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COURSE BROCHURE

Refining and Gas Processing Value and Risk Trade-Off Training Course

5 – 9 April 2027
New York

Refining and Gas Processing Value and Risk Trade-Off Training Course

Ref: 2952_111951 **Date:** 5 – 9 April 2027 **Location:** New York **Fees:** 9500 GBP

Refining and Gas Processing Value and Risk Trade-Off is a 1-week training course for refinery planners, process engineers and economics engineers who weigh margin opportunities against the operating exposure they create, and who build a margin improvement and risk register. Narrow product cracks and ageing equipment mean every extra barrel of value must be tested against reliability and process safety. Jupiter Prime Training offers the course to downstream technical and planning staff.

Why Refining and Gas Processing Value and Risk Trade-Off Matters Now

Three forces push this subject up the agenda. Volatile crude differentials and product spreads reward plants that switch feeds and modes quickly. Ageing units and tighter maintenance budgets raise the chance that a push for throughput ends in an unplanned shutdown. Owners, insurers and communities expect visible control of hazardous operations. A site that ranks opportunities by margin and exposure together captures value without trading away integrity. The course rests on recognised process safety and reliability practice.

Who Gains Most from Refining and Gas Processing Value and Risk Trade-Off

- Planning and scheduling engineers who set crude slates, unit modes and monthly targets
- Process engineers who push unit severity, conversion and recovery towards limits
- Economics engineers who quantify opportunity value and margin capture
- Reliability specialists who judge equipment condition against proposed operating windows
- Gas plant engineers who balance liquids recovery, sales gas specifications and energy use

Refineries and gas plants gain most when planning, process and reliability members attend together and agree one ranking of opportunities.

Refining and Gas Processing Value and Risk Trade-Off Capabilities

Participants practise putting a margin estimate and an exposure rating side by side for each idea.

- Assess crude and feed alternatives by netback and processing constraints — monthly crude selection
- Calculate the margin value of unit severity, cut point and recovery changes — unit optimisation targets
- Design product blends that meet specifications with minimum giveaway — blending and dispatch
- Weigh reliability and process safety exposure of each opportunity — operations and integrity leads
- Specify safeguards and operating envelope limits for approved changes — shift supervision
- Communicate a ranked list of opportunities with their exposures — site leadership

Key Refining and Gas Processing Value and Risk Trade-Off Terms

- Crude netback — the product value of a crude less freight, processing cost and losses, used to compare feed options.
- Gross margin capture — the share of theoretical margin a plant actually realises after constraints and losses.
- Product giveaway — quality delivered above specification, which hands away value without customer benefit.
- Integrity operating window — the limits of temperature, pressure and chemistry within which equipment damage stays controlled.
- Risk ranking matrix — a grid scoring likelihood and consequence to compare exposures on one scale.
- Natural gas liquids recovery — the share of ethane, propane and heavier components extracted from a raw gas stream.

Refining and Gas Processing Value and Risk Trade-Off Day by Day

Day 1: Margin Drivers and Exposure Sources

- Refinery and Gas Plant Margin Structure — Where Value Is Gained and Lost
- Crack Spreads and Crude Differentials — Market Signals for Planning
- Loss Events and Unplanned Shutdowns — Cost of Lost Availability
- Ageing Equipment and Damage Mechanisms — Limits on Pushing Units
- Opportunity Inventory Template — Capturing Ideas Across the Site

Day 2: Feed Selection and Unit Optimisation

- Crude Assay Interpretation — Yield and Contaminant Effects on Units
- Crude Netback Comparison — Choosing Between Feed Options
- Unit Severity and Cut Point Moves — Margin Versus Equipment Stress
- Gas Plant Recovery and Specification Trade-Offs — Liquids Versus Energy Use
- Planning Model Constraints — Keeping Optimisation Within Real Limits

Day 3: Blending, Specifications and Giveaway

- Gasoline and Diesel Blend Recipes — Meeting Specifications at Least Cost
- Giveaway Tracking — Quantifying Value Handed to Customers
- Off-Specification Product Handling — Reblending and Downgrade Costs
- Tank and Component Inventory — Flexibility for Blend Changes
- Laboratory and Online Analyser Confidence — Basis for Tighter Targets

Day 4: Reliability and Operating Exposure

- Integrity Operating Windows — Linking Process Changes to Damage Rates
- Risk Ranking Matrix — Scoring Likelihood and Consequence of Changes
- Management of Change Screening — When an Opportunity Needs Formal Review
- Critical Equipment Condition Data — Deciding Whether Units Can Run Harder
- Safeguard Selection — Alarms, Limits and Procedures for Approved Moves

Day 5: Practising the Margin Improvement and Risk Register

- Case Site Opportunity Inventory — Applying Margin Drivers
- Value Estimates for Feed, Unit and Blend Ideas — Applying Earlier Methods
- Exposure Scoring of Each Idea — Applying the Ranking Matrix
- Peer Challenge of Rankings — Testing Assumptions and Safeguards
- Margin Improvement and Risk Register — Final Ranked Opportunity List

Applying Refining and Gas Processing Value and Risk Trade-Off After the Course

- Run an opportunity inventory session with planning, process and reliability staff and score each idea for margin and exposure.
- Set up giveaway tracking for one product grade and report the value recovered to the planning meeting.

Refining and Gas Processing Value and Risk Trade-Off Questions FAQ

What is refining and gas processing value and risk trade-off and why does it matter now?

It is the practice of ranking margin opportunities in refineries and gas plants by both value and operating exposure. It matters now because volatile spreads and ageing equipment make unbalanced optimisation costly.

Which roles gain most from refining and gas processing value and risk trade-off training?

Planning, process, economics, reliability and gas plant engineers gain most. You share decisions that affect margin and equipment condition.

How does refining and gas processing value and risk trade-off differ from a refinery margin modelling course?

It adds exposure to every margin estimate rather than concentrating on spreadsheet or planning model technique. You score reliability and process safety effects alongside value and agree safeguards for each change.

What do you bring back from refining and gas processing value and risk trade-off training?

You bring back a margin improvement and risk register for a case site.

Refining and Gas Processing Value and Risk Trade-Off: The Way Forward

The margin improvement and risk register gives planners and process engineers a shared basis for the next monthly plan and the first operating change it proposes. Reliability leads use it to approve or hold each idea. After its first use, revisit the exposure scores, because equipment condition and market spreads change which opportunities remain worth the risk.