



TRAINING CATALOGUE · CATEGORY G

Operator & Field Programmes

Short, practical programmes for panel and field operators: hazards and safeguards, rounds and abnormal situations, permits and isolation, start-up and shutdown.

4

COURSES

3.5

TRAINING DAYS

Practitioner-led training for the process industry

On-site at your plant or virtual · custom curricula · competency assessment and certificates

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Cerasus Technologies QFZ LLC · Ras Bufontas Free Zone · Doha, Qatar

Category G · Operator & Field Programmes

CODE	COURSE	DURATION	LEVEL	PRIMARY AUDIENCE
G · Operator & Field Programmes				
TR-G01	Process Safety for Operators Hazards, safeguards and the operator's role in preventing loss of containment	1 day	Foundation	Panel and field operators
TR-G02	Operator Rounds and Abnormal Situation Recognition What to look, listen and feel for on a round, and what to do about it	½ day	Foundation	Field operators
TR-G03	Permit-to-Work, Isolation and Safe Work Practices Permits, energy isolation and the hand-over of equipment between operations and maintenance	1 day	Foundation	Field operators
TR-G04	Start-up, Shutdown and Transient Operations Managing the periods when the unit is furthest from its design point	1 day	Intermediate	Panel operators

OPERATORS · FOUNDATION · 1 DAY

Process Safety for Operators

Hazards, safeguards and the operator's role in preventing loss of containment

SHIFT LOG · Unit 100 · Night

22:10 PSV-201 lifted, reseated

23:40 FIC-105 in manual – fouling

01:15 Permit 4471 closed

03:30 Round B · P-102 seal weep

Carried forward → Day shift

HANDOVER

Critical ☐

Open tasks ☐

Overrides ☐

DURATION
1 day

LEVEL
Foundation

FORMAT
On-site classroom · virtual instructor-led

LANGUAGE
English

MAX. PARTICIPANTS
16

Your

own P&IDs and logbook

1

tabletop unit-upset exercise

100 %

operator-focused

Overview

Operators are the layer of protection that thinks. This one-day course explains the hazards of the units they run, why each safeguard exists, what the trip and alarm settings mean, and what to do — and record — when things drift. It is delivered on the site's own P&IDs, logbook and incident history.

Learning outcomes

- Explain the major-accident hazards of their own unit
- Identify the safeguards on a P&ID and what defeats them
- Respond to alarms with the intended action, not habit
- Recognise abnormal situations early on a round or a trend
- Use the logbook and shift handover to pass on what matters
- Apply permit, isolation and override rules correctly

Who should attend

Panel and field operators, shift supervisors, new operations staff; refresher for experienced crews

Course outline

MORNING

Lessons from major accidents · loss of containment and its causes · safe operating limits · alarms, trips and their meaning · safeguards on our P&IDs

AFTERNOON

Operator rounds and abnormal-situation recognition · overrides and bypasses · shift handover practice with CeraShift · tabletop exercise on a unit upset · quiz and certificate

Standards referenced

OSHA 29 CFR 1910.119(g) · CCPS Conduct of Operations · ISA-18.2

Tools & exercises

Exercises on the site's own P&IDs and CeraShift logbook

What's included

- ✓ Course manual and slide pack
- ✓ Software access for the course
- ✓ Post-course Q&A with the instructor
- ✓ Exercise and case-study pack
- ✓ Competency quiz and certificate
- ✓ Templates used in the exercises

