Certificate in Offshore Production Technology

GExperts Learning Academy | C-X01 | C | 8-16 weeks

Course overview

8-16 weeks C programme focused on Certificate in Offshore Production Technology, using energy-sector cases and applied decisions.

Designed for: Graduates, technicians and professionals

Learning outcomes

- Explain core principles and terminology for Certificate in Offshore Production Technology.
- Interpret an applied case using evidence and stated assumptions.
- Identify risks, safeguards, role boundaries and escalation points.
- Prepare a clear recommendation for a multidisciplinary audience.

Course guide

Work through each module objective, lesson and teaching note, complete the applied activity and assessment, then use the separate Academy practice page for practice questions and answer feedback.

Separate practice questions:
https://www.globalexpertsconsultoria.com/training/academy/courses/questions/?course=C-X01

Academic and certification status

Draft learning resource for study and review. It does not confer accreditation, external certification, a regulated qualification, professional licence, safety-critical competence or site authorisation. Confirm approvals, current laws, standards, approved procedures and awarding-body requirements before delivery.

Module 1: Certificate in Offshore Production Technology: Core Concepts

Learning objectives

- Explain certificate in offshore production technology: core concepts, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Certificate in Offshore Production Technology: Core Concepts
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore Production Technology

Detailed teaching notes

Teaching notes

Core explanation. Certificate in Offshore Production Technology: Core Concepts describes a practical part of Certificate in Offshore Production Technology. Learners connect the principles to asset performance, people, operational risk, project value and local context.

Decision logic. Review the objective, evidence, limits, interfaces and applicable controls for certificate in offshore production technology: core concepts. Decisions require current information, role-appropriate authority, competent review and documented assumptions.

Worked example. Use an applied Namibia-relevant case in which a team plans certificate in offshore production technology: core concepts while balancing safety, integrity, schedule, cost, environmental protection and local capability.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a decision brief for certificate in offshore production technology: core concepts: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Model answer guide. A sound response defines scope; uses current, traceable evidence; applies approved requirements and controls; records assumptions; assigns competent owners; checks interfaces; and communicates a measurable decision with an escalation path.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a decision brief for certificate in offshore production technology: core concepts: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 2: Separation gas processing and utilities

Learning objectives

- Explain separation gas processing and utilities, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Separation gas processing and utilities
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore Production Technology

Detailed teaching notes

Teaching notes

Core explanation. Production fluids are separated into oil, gas and water streams before further treatment. Gas compression, dehydration, oil stabilisation and utilities support product specifications and safe operation. Explain process flow diagrams before introducing instrument-level drawings.

Decision logic. Mass balance links input, output and accumulation. A bottleneck in power, cooling or compression can limit oil production. Product quality, emissions and integrity constrain throughput. Actual settings and alarm responses must follow approved procedures.

Worked example. A separator receives 100 mass units/hour; 55 leave as oil, 20 as gas and 25 as water, with no accumulation.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Reconcile a second balance with a missing stream and discuss measurement uncertainty.

Model answer guide. Total output plus accumulation must equal input; unexplained imbalance requires data checking.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Reconcile a second balance with a missing stream and discuss measurement uncertainty.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 3: Certificate in Offshore Production Technology: Systems and Interf

Learning objectives

- Explain certificate in offshore production technology: systems and interfaces, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Certificate in Offshore Production Technology: Systems and Interfaces
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore Production Technology

Detailed teaching notes

Teaching notes

Core explanation. Certificate in Offshore Production Technology: Systems and Interfaces describes a practical part of Certificate in Offshore Production Technology. Learners connect the principles to asset performance, people, operational risk, project value and local context.

Decision logic. Review the objective, evidence, limits, interfaces and applicable controls for certificate in offshore production technology: systems and interfaces. Decisions require current information, role-appropriate authority, competent review and documented assumptions.

