Certificate in Offshore HSE and Process Safety

GExperts Learning Academy | C-024 | C | 12 weeks

Course overview

12 weeks C programme focused on Certificate in Offshore HSE and Process Safety, using energy-sector cases and applied decisions.

Designed for: Learners appropriate to the stated programme level

Learning outcomes

- Explain core principles and terminology for Certificate in Offshore HSE and Process Safety.
- 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-024

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: Offshore hazards and safe working

Learning objectives

- Explain offshore hazards and safe working, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Offshore hazards and safe working
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore HSE and Process Safety

Detailed teaching notes

Teaching notes

Core explanation. Hazards include moving machinery, hydrocarbons, pressure, electricity, weather, dropped objects and human exposure. Risk depends on likelihood and consequence in a defined task. Hazard recognition is the beginning of control, not permission to work.

Decision logic. Use elimination, substitution and engineered controls before relying only on procedures or PPE. Include manual handling and hazardous substances from the IMIST source themes. Train learners to stop and escalate unsafe conditions and remain within their authority.

Worked example. A walkway crosses a lifting zone. A helmet alone does not remove dropped-load exposure.

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. Identify five hazards in a fictional deck layout and propose controls in hierarchy order.

Model answer guide. Prefer segregation or changed routing over PPE alone; identify responsible verification.

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

Applied activity

Identify five hazards in a fictional deck layout and propose controls in hierarchy order.

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: Risk assessment and uncertainty management

Learning objectives

- Explain risk assessment and uncertainty management, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Risk assessment and uncertainty management
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore HSE and Process Safety

Detailed teaching notes

Teaching notes

Core explanation. Define the activity and potential harm, identify hazards, evaluate existing controls, then decide further controls and ownership. A risk matrix supports prioritisation but does not prove a risk is tolerable. Include affected people and changing conditions.

Decision logic. Test whether controls are present and effective. Residual risk should be reassessed after control implementation, not merely after a promise. Escalate high-consequence uncertainty for competent review. Project risk also includes schedule, cost and opportunity effects.

Worked example. A permit lists a barrier that has not yet been installed. The claimed residual risk is premature.

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. Complete a risk register with cause, event, consequence, control, owner and verification.

Model answer guide. Keep hazard and consequence distinct and require evidence before taking control credit.

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

Applied activity

Complete a risk register with cause, event, consequence, control, owner and verification.

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: Permit to work isolation and SIMOPS

Learning objectives

- Explain permit to work isolation and simops, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Permit to work isolation and SIMOPS
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore HSE and Process Safety

Detailed teaching notes

Teaching notes

Core explanation. A permit coordinates specified work within defined conditions and time. It complements risk assessment, isolation, competence and supervision. SIMOPS review considers interactions between tasks that may be safe individually but unsafe together.

Decision logic. Walk through planning, authorisation, briefing, verification, suspension and handback conceptually. A signature does not establish a safe condition. Changes in scope, personnel or environment require review under the site system. Never reuse a classroom permit as operational authorisation.

Worked example. Hot work and a nearby hydrocarbon transfer are proposed concurrently. Their interaction needs coordinated review.

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 two fictional permits and identify interface conflicts and suspension triggers.

Model answer guide. Include shared hazards, isolation boundaries, authority, communication and revalidation after change.

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

Applied activity

Review two fictional permits and identify interface conflicts and suspension 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 4: Process safety fundamentals

Learning objectives

- Explain process safety fundamentals, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Process safety fundamentals
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore HSE and Process Safety

Detailed teaching notes

Teaching notes

Core explanation. Process safety prevents major loss-of-containment and energy-release events. Personal injury rates do not measure every major-accident risk. Explain hazard, initiating event, preventive barriers, mitigative barriers and consequences using a bowtie.

Decision logic. Assess barrier performance standards, degradation and independent assurance. HAZID, HAZOP and other reviews have different purposes and need competent facilitation. Do not call a classroom checklist a certified safety study. Track temporary changes and overdue critical actions.

Worked example. An asset reports no slips but has several overdue safety-critical tests; major-accident assurance remains weak.

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 bowtie for a fictional separator loss of containment.

Model answer guide. Separate prevention and mitigation and assign barrier evidence, owner and degradation response.

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

Applied activity

Build a bowtie for a fictional separator loss of containment.

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: Fire prevention detection and firewatch

Learning objectives

- Explain fire prevention detection and firewatch, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Fire prevention detection and firewatch
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore HSE and Process Safety

Detailed teaching notes

Teaching notes

Core explanation. Fire needs fuel, oxidant and ignition conditions. Prevention separates these; detection and response reduce consequences. A firewatch role monitors defined work and escalation requirements but does not replace isolation or gas-control measures.

Decision logic. Teach equipment recognition and alarm reporting with site-specific authority limits. Extinguisher selection and use require appropriate practical training and safe conditions. No learner should enter smoke or fight a fire beyond training and authority. Emergency arrangements take priority.

Worked example. A fictional firewatch observes a changed condition outside the permit boundary. Work is stopped and the supervisor informed.

