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COURSE BROCHURE

Maintenance Errors and Human Factors Prevention Training Course

9 – 13 May 2027
Muscat

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Registered in the United Kingdom and Saudi Arabia

Maintenance Errors and Human Factors Prevention Training Course

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Maintenance Errors and Human Factors Prevention is a 1-week training course for maintenance supervisors, technicians and safety engineers who see equipment fail soon after it has been worked on, and who leave with a maintenance error prevention plan for their own crew. Wrong parts, missed steps and reassembly slips still cause many breakdowns and incidents that follow a repair. Jupiter Prime Training delivers this course in maintenance errors and human factors prevention.

Why Maintenance Errors and Human Factors Prevention Matters Now

Leaner crews, longer shifts during shutdowns and a wave of experienced technicians retiring all raise the chance that a task is done from memory rather than procedure. Sites that treat each slip as individual carelessness keep repeating the same failures and lose trust on the shop floor; sites that study why errors happen and change tasks, tools and supervision see fewer maintenance-induced failures and safer restarts. The course links error prevention to ISO 55001 for asset management systems and to EN 13306 maintenance terminology, so human-factor findings feed work instructions and asset decisions.

Who Gains Most from Maintenance Errors and Human Factors Prevention

- Maintenance supervisors who assign tasks, sign off work and handle shift handovers
- Technicians and craft leads who carry out isolation, dismantling and reassembly
- Safety engineers who investigate incidents involving maintenance activity
- Planners who write job packs, procedures and checklists
- Reliability engineers who track repeat failures after maintenance

A maintenance crew gains most when its supervisor, a planner and senior technicians attend together, because error traps found in one job can then be fixed in procedures, tools and supervision at once.

Maintenance Errors and Human Factors Prevention Capabilities

Participants learn to see the conditions that set technicians up to fail and to remove them before the next job.

- Assess error types such as slips, lapses, mistakes and violations — choice of the right control
- Apply performance-shaping factor checklists to planned tasks — job pack approval
- Test procedures and job cards for clarity and missing steps — planner revisions
- Build a non-punitive error reporting route — supervisor and safety engineer follow-up
- Design error-proofing for reassembly and restart — return-to-service sign-off
- Communicate lessons from error investigations to crews — shift briefings and toolbox talks

Key Maintenance Errors and Human Factors Prevention Terms

- Maintenance-Induced Failure — a breakdown or defect caused by work done on the equipment rather than by normal wear.
- Slip and Lapse — unintended actions or forgotten steps made by a skilled person during a familiar task.
- Violation — a deliberate departure from a rule or procedure, often to save time or work around a problem.
- Performance-Shaping Factor — a condition such as fatigue, time pressure or poor lighting that raises the chance of error.
- Error Trap — a task feature, such as similar parts or unclear labels, that repeatedly leads people into the same mistake.
- Just Culture — an approach that separates honest error from reckless behaviour so people report problems openly.

Maintenance Errors and Human Factors Prevention Day by Day

Day 1: How Maintenance Work Goes Wrong

- Maintenance-Induced Failure Cases — Power, Process and Building Services Examples
- Error Types Model — Slips, Lapses, Mistakes and Violations
- Performance-Shaping Factors — Fatigue, Time Pressure and Environment
- Shift Handover Breakdowns — Lost Information Between Crews
- Error Cost Profile — Repeat Work, Downtime and Injuries

Day 2: Finding Error Traps in Tasks

- Task Walk-Through Method — Spotting Error-Prone Steps Before Work
- Job Card and Procedure Review — Clarity, Sequence and Missing Checks
- Similar-Part and Orientation Traps — Reassembly Mistakes on Pumps and Valves
- Tooling and Torque Control — Wrong Settings and Unverified Fastening
- Isolation and Permit Interfaces — Errors at Start and End of Work

Day 3: Investigating Maintenance Errors

- Error Reporting Route — Non-Punitive Capture of Near Misses
- Just Culture Decision Aid — Honest Error Versus Reckless Act
- Error Investigation Interview — Reconstructing What the Technician Saw
- Contributing Factor Mapping — Task, Team, Organisation and Equipment
- Repeat Failure Data in the CMMS — Linking Breakdowns to Recent Work

Day 4: Prevention Controls and Error-Proofing

- Error-Proofing Design — Keyed Parts, Colour Coding and Physical Guides
- Independent Verification Steps — Second-Person Checks for Critical Tasks
- Procedure Format Under EN 13306 Terms — Clear Task Steps and Hold Points
- Supervision and Briefing Practices — Pre-Job and Post-Job Talks
- Competence and Fatigue Controls — Task Assignment and Shift Patterns

Day 5: Practising the Maintenance Error Prevention Plan

- Error Trap Review of a Chosen Task — Applying the Walk-Through Method
- Investigation of a Past Event — Applying Contributing Factor Mapping
- Control Selection for Each Trap — Applying Error-Proofing and Verification
- Crew Briefing Script — Presenting Changes to Technicians
- Maintenance Error Prevention Plan — Completed Document for Supervisors

Applying Maintenance Errors and Human Factors Prevention After the Course

- Walk through one high-risk job with the crew and list every error trap found, then revise its job card.
- Pull six months of repeat failures from the CMMS and check how many followed recent maintenance work.

Maintenance Errors and Human Factors Prevention Questions FAQ

What is maintenance errors and human factors prevention and why does it matter now?

Maintenance errors and human factors prevention is the practice of finding why technicians make mistakes and changing tasks to stop them. It matters now because leaner crews and retiring experts make error-prone jobs more frequent.

Which roles gain most from maintenance errors and human factors prevention training?

Maintenance supervisors, technicians, safety engineers, planners and reliability engineers gain most. They assign, perform, investigate or document maintenance work where errors start.

How does maintenance errors and human factors prevention differ from a root cause failure analysis course?

Maintenance errors and human factors prevention centres on people, tasks and conditions behind slips and mistakes. A root cause failure analysis course centres on physical failure mechanisms in equipment and materials.

What do you bring back from maintenance errors and human factors prevention training?

You bring back a prevention plan for your own crew, with error traps found in real tasks, a past event analysed, chosen controls and a briefing ready for technicians.

Maintenance Errors and Human Factors Prevention: The Way Forward

The maintenance error prevention plan first informs which job cards and checks are revised before the next shutdown. Supervisors and planners use it to brief crews and track reported near misses. After a few months, revisit the error trap list, because reporting usually surfaces new traps once technicians trust that honest errors are treated fairly.