PREREQUISITES
None

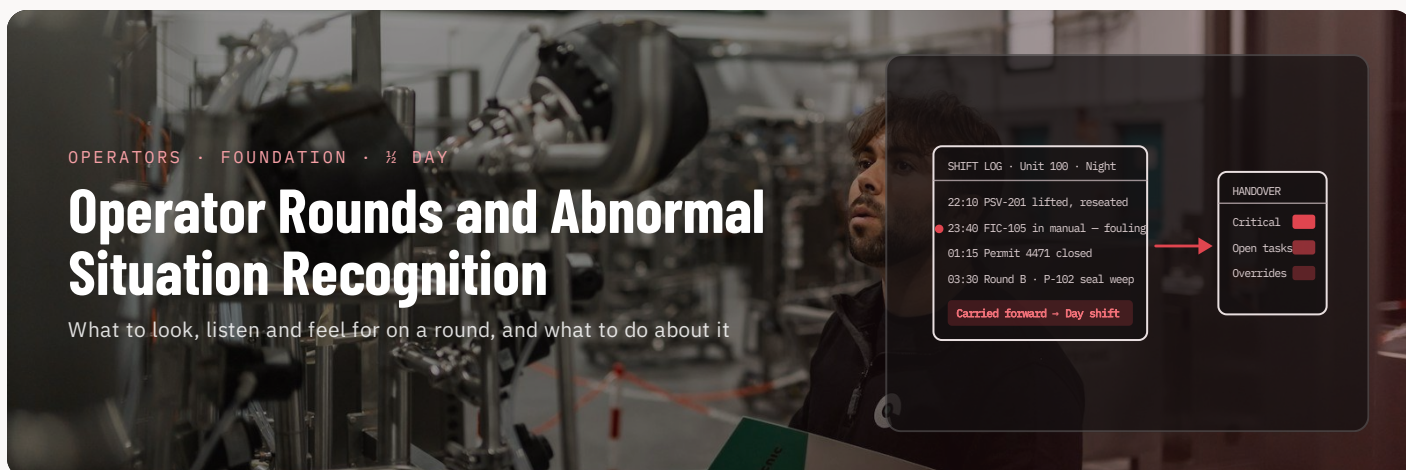
CERTIFICATION
Certificate of completion; competency record for the training matrix

INSTRUCTORS
Practising engineers — TÜV HAZOP Leader, CCPS and IEC 61511 Functional Safety certified — with 200+ years of cumulative plant experience.

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DURATION
 ½ day

LEVEL
 Foundation

FORMAT
 On-site classroom · virtual instructor-led

LANGUAGE
 English

MAX. PARTICIPANTS
 16

1

guided round on your own unit

8

abnormal-situation drills

Tablet

rounds in CeraShift

◆ Overview

A good round finds the seal leak, the passing valve and the vibrating pump before the alarm does. This half-day course gives field and panel operators a structured way to look at their unit: what normal looks like, which deviations matter, how to read a trend or a sight glass against the safe operating limits, and how to report what they found so the next shift and the engineer can act on it. Exercises use the site's own round sheets, P&IDs and recent near-miss reports.

◆ Learning outcomes

- Plan a round around the safety-critical equipment and safe operating limits of the unit
- Recognise the early signs of loss of containment, fouling, cavitation and instrument drift
- Compare field observations with panel trends and question a mismatch
- Escalate an abnormal situation through the right channel at the right time
- Record findings on the electronic round sheet so they become work orders, not memories
- Use round data to spot slow deterioration between shifts

◆ Who should attend

Field operators, panel operators, shift supervisors and trainee operators; refresher for experienced crews

◆ Course outline

SESSION 1

Why rounds matter: incidents caught and missed on the round · safe operating limits and the operating envelope · sensory checks on pumps, exchangers, furnaces and relief systems · reading local gauges against panel values · leaks, passing valves and small releases

SESSION 2

Abnormal situation recognition and the 'stop and question' rule · escalation and shift-supervisor notification · electronic rounds on the tablet with CeraShift · guided round on the participants' unit · eight short drills and debrief · quiz and certificate

◆ Standards referenced

OSHA 29 CFR 1910.119(f) / (g) CCPS Conduct of Operations

ISA-18.2

CCPS Guidelines for Safe Process Operations and Maintenance

◆ Tools & exercises

Round sheets and exception reports built in CeraShift on the site's own equipment list

