Corrosion and Cathodic-Protection Technician

GExperts Learning Academy | TV-062 | TV | 6-12 months

Course overview

6-12 months TV programme focused on Corrosion and Cathodic-Protection Technician, using energy-sector cases and applied decisions.

Designed for: Learners appropriate to the stated programme level

Learning outcomes

- Explain core principles and terminology for Corrosion and Cathodic-Protection Technician.
- 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=TV-062

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: Corrosion mechanisms and damage management

Learning objectives

- Explain corrosion mechanisms and damage management, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Corrosion mechanisms and damage management
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Corrosion and Cathodic-Protection Technician

Detailed teaching notes

Teaching notes

Core explanation. Corrosion depends on materials, fluids, temperature, environment and operating history. Internal corrosion, external marine corrosion and localised attack can require different controls. Explain general thinning versus pitting and why average thickness may hide local damage.

Decision logic. Identify credible damage mechanisms before selecting inspection or mitigation. Coatings, inhibitors, material selection and cathodic protection have different applications. Competent engineers establish acceptance criteria; classroom measurements never approve equipment for continued service.

Worked example. A plate's average thickness appears acceptable but a local pit is much deeper.

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 damage map and propose a specialist inspection scope.

Model answer guide. Address local severity, mechanism, inspection coverage and operating conditions rather than average thickness alone.

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

Applied activity

Review a fictional damage map and propose a specialist inspection scope.

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: Corrosion and Cathodic-Protection Technician: Risk Controls

Learning objectives

- Explain corrosion and cathodic-protection technician: risk controls, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Corrosion and Cathodic-Protection Technician: Risk Controls
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Corrosion and Cathodic-Protection Technician

Detailed teaching notes

Teaching notes

Core explanation. Corrosion and Cathodic-Protection Technician: Risk Controls describes a practical part of Corrosion and Cathodic-Protection Technician. 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 corrosion and cathodic-protection technician: risk controls. 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 corrosion and cathodic-protection technician: risk controls 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 corrosion and cathodic-protection technician: risk controls: 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 corrosion and cathodic-protection technician: risk controls: 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 3: Marine monitoring and evidence quality

Learning objectives

- Explain marine monitoring and evidence quality, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Marine monitoring and evidence quality
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Corrosion and Cathodic-Protection Technician

Detailed teaching notes

Teaching notes

Core explanation. Monitoring tests defined questions using repeatable sampling, measurement and analysis. Explain baseline, reference locations, quality control and detection limits. A changing measurement does not establish its cause automatically.

Decision logic. Specify indicators, frequency, methods, responsibilities and action thresholds through competent review. Maintain chain of custody and calibration records. Interpret trends alongside natural variability and other activities. Avoid using unsupported universal compliance limits.

Worked example. A sample result rises after a storm at both project and reference locations.

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. Interpret the result and propose a proportionate follow-up.

Model answer guide. Consider regional variability, method quality and exposure pathways before attributing causation.

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

Applied activity

Interpret the result and propose a proportionate follow-up.

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: Corrosion and Cathodic-Protection Technician: Evidence and Deci

Learning objectives

- Explain corrosion and cathodic-protection technician: evidence and decision gates, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Corrosion and Cathodic-Protection Technician: Evidence and Decision Gates
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Corrosion and Cathodic-Protection Technician

Detailed teaching notes

Teaching notes

Core explanation. Corrosion and Cathodic-Protection Technician: Evidence and Decision Gates describes a practical part of Corrosion and Cathodic-Protection Technician. 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 corrosion and cathodic-protection technician: evidence and decision gates. 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 corrosion and cathodic-protection technician: evidence and decision gates 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 corrosion and cathodic-protection technician: evidence and decision gates: 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 corrosion and cathodic-protection technician: evidence and decision gates: 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 5: Corrosion and Cathodic-Protection Technician: Work Planning

Learning objectives

- Explain corrosion and cathodic-protection technician: work planning, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Corrosion and Cathodic-Protection Technician: Work Planning
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Corrosion and Cathodic-Protection Technician

