JUPITER PRIME

Consulting • Training • Advisory

جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

Gas Processing and Conditioning Plant Operations Training Course

20 – 24 June 2027
Online

jupiterprime.uk

info@jupiterprime.uk

Registered in the United Kingdom and Saudi Arabia

Gas Processing and Conditioning Plant Operations Training Course

Ref: 1565_57549 **Date:** 20 – 24 June 2027 **Location:** Online **Fees:** 2900 GBP

Gas Processing and Conditioning Plant Operations is a 1-week training course for process engineers and gas plant operators, and it ends with a gas conditioning performance review for one processing train. As feed gas grows sourer, wetter or leaner, holding the export stream to its contract limits decides revenue, flaring and pipeline integrity. This course is delivered by Jupiter Prime Training.

Why Gas Processing and Conditioning Plant Operations Matter Now

Three forces shape gas plant operations today. Feed composition shifts as fields age, bringing more carbon dioxide, hydrogen sulphide and free water to inlet facilities. Buyers and pipeline owners enforce tighter limits on water content, hydrocarbon dew point and heating value. Pressure to cut flaring and venting puts acid gas handling and sulphur recovery under scrutiny. Plants that read these signals early stay on specification; late ones lose throughput and risk hydrate blockages. The course rests on the gas processing data book methods used across the industry, described in general terms.

Who Gains Most from Gas Processing and Conditioning Plant Operations

- Engineers owning the balance of treating and liquids units
- Control room staff adjusting solvent rates and chiller temperatures
- Specialists interpreting laboratory and analyser results
- Supervisors who sign off product quality before gas enters the export line
- Staff planning turnarounds on conditioning trains

Shift teams gain most when an engineer, a board operator and a laboratory specialist from the same train attend together.

Gas Processing and Conditioning Plant Operations Capabilities

Participants link each unit's set points to export limits and spot drift early.

- Assess acid gas removal performance from lean and rich loading figures — solvent circulation decisions
- Calculate water dew point margin after dehydration contactors — operators protecting the pipeline
- Specify hydrate inhibitor injection rates for cold sections — start-up and blowdown planning
- Weigh refrigeration and turboexpander options for liquids recovery — commercial staff valuing NGL
- Apply sulphur recovery unit air demand control — environmental and flaring limits
- Build a key performance indicator set for a conditioning train — plant management reviews

Key Gas Processing and Conditioning Plant Operations Terms

- Sales gas specification — contract limits on water, sulphur, dew point and heating value for export gas.
- Hydrocarbon dew point — the temperature at which heavier hydrocarbons start to condense from gas.
- Hydrate inhibition — injecting methanol or glycol to stop ice-like hydrates forming in lines.
- Rich solvent loading — acid gas carried per mole of amine leaving the absorber.
- Claus process — the thermal and catalytic route turning hydrogen sulphide into sulphur.
- Turboexpander — a machine that expands gas to chill it for liquids recovery.

Gas Processing and Conditioning Plant Operations Day by Day

Day 1: Feed Gas, Contracts and the Processing Chain

- Feed Gas Composition and Contaminant Survey — Which Units the Plant Truly Needs
- Sales Gas Specification Clauses — Off-Spec Penalties and Export Shut-In Risk
- Inlet Separation and Slug Catcher Duty — Liquid Carry-Over Into Treating Units
- Phase Envelope Reading — Where Condensation Starts Along the Train
- Block Flow Diagram of a Processing Train — Interfaces Between Shift Teams

Day 2: Acid Gas Removal and Sulphur Handling

- Amine Absorber and Regenerator Balance — Solvent Rate Versus Reboiler Steam
- Foaming, Heat-Stable Salts and Solvent Losses — Reclaiming and Filtration Choices
- Physical Solvents and Membranes for Bulk CO2 — High-Pressure Sour Feed Options
- Claus Furnace and Converter Operation — Air Demand and Sulphur Yield
- Tail Gas Treating Basics — Emission Limits and Incinerator Load

Day 3: Water Removal, Hydrates and Dew Point

- Glycol Contactor and Regeneration Loop — Lean Glycol Purity and Water Content
- Adsorbent Bed Cycles — Breakthrough Timing Ahead of Cryogenic Sections
- Hydrate Curve Prediction — Inhibitor Choice for Start-Up and Blowdown
- Methanol and Glycol Injection Rates — Cold Spot Protection Versus Chemical Cost
- Joule-Thomson and Chiller Dew Point Units — Hydrocarbon Dew Point Margin

Day 4: Liquids Recovery and Plant Health

- Refrigeration and Turboexpander Recovery — Ethane and Propane Yield Trade-Offs
- Demethaniser and Fractionation Column Control — Product Purity Versus Throughput
- Analyser Validation and Sampling Practice — Trust in Product Quality Data
- Key Performance Indicators for Conditioning Units — Early Warning of Drift
- Energy and Fuel Gas Accounting — Where Plant Efficiency Is Lost

Day 5: Practising the Gas Conditioning Performance Review

- Inlet and Specification Gap Check — Applying Day 1 Feed Survey Findings
- Treating and Sulphur Unit Health Scoring — Applying Day 2 Operating Limits
- Dehydration and Dew Point Margin Audit — Applying Day 3 Hydrate Methods
- Liquids Recovery Yield Comparison — Applying Day 4 Performance Indicators
- Gas Conditioning Performance Review — Ranked Actions for the Next Turnaround

Applying Gas Processing and Conditioning Plant Operations After the Course

- Run a one-month trend of dew point margin and lean glycol purity and flag units drifting to a limit.
- Lead a shift briefing on the hydrate curve and inhibitor rates for the next cold start-up.

Gas Processing and Conditioning Plant Operations Questions FAQ

What is gas processing and conditioning plant operations, and why does it matter now?

It is the daily running of the units that turn raw gas into export-quality sales gas and liquids. It matters now because feed gas is changing as fields age while buyers, pipeline owners and flaring limits all tighten what a plant may send out.

Which roles gain most from gas processing and conditioning plant operations training?

Process engineers and board operators on treating, dehydration and liquids units gain most. Laboratory specialists and supervisors also benefit, in upstream gas plants and midstream processing hubs.

How does a gas processing and conditioning plant operations course differ from a gas plant design course?

It focuses on running existing units to specification rather than sizing new equipment. You work with operating data and trends, not equipment selection and capital cost.

What do you bring back from gas processing and conditioning plant operations training?

You bring back a performance review of one processing train, with unit health scores, dew point and specification margins, and ranked actions.

Gas Processing and Conditioning Plant Operations: The Way Forward

The gas conditioning performance review first informs which unit gets attention in the next turnaround. Plant managers, shift supervisors and process engineers use it to align set points with export limits. After its first use, revisit the review whenever feed composition shifts, because a new contaminant level can move every margin in the train at once.