◆ What's included

- ✓ Course manual and slide pack
- ✓ Software access for the course
- ✓ Post-course Q&A with the instructor
- ✓ Exercise and case-study pack
- ✓ Competency quiz and certificate
- ✓ Templates used in the exercises

PREREQUISITES
 None

CERTIFICATION
 Certificate of completion; competency record for the training matrix

INSTRUCTORS
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OPERATORS · FOUNDATION · 1 DAY

Permit-to-Work, Isolation and Safe Work Practices

Permits, energy isolation and the hand-over of equipment between operations and maintenance

SHIFT LOG · Unit 100 · Night

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03:30 Round B · P-102 seal weep

Carried forward – Day shift

HANDOVER

Critical ☐

Open tasks ☐

Overrides ☐

DURATION
1 day

LEVEL
Foundation

FORMAT
On-site classroom · virtual instructor-led

LANGUAGE
English

MAX. PARTICIPANTS
16

1

isolation plan built on a real P&ID

5

permit types worked through

LOTO

audit on the plant

Overview

Most maintenance-related process safety incidents trace back to a permit that was signed but not understood, or an isolation that was assumed rather than proven. This course covers the full permit-to-work cycle from job planning to close-out, positive isolation and lock-out/tag-out, gas testing and confined-space entry, and the hand-back to operations. Participants build an isolation plan on one of their own P&IDs and audit a live permit in the plant.

Learning outcomes

- Explain the roles of issuer, receiver, area authority and performing authority in the permit cycle
- Select the correct isolation method — valve, double block and bleed, spade or physical disconnection — for the fluid and the job
- Apply lock-out/tag-out so that stored energy, not just the main supply, is controlled
- Specify gas testing, confined-space and hot-work controls that match the hazard
- Recognise simultaneous-operations conflicts and manage permit interactions
- Hand equipment back to operations with a documented de-isolation and leak test

Who should attend

Field operators, area authorities, permit issuers and receivers, maintenance supervisors and contractor supervisors

Course outline

MORNING

Incidents caused by permit and isolation failures · permit-to-work system: types, roles and authorities · job hazard analysis at the permit desk · isolation standards: single valve to positive isolation · lock-out/tag-out and stored energy · isolation plan workshop on a participants' P&ID

AFTERNOON

Gas testing, confined-space entry and hot work · working at height, excavation and lifting interfaces · simultaneous operations and permit conflicts · permit suspension, extension and close-out · de-isolation, leak testing and hand-back · live permit audit walk-down and debrief

Standards referenced

OSHA 29 CFR 1910.119(f) / (g)

OSHA 29 CFR 1910.147 (Lockout/Tagout) API RP 2201

CCPS Guidelines for Safe Work Practices

CCPS Conduct of Operations

Tools & exercises

Isolation plan and permit walk-down exercises on the site's own P&IDs and permit forms

What's included

- ✓ Course manual and slide pack
- ✓ Software access for the course
- ✓ Post-course Q&A with the instructor
- ✓ Exercise and case-study pack
- ✓ Competency quiz and certificate
- ✓ Templates used in the exercises

PREREQUISITES

None; area familiarity helps for the walk-down

CERTIFICATION

Certificate of completion; competency record for permit issuer/receiver authorisation

