	Pathway			
		Process	Electrical	Instrument	Mechanical
11 Perform Routine Operations and Maintenance of Current-to-Pneumatic Converters	60			M	
12 Perform Routine Operations and Maintenance of Process Controllers and Control Valves	110			M	
13 Perform Routine Operations and Maintenance of Static Equipment	120				M
14 Perform Routine Operations and Maintenance of Reciprocating Engines and Pumps	90				M
15 Perform Routine Operations and Maintenance of Compressors and Turbines	90				M

Pearson BTEC International Level 3 Specialist Diploma in Control Room Operations in Oil and Gas Facilities		Unit size (GLH)	Mandatory or optional
1	Perform Functional Testing of Integrated Process Systems and Remote Control Operations	110	M
2	Perform Central Control Room Operations	120	M
3	Coordinate the Response to Emergencies and Critical Process Situations	120	M
4	Supervise Frontline Safety Barriers	60	O
5	Supervise Process Safety Within Own Area of Work	90	O
6	Supervise Materials Acquisition and Supply Chain Processes for Process-related Frontline Activities	60	O
7	Perform Constituents Testing of Process Fluids	70	O
8	Maintain Flow Assurance on Subsea Wells	150	O
9	Operate and Maintain Subsea Systems	150	O

Pearson BTEC International Level 3 Specialist Diploma in Electrical Engineering Operations in Oil and Gas Facilities		Unit size (GLH)	Mandatory or optional
1	Inspect and Test Installations, Cables and Conductors	100	M
2	Inspect and Test Power Distribution and Protection Systems	100	M
3	Perform Corrective Maintenance of Electrical Equipment and Distribution Systems	100	M
4	Perform Corrective Maintenance of Auxiliary Power and Utilities Systems	100	M
5	Perform Corrective Maintenance of Power Generation and Protection Systems	100	M

Pearson BTEC International Level 3 Specialist Diploma in Instrument Engineering Operations in Oil and Gas Facilities	Unit size (GLH)	Mandatory or optional
1 Perform Corrective Maintenance of Control Systems and Safeguarding Systems	100	M
2 Perform Corrective Maintenance of Distributed Control Systems	120	M
3 Perform Corrective Maintenance of Instrumented Protective Devices and Systems	120	M
4 Perform Corrective Maintenance of Fire and Gas Detection Devices and Systems	120	M

Pearson BTEC International Level 3 Specialist Diploma in Mechanical Engineering Operations in Oil and Gas Facilities	Unit size (GLH)	Mandatory or optional
1 Perform Corrective Maintenance of Reciprocating Engines	120	M
2 Perform Corrective Maintenance of Pumps	120	M
3 Perform Corrective Maintenance of Gas Turbines	120	M
4 Perform Corrective Maintenance of Compressors	120	M

Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Facility Management		Unit size (GLH)	Mandatory or optional
1	Manage Emergency Responses	150	M
2	Manage Health, Safety, Environment and Security	150	M
3	Manage Information and Decision Making	140	M
4	Manage Operations and Asset Integrity	140	M
5	Manage Maintenance Activities	140	O
6	Manage Turnaround and Project Implementation	160	O
7	Manage Process Plant and Well Integrity	120	O
8	Manage Upstream Production and Operations Optimisation	140	O
9	Manage Marine Operations	130	O
10	Manage Marine Export Operations	140	O
11	Manage Onshore Terminal Plant, Storage and Export Facilities	110	O
12	Manage Onshore Terminal Process Optimisation and Export Operations	140	O

Pearson BTEC International Level 4 Professional Diploma in Oil and Gas Installation Management		Unit size (GLH)	Mandatory or optional
1	Manage Emergency Responses	150	M
2	Manage Health, Safety, Environment and Security	150	M
3	Manage Information and Decision Making	140	M
4	Manage Production and Maintenance Operations	150	M
5	Manage Simultaneous Operations	150	M
6	Manage Finance and Human Resources	130	M
7	Manage Operations and Production Plans	150	M

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