Worked example. Use an applied Namibia-relevant case in which a team plans certificate in offshore production technology: systems and interfaces while balancing safety, integrity, schedule, cost, environmental protection and local capability.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a decision brief for certificate in offshore production technology: systems and interfaces: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Model answer guide. A sound response defines scope; uses current, traceable evidence; applies approved requirements and controls; records assumptions; assigns competent owners; checks interfaces; and communicates a measurable decision with an escalation path.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a decision brief for certificate in offshore production technology: systems and interfaces: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 4: Flow assurance

Learning objectives

- Explain flow assurance, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Flow assurance
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore Production Technology

Detailed teaching notes

Teaching notes

Core explanation. Flow assurance manages the ability to transport fluids through operating and transient conditions. Hydrates, wax, scale, corrosion and slugging can threaten performance. Explain the pressure-temperature-composition relationship qualitatively with a cooling pipeline sketch.

Decision logic. Assess startup, shutdown and restart as well as steady operation. Chemical treatment, insulation and operating strategies interact with facilities and environmental constraints. Classroom discussion does not prescribe inhibitor doses or live restart sequences.

Worked example. A pipeline flows normally when warm but cools during a long shutdown, changing restart risk.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Build a flow-assurance risk register for normal operation and shutdown.

Model answer guide. Include fluid data, thermal history, safeguards, monitoring and an authorised specialist review before restart.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Build a flow-assurance risk register for normal operation and shutdown.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 5: Well testing and pressure interpretation

Learning objectives

- Explain well testing and pressure interpretation, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Well testing and pressure interpretation
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore Production Technology

Detailed teaching notes

Teaching notes

Core explanation. A well test records flow and pressure response to infer reservoir and well behaviour. Explain drawdown, buildup, skin and boundary effects conceptually. Measurement resolution, rate history and test duration constrain interpretation.

Decision logic. Different models can fit limited data. Use derivative behaviour and independent geology to test models rather than declaring a unique answer. Short tests may not observe distant boundaries. Operational testing requires an approved programme and safety controls.

Worked example. A short buildup appears stable but has not investigated the reservoir boundary; connectivity remains uncertain.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Review a fictional test summary and list claims supported and unsupported by it.

Model answer guide. Separate local mobility evidence from field-wide connectivity and long-term deliverability claims.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Review a fictional test summary and list claims supported and unsupported by it.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 6: Certificate in Offshore Production Technology: Data and Performa

Learning objectives

- Explain certificate in offshore production technology: data and performance, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Certificate in Offshore Production Technology: Data and Performance
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore Production Technology

Detailed teaching notes

Teaching notes

Core explanation. Certificate in Offshore Production Technology: Data and Performance describes a practical part of Certificate in Offshore Production Technology. Learners connect the principles to asset performance, people, operational risk, project value and local context.

Decision logic. Review the objective, evidence, limits, interfaces and applicable controls for certificate in offshore production technology: data and performance. Decisions require current information, role-appropriate authority, competent review and documented assumptions.

Worked example. Use an applied Namibia-relevant case in which a team plans certificate in offshore production technology: data and performance while balancing safety, integrity, schedule, cost, environmental protection and local capability.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a decision brief for certificate in offshore production technology: data and performance: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Model answer guide. A sound response defines scope; uses current, traceable evidence; applies approved requirements and controls; records assumptions; assigns competent owners; checks interfaces; and communicates a measurable decision with an escalation path.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a decision brief for certificate in offshore production technology: data and performance: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 7: Integrated reservoir management

Learning objectives

- Explain integrated reservoir management, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Integrated reservoir management
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore Production Technology

Detailed teaching notes

Teaching notes

Core explanation. Reservoir management links surveillance, models, wells, facilities and economics to an agreed objective. Define decision triggers and data owners. A model is useful when it helps choose an action and exposes uncertainty, not simply because it has many cells.

Decision logic. Use a closed learning cycle: predict, measure, compare, diagnose and revise. History matching can be non-unique, so retain plausible alternatives and test decisions against them. Integrate subsurface and operations teams when reviewing constraints and new evidence.

Worked example. Measured water breakthrough is earlier than predicted. Review connectivity and completion assumptions before merely adjusting a curve.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Create a surveillance plan with three measurements and associated decision triggers.

