Crane Safety Training for Ports

Service Objectives

- Enable safe, efficient lifting for STS gantry, RTG/RMG, MHC, straddle carriers, reach stackers, and heavy-lift mobile cranes in live port operations.
- Apply load charts and spreader ratings; enforce wind/weather thresholds and use anti-sway and safe-lift features correctly.
- Standardise communications: approved hand signals, radio discipline, and talk-group management between cabs, signallers, lashers, and vessel crews.
- Prevent incidents at high-risk interfaces: DROPS, pinch-points at twistlocks/lashing, truck–crane interfaces, gantry travel and spacing.
- Plan and authorise non-routine/heavy lifts with engineered plans; integrate permit-to-work and LOTO for maintenance on cranes/spreaders.
- Align with terminal SOPs and ISO 45001 practices to embed measurable, auditable safe behaviours.

> Designed for compliance with OSHAD and Dubai Municipality requirements applicable to port operations, and compatible with IMDG rules where dangerous goods are handled.

Who This Service Is For

- Port authorities, terminal operators, stevedoring companies, maintenance contractors, and logistics providers working inside UAE free zones and port estates.
- Roles: operators, lashers, signallers/banksmen, berth supervisors, quay crane technicians, control room coordinators, and HSE/training managers.
- Terminal contexts: container, bulk, Ro-Ro, and general cargo operations in locations such as Khalifa Port, JAFZA, Mina Zayed, Port Rashid, and Port of Fujairah.
- 24/7 shift environments with rotating, multilingual crews requiring consistent signalling, radio protocols, and permit-to-work expectations.
- Operations exposed to weather constraints (wind, dust, night work) and vessel motion, requiring dynamic risk assessment and wind cut-out adherence.

Duration & Process Overview

- Blended delivery: classroom theory on-site; simulator practice where available; on-crane practicals during safe, non-operational windows or on a training crane.
- Typical formats: Operators (2 days incl. simulator/on-crane); Rigger/Signaller (1 day); Supervisor & Lift Planning (0.5–1 day); Refresher (0.5 day).
- Rolling cohorts and night-shift sessions available for multi-terminal operators to ensure consistent competence across shifts.

- Optimal group size: 8–12 to maximise observation of signalling, exclusion zone control, and radio communication behaviours.

Methodology

Training maps directly to port workflows and equipment, combining role-specific theory, scenario-based drills, and observed practical competence.

Phase	Objective	Deliverable
Pre-Training Needs Analysis & SOP Integration	Align content with terminal SOPs, equipment configs, and recent incident learnings.	Site-specific scenarios and assessment criteria.
Core Theory	Build foundational knowledge on port lifting principles, load charts, spreader ratings, wind thresholds, and vessel motion effects.	Applied understanding mapped to terminal SOPs.
Communications & Signalling	Standardise hand signals, radio discipline, and talk-group management between quay, yard, and vessel teams.	Approved signal set and radio scripts in use.
Equipment-Specific Controls	Operate STS trolley/gantry travel; manage RTG/RMG stack operations and crossings; set up and de-rig MHC safely.	Demonstrated correct use of anti-sway, alarms, bumpers, and spacing controls.
Hazard Identification & DROPS	Identify and control dropped-object, pinch-point, and interface hazards; enforce exclusion zones and twistlock management.	Checklist-based inspections and DROPS controls embedded.
Non-Routine / Heavy Lifts	Plan tandem/heavy lifts with engineered lift plans and supervisor authorisation; integrate permit-to-work and LOTO.	Validated lift plans and documented controls before execution.
Emergency Response	Execute E-stops, evacuations, and incident containment aligned to terminal protocols and IMDG where relevant.	Rehearsed drills and defined escalation triggers.
Practical Assessment	Evidence competence via simulators (if available) and on-crane tasks under realistic conditions.	Observed behaviours, knowledge check, and records for competence matrices.

Use cases include reducing truck–crane conflicts, preventing gantry-to-gantry contacts, consistent wind cut-out decisions, and measurable declines in dropped-object near misses at lashing/twistlock stations.