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COURSE BROCHURE

Loading Master Training Course for Oil and LNG Terminals

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Registered in the United Kingdom and Saudi Arabia

Loading Master Training Course for Oil and LNG Terminals

Loading Master for oil and LNG terminals is a 2-week advanced training course for loading masters, terminal supervisors and marine superintendents who build a Terminal Cargo Transfer Plan for crude, product and LNG cargoes. As tankers grow larger and berth windows tighten, every ship-shore transfer depends on precise checks, accurate figures and calm control of the manifold. Jupiter Prime Training delivers this Loading Master course for oil and LNG terminals.

Why Loading Master Matters Now

Three forces shape the loading master role today. Terminals handle a wider mix of crude grades, refined products and liquefied gas at the same jetties, so one person must switch between very different hazards within a shift. Buyers, sellers and cargo inspectors scrutinise every quantity figure, and small measurement gaps turn into claims and demurrage disputes. Charterers and vessel operators expect fast turnarounds without shortcuts on safety. A terminal that runs its transfers well protects people, assets and commercial reputation; one that does not faces spills, delays and costly arguments over cargo documents. The course rests on recognised industry practice for ship-shore safety, custody transfer measurement and petroleum standards published by the American Petroleum Institute API.

Who Gains Most from Loading Master

- Loading masters who supervise the ship-shore interface and sign off each cargo operation
- Terminal supervisors responsible for jetty crews, loading arms and shore tank line-ups
- Marine superintendents who vet vessels, approve mooring plans and settle berth disputes
- Cargo measurement specialists who reconcile ship and shore figures for custody transfer
- Terminal safety leads who own emergency shutdown drills and vapour control arrangements

Marine terminal teams gain most when the loading master, the shift supervisor and the measurement specialist attend together and agree one transfer routine for every berth.

Loading Master Capabilities

Participants sharpen the judgement a loading master uses alongside the tanker, from first contact with the ship's officer to the final signature on the cargo papers.

- Apply the ship-shore safety checklist and agreed repetitive checks — vessel acceptance and stop decisions
- Calculate gross and net standard volumes and LNG energy quantities — buyers, sellers and inspectors
- Specify mooring arrangements and loading arm envelopes — berth limits and weather stoppages
- Design pressure, rate and vapour return sequences — safe starts, topping off and line clearing
- Test emergency shutdown and release coupling responses — jetty crews and ship's officers
- Build defensible cargo documentation and letters of protest — claims and demurrage disputes

Key Loading Master Terms

- Ship-shore safety checklist — a joint list the vessel and terminal complete before transfer, confirming hoses, moorings, communications and emergency arrangements.
- Custody transfer — the point where ownership of a cargo passes from seller to buyer, fixed by agreed measurement.
- Vessel experience factor — the average ratio between ship-measured and shore-measured quantities, used to judge the ship's figures.
- Marine loading arm — an articulated steel pipe assembly that connects shore lines to a ship's manifold within a set operating envelope.
- Emergency shutdown — a linked ship and shore system that stops pumps and closes valves quickly when a hazard is detected.
- Letter of protest — a written notice recording a discrepancy or delay, preserving a party's position for later claims.

Loading Master Day by Day

Day 1: The Loading Master at the Jetty

- Terminal Roles and Lines of Authority — Who Can Stop a Cargo Operation
- Crude, Product and LNG Hazard Profiles — Berth Allocation and Crew Briefing
- Vessel Nomination and Acceptance Criteria — Whether a Tanker Is Accepted Alongside
- Port and Pilot Interface — Arrival Timing and Berthing Window Choices
- Jetty Equipment Register — Readiness Before the Vessel Is All Fast

Day 2: Ship-Shore Safety Interface

- Ship-Shore Safety Checklist Walkthrough — Go or No-Go Before Connection
- Agreed Repetitive Checks Schedule — Ongoing Assurance During Transfer
- Communication and Language Protocols — Clear Stop Signals Across the Manifold
- Pre-Transfer Conference Agenda — Rates, Pressures and Sequence Agreement
- Hot Work and Ignition Source Controls — Permits Near the Cargo Area

Day 3: Mooring and Berth Integrity

- Mooring Line Layout and Tension Monitoring — Surge, Sway and Line Tending
- Environmental Operating Limits — When Wind or Swell Halts Cargo Work
- Fender and Berth Load Checks — Matching Vessel Size to Jetty Design
- Gangway and Access Arrangements — Safe Crew and Inspector Movement
- Quick Release Hooks Testing — Emergency Unmooring Readiness