Model answer guide. Each measurement must connect to a management choice, owner and review frequency.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Create a surveillance plan with three measurements and associated decision triggers.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 8: Certificate in Offshore Production Technology: Communication an

Learning objectives

- Explain certificate in offshore production technology: communication and escalation, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Certificate in Offshore Production Technology: Communication and Escalation
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore Production Technology

Detailed teaching notes

Teaching notes

Core explanation. Certificate in Offshore Production Technology: Communication and Escalation describes a practical part of Certificate in Offshore Production Technology. Learners connect the principles to asset performance, people, operational risk, project value and local context.

Decision logic. Review the objective, evidence, limits, interfaces and applicable controls for certificate in offshore production technology: communication and escalation. Decisions require current information, role-appropriate authority, competent review and documented assumptions.

Worked example. Use an applied Namibia-relevant case in which a team plans certificate in offshore production technology: communication and escalation while balancing safety, integrity, schedule, cost, environmental protection and local capability.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a decision brief for certificate in offshore production technology: communication and escalation: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Model answer guide. A sound response defines scope; uses current, traceable evidence; applies approved requirements and controls; records assumptions; assigns competent owners; checks interfaces; and communicates a measurable decision with an escalation path.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a decision brief for certificate in offshore production technology: communication and escalation: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 9: Well control and barrier management

Learning objectives

- Explain well control and barrier management, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Well control and barrier management
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore Production Technology

Detailed teaching notes

Teaching notes

Core explanation. A barrier system prevents unintended fluid flow. Show primary and secondary barrier envelopes and the need for defined performance standards. Recognising indications, reporting promptly and following the authorised well-control programme are distinct from being certified to operate equipment.

Decision logic. Teach barrier status with evidence, not equipment names alone. An installed component may be unavailable, untested or outside its operating envelope. Barrier changes require controlled review. No live well-control drill or shut-in sequence is prescribed by this awareness content.

Worked example. A component appears on the drawing, but its required test record is missing. Treat its verified availability as unresolved.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Construct a barrier-status register from a fictional well diagram.

Model answer guide. Record function, verification, owner, limitation and escalation; do not mark an unverified barrier healthy.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Construct a barrier-status register from a fictional well diagram.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Module 10: Certificate in Offshore Production Technology: Competence Revi

Learning objectives

- Explain certificate in offshore production technology: competence review, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Certificate in Offshore Production Technology: Competence Review
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore Production Technology

Detailed teaching notes

Teaching notes

Core explanation. Certificate in Offshore Production Technology: Competence Review describes a practical part of Certificate in Offshore Production Technology. Learners connect the principles to asset performance, people, operational risk, project value and local context.

Decision logic. Review the objective, evidence, limits, interfaces and applicable controls for certificate in offshore production technology: competence review. Decisions require current information, role-appropriate authority, competent review and documented assumptions.

Worked example. Use an applied Namibia-relevant case in which a team plans certificate in offshore production technology: competence review while balancing safety, integrity, schedule, cost, environmental protection and local capability.

Facilitator prompts. Ask learners to distinguish verified facts from assumptions, identify who has decision authority, name stop-work triggers and state what evidence could change their recommendation. Compare technical, HSE, commercial and community perspectives.

Activity. Prepare a decision brief for certificate in offshore production technology: competence review: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Model answer guide. A sound response defines scope; uses current, traceable evidence; applies approved requirements and controls; records assumptions; assigns competent owners; checks interfaces; and communicates a measurable decision with an escalation path.

Assessment evidence. Score accuracy (30%), use of evidence (20%), safeguards (20%), analysis (20%) and communication (10%).

Applied activity

Prepare a decision brief for certificate in offshore production technology: competence review: scope, evidence, assumptions, hazards, safeguards, owner, decision gate and escalation trigger.

Assessment

Formative: 10-question practice quiz with answer feedback

Summative: Applied decision brief or practical case assessed against the rubric; proposed pass mark 70%, subject to academic approval.

Practice

Use the separate Academy practice questions and answer key page for this module.

Facilitator close-out and resources

Facilitator close-out

Record attendance, assessment evidence, learner support needs, incidents and improvement actions according to approved provider processes. Do not sign learners off for regulated or safety-critical work without the authorised assessment and certification route.

Resources and references

- Supplied GExperts/IUM reference materials; verify reuse rights and currentness.
- Current applicable Namibian legislation, standards and approved site procedures supplied by the provider.
- Case worksheet and instructor slides must be produced and reviewed before course release.