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. Identify fire hazards in a mock hot-work briefing and state escalation triggers.

Model answer guide. Include combustible exposure, ignition sources, access, communications and changed conditions; no improvised firefighting.

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

Applied activity

Identify fire hazards in a mock hot-work briefing and state escalation 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 6: Emergency preparedness and command

Learning objectives

- Explain emergency preparedness and command, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Emergency preparedness and command
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore HSE and Process Safety

Detailed teaching notes

Teaching notes

Core explanation. Emergency planning identifies credible scenarios, warning, command, communications, muster, evacuation, medical support and external interfaces. Responsibilities and fallback communications should be understood before an event. Awareness differs from emergency-team qualification.

Decision logic. Use tabletop exercises with timed injects, observer records and debrief actions. Test loss of communications or unavailable resources. Never simulate an actual distress call or activate real emergency equipment without authorised arrangements.

Worked example. A fictional offshore incident interrupts the primary communication link during a weather restriction.

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. Run a tabletop with incident controller, operations, logistics and communications roles.

Model answer guide. Prioritise people, establish command, verify information, use planned backup channels and document decisions.

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

Applied activity

Run a tabletop with incident controller, operations, logistics and communications roles.

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: Human factors and safe teamwork

Learning objectives

- Explain human factors and safe teamwork, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Human factors and safe teamwork
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore HSE and Process Safety

Detailed teaching notes

Teaching notes

Core explanation. Human performance is influenced by fatigue, workload, design, communication and organisational pressure. Errors are not explained adequately by blaming an individual. Teach clear handover, challenge, confirmation and usable procedures.

Decision logic. Identify conditions that make error likely and improve the system. A worker should be able to raise concerns without retaliation. Discuss language and comprehension checks, especially where teams have different experience levels. Avoid presenting awareness as immunity from error.

Worked example. A night-shift handover omits an isolation limitation because both workers assume the other knows.

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. Redesign the handover and role-play a closed-loop confirmation.

Model answer guide. Include critical status, restrictions, pending actions and acknowledgement, supported by a usable record.

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

Applied activity

Redesign the handover and role-play a closed-loop confirmation.

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: Incident investigation and learning

Learning objectives

- Explain incident investigation and learning, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Incident investigation and learning
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore HSE and Process Safety

Detailed teaching notes

Teaching notes

Core explanation. An investigation establishes what happened, why controls failed and how recurrence can be prevented. Preserve evidence, protect people and separate verified facts from assumptions. Near misses can reveal major weaknesses without actual harm.

Decision logic. Use a timeline and causal analysis to explore technical, human and organisational contributors. Avoid premature blame and unsupported conclusions. Actions should address causes, have accountable owners and be checked for effectiveness. Reporting follows applicable site and legal requirements.

Worked example. A dropped tool caused no injury, but exclusion-zone and securing controls were ineffective.

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. Analyse a fictional near miss and propose three causal actions.

Model answer guide. Include physical prevention, work-system improvements and verification, rather than retraining alone.

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

Applied activity

Analyse a fictional near miss and propose three causal actions.

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: Produced water hazardous substances and waste

Learning objectives

- Explain produced water hazardous substances and waste, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Produced water hazardous substances and waste
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore HSE and Process Safety

Detailed teaching notes

Teaching notes

Core explanation. Waste management identifies streams, hazards, storage, treatment, transport and final disposition. Separate prevention, reuse, recovery and disposal. Safety data sheets support hazardous-substance understanding but do not replace task assessment.

Decision logic. Track quantities and chain of custody. Mixing streams can increase hazards or eliminate recovery options. Actual handling and discharge limits come from applicable approvals and competent procedures, not classroom defaults. Include spill prevention and contractor verification.

Worked example. A fictional warehouse labels used oil as general waste, obscuring treatment and disposal requirements.

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 waste-stream register with controls and evidence.

Model answer guide. Include classification, segregation, containment, authorised route, quantities and receipts.

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

Applied activity

Create a waste-stream register with controls and evidence.

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: Safety and project leadership

Learning objectives

- Explain safety and project leadership, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Safety and project leadership
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Certificate in Offshore HSE and Process Safety

Detailed teaching notes

Teaching notes

Core explanation. Leadership sets priorities through decisions, resources and response to bad news. Explain the difference between stated values and incentives that reward unsafe shortcuts. Leaders need clear delegation, listening and evidence-based challenge.

Decision logic. Use leading indicators tied to important barriers and delivery outcomes. Review overdue actions and organisational capacity, not just aggregate counts. Encourage escalation and resolve conflicting objectives openly. Authority remains accountable even when tasks are delegated.

Worked example. A manager requests schedule recovery while critical tests are incomplete. The team must resolve priorities explicitly.

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. Write a leadership response and a 30-day improvement plan.

Model answer guide. Require safe sequencing, resources, action owners and follow-up; do not reward concealment of incomplete work.

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

Applied activity

Write a leadership response and a 30-day improvement plan.

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.