Day 4: Marine Loading Arms and Hoses

- Loading Arm Operating Envelope — Alarm Zones and Drift Limits
- Powered Emergency Release Coupling — Disconnection Under Excess Movement
- Cargo Hose Selection and Inspection — Rating, Bend Radius and Retirement
- Manifold Connection and Leak Testing — Integrity Before First Flow
- Insulating Flanges and Bonding — Static and Stray Current Control

Day 5: Crude and Product Cargo Calculations

- Tank Gauging and Ullage Readings — Opening and Closing Quantity Figures
- Temperature and Density Corrections — Gross to Net Standard Volume
- Sediment and Water Deductions — Saleable Quantity Determination
- Vessel Experience Factor Application — Judging Ship Versus Shore Figures
- Petroleum Measurement Tables From API — Consistent Volume Conversion

Day 6: LNG Cargo Measurement and Energy Transfer

- Custody Transfer Measurement System — LNG Level, Temperature and Pressure
- Gas Composition and Calorific Value — Delivered Energy Calculation
- Boil-Off and Vapour Return Accounting — Quantity Netting Between Parties
- Heel and Cooldown Requirements — Arrival Condition Acceptance
- Shore Meter Proving and Sampling — Confidence in Transferred Quantity

Day 7: Transfer Rates, Pressure and Vapour Control

- Start-Up, Bulk and Topping-Off Rate Plans — Surge and Overfill Prevention
- Vapour Emission Control and Return Lines — Tank Pressure Management
- Inert Gas and Oxygen Monitoring — Flammable Atmosphere Avoidance
- Line Draining and Stripping Procedures — Clean Disconnection After Loading
- Ballast and Stress Coordination With the Ship — Trim and Draught Limits

Day 8: Emergency Shutdown and Incident Response

- Linked Ship-Shore Emergency Shutdown Logic — Trip Initiation and Valve Closure
- Spill and Gas Release Response Plan — First Actions at the Jetty
- Fire Fighting and Tug Assistance — Vessel Removal From Berth
- Drill Scenario Design — Testing Crews Against Realistic Failures
- Near Miss Reporting and Investigation — Lessons Fed Back to Procedures

Day 9: Cargo Documentation and Disputes

- Bill of Lading and Cargo Manifest Data — Quantity and Quality Records
- Time Sheet and Statement of Facts — Laytime and Demurrage Evidence
- Letters of Protest Drafting — Preserving Positions on Discrepancies
- Independent Inspector Coordination — Witnessing and Joint Measurement
- Quantity Claim Reconciliation — Root Causes of Transit Losses

Day 10: Practising the Terminal Cargo Transfer Plan

- Crude Loading Simulation — Applying Checklist, Mooring and Rate Plans
- LNG Discharge Simulation — Applying Measurement and Vapour Return Steps
- Emergency Shutdown Tabletop Exercise — Applying Incident Response Roles
- Disputed Cargo Figures Case — Applying Calculations and Protest Letters
- Terminal Cargo Transfer Plan Completion — Berth-Ready Document for Team Use

Applying Loading Master After the Course

- Lead a review of the terminal's ship-shore safety checklist and agreed repetitive checks against the practice covered on the course, closing gaps with jetty crews.
- Run a ship and shore figure reconciliation for recent cargoes, applying the vessel experience factor and logging root causes for any repeated discrepancy.

Loading Master Questions FAQ

What is a loading master for oil and LNG terminals and why does the role matter now?

A loading master controls the safe, measured transfer of cargo between tanker and terminal. The role matters now because mixed crude, product and LNG traffic, tighter berth windows and close scrutiny of cargo figures leave little room for error at the manifold.

Which roles gain most from loading master training for oil and LNG terminals?

Loading masters, terminal supervisors and marine superintendents gain most. Measurement specialists and terminal safety leads also benefit, since they share responsibility for cargo figures, emergency shutdown and vapour control during every transfer at the jetty.

How does this loading master course for oil and LNG terminals differ from a general tanker operations course?

It is written from the shore side of the manifold. A general tanker operations course follows the ship's crew, while this course follows the person who accepts the vessel, signs the checklist, agrees the figures and defends the cargo documents.

What do you bring back from loading master training for oil and LNG terminals?

You bring back a structured transfer plan for your own berth, worked cargo calculations for crude and LNG, an emergency shutdown drill outline and templates for letters of protest that your terminal team can adopt straight away.

Loading Master: The Way Forward

The Terminal Cargo Transfer Plan sets out checks, mooring limits, rate sequences, measurement steps and shutdown roles for one berth. Its first use is the decision to accept the next vessel alongside. Loading masters, shift supervisors and inspectors work from it together. After the first cargo, revisit how ship and shore figures compared, since that comparison shows where the plan needs tightening.