INSTRUCTORS

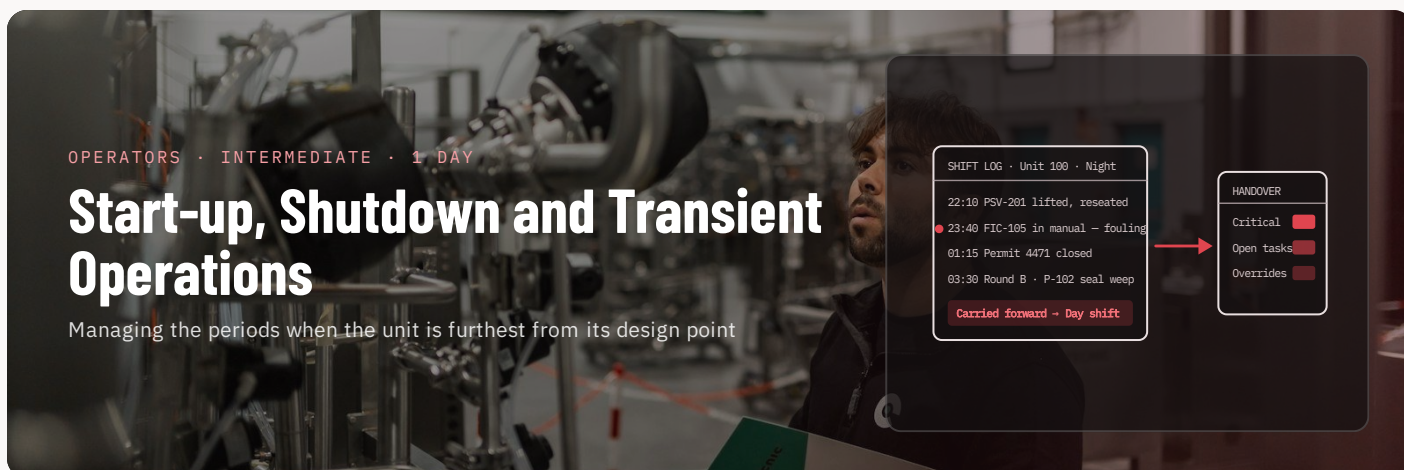
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DURATION
 1 day

LEVEL
 Intermediate

FORMAT
 On-site classroom · virtual instructor-led

LANGUAGE
 English

MAX. PARTICIPANTS
 16

3

transient scenarios walked through

1

start-up procedure reviewed line by line

PSSR

checklist template

Overview

Transient operations account for a small fraction of running hours and a large share of serious incidents. This course looks at what is physically different about a unit at start-up, shutdown, rate change and emergency depressuring: thermal stress, water and air ingress, level control at low rates, trips that behave differently, and procedures written for a plant that has since changed. Participants review one of their own start-up procedures step by step and work through three transient scenarios on the site's own trends.

Learning outcomes

- Identify the hazards specific to start-up, shutdown and rate changes on their unit
- Apply purging, leak testing, warm-up and cool-down limits correctly
- Recognise where trips, alarms and controllers behave differently outside normal operation
- Use the pre-start-up safety review as a genuine check, not a signature exercise
- Handle emergency shutdown and depressuring with the intended sequence
- Feed back procedure deviations and near-misses so the procedure improves

Who should attend

Panel operators, shift supervisors, operations engineers and turnaround coordinators involved in unit start-up, shutdown and rate changes

Course outline

MORNING

Transient-operation incidents and their common causes · start-up sequence: air-freeing, purging, leak testing, inventory and warm-up · thermal and mechanical limits on equipment · trip and override management during start-up · procedure review of a participants' start-up procedure

AFTERNOON

Planned shutdown, decontamination and hand-over to maintenance · emergency shutdown and depressuring · rate changes, feed changes and turndown · pre-start-up safety review and restart after a trip · three transient scenarios on the site's trends · quiz and certificate

Standards referenced

OSHA 29 CFR 1910.119(f) / (g)

CCPS Guidelines for Safe Process Operations and Maintenance

CCPS Conduct of Operations ISA-18.2 API 521 (depressuring)

Tools & exercises

Scenario walk-throughs on the site's own historian trends and CeraShift shift logs

What's included

- ✓ Course manual and slide pack
- ✓ Software access for the course
- ✓ Post-course Q&A with the instructor
- ✓ Exercise and case-study pack
- ✓ Competency quiz and certificate
- ✓ Templates used in the exercises

PREREQUISITES

Operating experience on a process unit; TR-G01 recommended

CERTIFICATION

Certificate of completion; competency record for the training matrix

INSTRUCTORS

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