Detailed teaching notes

Teaching notes

Core explanation. Corrosion and Cathodic-Protection Technician: Work Planning describes a practical part of Corrosion and Cathodic-Protection Technician. 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 corrosion and cathodic-protection technician: work planning. 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 corrosion and cathodic-protection technician: work planning 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 corrosion and cathodic-protection technician: work planning: 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 corrosion and cathodic-protection technician: work planning: 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 6: Corrosion and Cathodic-Protection Technician: Data and Performa

Learning objectives

- Explain corrosion and cathodic-protection technician: data and performance, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Corrosion and Cathodic-Protection Technician: Data and Performance
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Corrosion and Cathodic-Protection Technician

Detailed teaching notes

Teaching notes

Core explanation. Corrosion and Cathodic-Protection Technician: Data and Performance describes a practical part of Corrosion and Cathodic-Protection Technician. 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 corrosion and cathodic-protection technician: 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 corrosion and cathodic-protection technician: 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 corrosion and cathodic-protection technician: 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 corrosion and cathodic-protection technician: 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: Corrosion and Cathodic-Protection Technician: Applied Case

Learning objectives

- Explain corrosion and cathodic-protection technician: applied case, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Corrosion and Cathodic-Protection Technician: Applied Case
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Corrosion and Cathodic-Protection Technician

Detailed teaching notes

Teaching notes

Core explanation. Corrosion and Cathodic-Protection Technician: Applied Case describes a practical part of Corrosion and Cathodic-Protection Technician. 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 corrosion and cathodic-protection technician: applied case. 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 corrosion and cathodic-protection technician: applied case 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 corrosion and cathodic-protection technician: applied case: 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 corrosion and cathodic-protection technician: applied case: 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 8: Corrosion and Cathodic-Protection Technician: Communication ar

Learning objectives

- Explain corrosion and cathodic-protection technician: communication and escalation, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Corrosion and Cathodic-Protection Technician: Communication and Escalation

2. Systems and operating context

3. Evidence, assumptions and decision gates

4. Hazards, safeguards and escalation

5. Applied case: Corrosion and Cathodic-Protection Technician

Detailed teaching notes

Teaching notes

Core explanation. Corrosion and Cathodic-Protection Technician: Communication and Escalation describes a practical part of Corrosion and Cathodic-Protection Technician. 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 corrosion and cathodic-protection technician: 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 corrosion and cathodic-protection technician: 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 corrosion and cathodic-protection technician: 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 corrosion and cathodic-protection technician: 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: Corrosion and Cathodic-Protection Technician: Knowledge Check

Learning objectives

- Explain corrosion and cathodic-protection technician: knowledge check, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Corrosion and Cathodic-Protection Technician: Knowledge Check
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Corrosion and Cathodic-Protection Technician

Detailed teaching notes

Teaching notes

Core explanation. Corrosion and Cathodic-Protection Technician: Knowledge Check describes a practical part of Corrosion and Cathodic-Protection Technician. 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 corrosion and cathodic-protection technician: knowledge check. 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 corrosion and cathodic-protection technician: knowledge check 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 corrosion and cathodic-protection technician: knowledge check: 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 corrosion and cathodic-protection technician: knowledge check: 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 10: Corrosion and Cathodic-Protection Technician: Competence Rev

Learning objectives

- Explain corrosion and cathodic-protection technician: competence review, interpret a case, select appropriate controls and justify a documented decision.

Lessons

1. Purpose and key terms of Corrosion and Cathodic-Protection Technician: Competence Review
2. Systems and operating context
3. Evidence, assumptions and decision gates
4. Hazards, safeguards and escalation
5. Applied case: Corrosion and Cathodic-Protection Technician

Detailed teaching notes

Teaching notes

Core explanation. Corrosion and Cathodic-Protection Technician: Competence Review describes a practical part of Corrosion and Cathodic-Protection Technician. 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 corrosion and cathodic-protection technician: 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 corrosion and cathodic-protection technician: 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 corrosion and cathodic-protection technician: 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 corrosion and cathodic-protection technician: 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.