JUPITER PRIME

Consulting • Training • Advisory

جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

Hazardous Energy Isolation and Locking Training Course

21 – 25 March 2027
Kuala Lumpur

jupiterprime.uk

info@jupiterprime.uk

Registered in the United Kingdom and Saudi Arabia

Hazardous Energy Isolation and Locking Training Course

Ref: 3085_117211 **Date:** 21 – 25 March 2027 **Location:** Kuala Lumpur **Fees:** 4600 GBP

Hazardous Energy Isolation and Locking is a 1-week training course for maintenance supervisors, authorised persons and safety officers, built around one work product: a machine-specific isolation procedure with a matching group isolation plan. Servicing injuries still begin with a valve left open or a feeder switched back on. Jupiter Prime Training places hazardous energy isolation and locking at the centre of safe maintenance.

Why Hazardous Energy Isolation and Locking Matters Now

Three forces shape isolation practice today. Machines combine more energy types in one frame, so a single electrical switch rarely makes a line safe. Contractors and mixed shift crews often do not know the plant, and pressure for shorter stoppages tempts people to skip verification. Poor isolation brings unexpected start-ups, trapped pressure releases and crush injuries. The course rests on recognised safe-isolation principles described in general terms: identify, isolate, secure, dissipate and verify.

Who Gains Most from Hazardous Energy Isolation and Locking

- Those who plan and release maintenance jobs on production equipment
- Those who authorise isolations and sign work back to operations
- Those who audit lock boxes, tag records and isolation certificates
- Those who write and update equipment-specific isolation instructions
- Those who supervise contractor crews working on shared isolation points

A maintenance department gains most when its planners, authorised persons and safety officers attend together.

Hazardous Energy Isolation and Locking Capabilities

Participants move from spotting energy on a machine to proving it is gone and handing equipment back without surprises.

- Map every electrical, stored, hydraulic, pneumatic, thermal and gravity source on an asset — the job planner
- Specify isolation points, lock positions and dissipation steps in sequence — the authorised person
- Apply personal and group locks with correct tags and key control — the work crew
- Test for zero energy with try-start, gauge reading and voltage proving — the person signing the permit
- Design a group isolation plan for multi-crew and contractor jobs — the maintenance supervisor
- Assess lock and tag compliance through field audits — the safety officer

Key Hazardous Energy Isolation and Locking Terms

- Energy isolating device — a disconnector, block valve or similar device that stops energy reaching equipment in its safe position.
- Stored energy — energy left in capacitors, springs, accumulators, raised loads or hot fluids after isolation.
- Zero energy state — the verified condition in which no source can move, energise or release anything harmful.
- Group lock box — a box holding all isolation lock keys, secured by each worker's personal lock until all have finished.
- Try-start — operating the normal controls after isolation to prove the equipment cannot start.
- Isolation certificate — the signed record listing each isolation point, lock number and verification result for a specific job.

Hazardous Energy Isolation and Locking Day by Day

Day 1: Energy Sources on Machines and Processes

- Energy Source Survey — Which Hazards a Job Must Address
- Electrical Supply Tracing — Locating Every Feeder and Back-Feed Path
- Hydraulic and Pneumatic Circuits — Where Pressure Hides After Shutdown
- Thermal and Chemical Energy — Release Risks From Hot or Reactive Media
- Gravity and Mechanical Motion — Restraining Raised Loads and Flywheels

Day 2: Writing Isolation Procedures

- Isolation Point Register — Recording Every Device by Tag and Location
- Step Sequencing — Order of Shutdown, Isolation and Dissipation
- Photo-Based Procedure Sheets — Making Instructions Readable on the Shop Floor
- Double Block and Bleed Arrangements — When Single Valves Are Not Enough
- Procedure Validation Walkdown — Confirming the Written Steps Match the Plant

Day 3: Locks, Tags and Key Control

- Personal Lock Rules — One Person, One Lock, One Key
- Tag Content and Placement — Warning Information Others Must Read
- Lockout Hardware Selection — Valve Covers, Breaker Clamps and Hasps
- Group Lock Box Method — Securing Many Isolations for Many Workers
- Lock Removal by Others — Controlled Steps When a Worker Is Absent

Day 4: Proving Zero Energy and Returning to Service

- Voltage Proving Sequence — Testing the Tester Before and After
- Pressure Bleed-Down Checks — Gauges, Vents and Drain Confirmation
- Try-Start Discipline — Proving Controls Cannot Restart the Machine
- Shift Change and Contractor Handover — Keeping Isolation Ownership Clear
- Restoration Checklist — Removing Locks and Re-Energising in Safe Order

Day 5: Practising the Machine-Specific Isolation Procedure

- Energy Source Survey Applied — Mapping a Packaging Line Case Asset
- Procedure Sheet Drafting — Sequencing Isolations for the Case Asset
- Group Lock Box Planning — Allocating Crews on a Pump Station Shutdown
- Field Audit Simulation — Scoring Locks, Tags and Certificates
- Machine-Specific Isolation Procedure and Group Isolation Plan — Final Review

Applying Hazardous Energy Isolation and Locking After the Course

- Run an energy source survey on one high-risk asset and rewrite its isolation sheet with photographs and verified steps.
- Lead a field audit of active group lock boxes and isolation certificates, then brief supervisors on the gaps found.

Hazardous Energy Isolation and Locking Questions FAQ

What is hazardous energy isolation and locking, and why does it matter now?

It is the practice of cutting off, securing and proving the absence of every energy source before people work on equipment. It matters now because machines hold more energy types, crews change more often and pressure to shorten stoppages tempts people to skip verification.

Which roles gain most from hazardous energy isolation and locking training?

Maintenance supervisors, authorised persons and safety officers gain most. You plan, sign or audit isolations and need one consistent method for locks and zero energy proof.

How does hazardous energy isolation and locking differ from high-voltage switching training?

It covers every energy type on a machine, not only electrical networks. Switching courses focus on network operation and earthing; this subject gives hydraulic, pneumatic, thermal and gravity energy equal weight.

What do you bring back from hazardous energy isolation and locking training?

You bring back a written isolation procedure for one of your own machines and a group isolation plan for multi-crew jobs. Both can serve as templates for other assets.

Hazardous Energy Isolation and Locking: The Way Forward

The machine-specific isolation procedure and group isolation plan first inform how the next planned shutdown is released and who holds which key. Planners and contractor leads use them on every job there. After the first use, revisit the stored energy steps and the try-start checks, since these are where field conditions most often differ from the written sequence.