CONCEPT

Control Room Management and Multishift Operations: Shift Handover, Fatigue and Upset Response

18 – 22 July 2027
Riyadh - KAFD district five-star



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Ref: 302_15538 **Date:** 18 – 22 July 2027 **Location:** Riyadh - KAFD district five-star **Fees:** 20000 SAR

Introduction:

Control room management decides how a process plant or utility behaves at three in the morning: who watches which console, what the incoming shift really knows, how tired the panel operator is and how fast the team reacts when trends start to drift. Weak handovers, thin staffing and unmanaged fatigue turn small deviations into upsets. This Core Concept course gives control room supervisors and shift leaders practical methods to run multishift operations, protect situation awareness and measure control room performance. Participants build a Control Room Operations Improvement Plan for their own site.

Course Objectives:

- Define control room roles, minimum staffing and shift rotation arrangements for normal, upset and emergency operating states
- Assess operator workload, situation awareness and fatigue exposure using console activity data, rosters and a fatigue risk index
- Run structured shift handovers that combine a written log with a face-to-face exchange and verification by the incoming shift
- Apply operating envelopes, standing orders and closed-loop field communication in routine console work
- Lead the control room team through abnormal situations and alarm floods with a clear role split and escalation route
- Set control room KPIs, operator competence assurance and simulator training that keep shift performance consistent

Target Audience:

- Control room supervisors who direct console operators and coordinate field crews on each shift
- Shift superintendents accountable for handover quality, rosters and shift-level operating decisions
- Senior panel operators who train and mentor newer console operators
- Operations team leads who own standing orders, operating limits and daily production targets
- Operations training coordinators who run console qualification and simulator sessions

Course Outline:

Day 1: Control Room Operations Foundations and Current-State Review

- Control Room Mission Statement and Operating Boundaries for Process and Utility Plants
- Console Role RACI: Panel Operator, Shift Supervisor, Field Operator and Engineer on Call
- Minimum Staffing Assessment for Normal, Upset and Emergency Operating States
- Multishift Rotation Patterns: Fixed, Forward-Rotating and Twelve-Hour Schedules Compared
- Control Room Current-State Walkthrough Checklist and Console Operator Survey

Day 2: Situation Awareness, Workload, Ergonomics and Fatigue Frameworks

- Endsley Three-Level Situation Awareness Model: Perception, Comprehension and Projection
- Console Workload Profiling: Task Logs, Interruption Counts and Peak Activity Periods
- ISO 11064 Ergonomic Design of Control Centres at Overview With ISO 11064-4 Workstation Layout
- HSG256 Managing Shift Work: Shift Timing, Rotation Direction, Breaks and Night Working
- Fatigue Risk Index Calculation and Written Limits on Hours, Overtime and Shift Swaps

Day 3: Shift Handover, Operating Envelopes and Field Communication

- Structured Shift Handover: Outgoing Preparation, Face-to-Face Exchange and Incoming Verification
- Shift Handover Log Template and Criteria for Higher-Risk Handovers
- Operating Envelope and Safe Operating Limit Display at the Console
- Standing Orders, Night Orders and Temporary Operating Instructions Hierarchy
- Console-to-Field Radio Protocol With Read-Back and Closed-Loop Confirmation

Day 4: Abnormal Situations, Upset Response and Control Room Performance

- Abnormal Situation Management: Early Deviation Detection From Trend Displays
- Alarm Flood Response Routine: First-Out Identification, Role Split and Supervisor Escalation
- Upset Escalation Matrix With Call-Out List and Incident Command Handoff
- Console Qualification Matrix and Periodic Operator Reassessment
- Control Room KPI Set: Handover Quality, Envelope Excursions, Overtime Hours and Order Adherence

Day 5: Simulator Exercises and the Control Room Operations Improvement Plan

- Simulator Scenario: Night-Shift Compressor Trip With a Concurrent Alarm Flood
- Simulator Scenario: Utility Power Dip During Shift Changeover
- Exercise Debrief Using Situation Awareness Probes and Handover Log Evidence
- Simulator Training Programme Design: Scenario Library, Frequency and Assessment Criteria
- Control Room Operations Improvement Plan Drafting and Peer Challenge

Skills You Will Gain:

- Shift Handover Facilitation
- Control Room Staffing Assessment
- Fatigue Risk Management
- Console Workload Analysis
- Operating Envelope Management
- Upset Response Coordination
- Simulator Scenario Design
- Control Room KPI Reporting

Why Attend This Course:

- Return with a Control Room Operations Improvement Plan built on the rosters, handover logs and console data of your own site
- Rehearse upset and alarm flood response as a shift team in timed simulator scenarios before facing them on the plant
- Give the incoming shift the information it needs through a handover log and verification routine that can be audited
- Compare shift practice with control room peers from refining, petrochemicals, power generation and water utilities

Conclusion:

A control room performs well when staffing, handover, fatigue limits and escalation routes are planned rather than left to habit. The course moves from roles, staffing and rotation patterns, through situation awareness, workload, ergonomics and fatigue frameworks, to handover, operating envelopes and field communication, then to abnormal situations, alarm flood response, competence and KPIs. The final day runs simulator scenarios and produces a Control Room Operations Improvement Plan ready for review by site operations management.