JUPITER PRIME

Consulting • Training • Advisory

جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

# Life-of-Well Architecture and Concept Selection Training Course

17 – 21 January 2027
Muscat

**jupiterprime.uk**

info@jupiterprime.uk

Registered in the United Kingdom and Saudi Arabia

# Life-of-Well Architecture and Concept Selection Training Course

**Ref:** 2864_109579 **Date:** 17 – 21 January 2027 **Location:** Muscat **Fees:** 6500 GBP

Life-of-Well Architecture and Concept Selection is a 1-week training course for well engineers and well delivery team leads who choose casing schemes, tubulars and completions that must serve a well from first production to abandonment, building a well concept selection and optimisation review. Reservoirs decline, water arrives and intervention costs climb, so a concept chosen only for drilling cost can lock in decades of lost rate. Jupiter Prime Training offers this life-of-well architecture course.

## Why Life-of-Well Architecture Matters Now

Three forces now shape well architecture. Operators expect each well to deliver more reserves for less capital, so slimmer or simpler designs are tempting. Reservoir teams forecast changing rates, water cut and gas-oil ratio that a fixed tubing size may not handle. Integrity and abandonment liabilities sit with the asset long after the rig leaves. Sizing against the full production profile avoids early workovers; ignoring it means paying twice, in a recompletion and in deferred barrels. The course rests on load-case casing design, nodal analysis and life-cycle cost comparison.

## Who Gains Most from Life-of-Well Architecture

- Engineers who prepare casing schemes, hole-section plans and setting depths for development wells
- Completion specialists who size tubing, select packers and plan artificial lift readiness
- Well delivery leads who approve concept choices and defend them at stage gates
- Production technologists who supply inflow forecasts and intervention plans for the design
- Integrity engineers who define barrier envelopes and abandonment requirements from the outset

A multidisciplinary well team that sends drilling, completion and production members together gains most, because the concept trade-offs cross all three desks.

## Life-of-Well Architecture Capabilities

Participants leave able to compare well concepts on rate, cost and integrity over the field life rather than on spud-to-rig-release figures alone.

- Weigh monobore, tapered and conventional casing schemes against production and intervention needs — concept selection gate
- Calculate tubing size sensitivity across early, plateau and late-life rates — completion design sign-off
- Specify load cases for burst, collapse and axial loads over the producing life — casing design approval
- Compare life-cycle cost of competing concepts including workovers and abandonment — asset economics review
- Build an offset-well lessons register that feeds the next concept decision — continuous improvement loop
- Communicate concept recommendations with clear risk and uncertainty ranges — asset leadership and partners

## Key Life-of-Well Architecture Terms

- Well architecture — the arrangement of hole sizes, casing strings, setting depths and completion that defines a well's structure.
- Monobore completion — a design with a constant internal diameter from surface to reservoir, easing intervention and through-tubing access.
- Nodal analysis — a method that matches reservoir inflow with tubing outflow to predict rate for a chosen completion size.
- Load case — a defined pressure and temperature scenario used to check that a casing or tubing string will not fail.
- Life-cycle cost — the total cost of a well concept from construction through operation, intervention and final abandonment.
- Barrier envelope — the set of verified elements that prevent uncontrolled flow from the reservoir at every life stage.

## Life-of-Well Architecture Day by Day

## Day 1: The Well Across Its Field Life

- Production Profile Forecasts — Rate, Water Cut and Pressure Over Time
- Well Function Statements — Producer, Injector or Convertible Service
- Field Development Context — Well Count, Spacing and Drainage Targets
- Abandonment Requirements — Planning Final Barriers From the First Design
- Concept Option Mapping — Framing Alternatives Before Detailed Engineering

## Day 2: Casing Schemes and Hole Sections

- Pore and Fracture Pressure Windows — Setting Depth Selection
- Conventional Versus Tapered Versus Slim Schemes — Cost and Access
- Burst, Collapse and Axial Load Cases — String Grade and Weight
- Thermal and Producing Loads — Late-Life Casing Integrity
- Contingency String Planning — Trouble Zones and Drilling Uncertainty

## Day 3: Tubulars and Completion Sizing

- Nodal Analysis Sensitivities — Tubing Size Against Life-of-Well Rates
- Liquid Loading and Erosion Limits — Upper and Lower Size Bounds
- Artificial Lift Readiness — Pump Setting Depth and Gas Lift Mandrels
- Metallurgy and Corrosion Allowance — Sour and Water-Wet Service
- Intervention Access — Monobore Diameters and Through-Tubing Tools

## Day 4: Cost, Performance and Lessons

- Life-Cycle Cost Models — Construction, Workover and Abandonment Spend
- Deferred Production Valuation — Downtime From Undersized Completions
- Risked Concept Scoring — Weighting Rate, Cost and Integrity
- Offset Well Lessons Registers — Failures That Reshape New Designs
- Post-Well Performance Reviews — Closing the Design Feedback Loop

## Day 5: Practising the Well Concept Review

- Case Well Profile Build — Applying Field Life Forecasts
- Casing Scheme Trade-Off — Applying Load Cases to Two Options
- Completion Size Selection — Applying Nodal Sensitivities and Lift Needs
- Concept Ranking Session — Applying Life-Cycle Cost and Risk Scores
- Well Concept Selection and Optimisation Review — Final Recommendation Package

## Applying Life-of-Well Architecture After the Course

- Run a nodal sensitivity check on the tubing size of one planned well against its late-life rate forecast.
- Start an offset-well lessons register for the field linked to upcoming casing and completion choices.

## Life-of-Well Architecture Questions FAQ

### What is life-of-well architecture and concept selection and why does it matter now?

It is the practice of choosing casing, tubulars and completion so a well performs from first oil to abandonment. It matters now because recompletions are costly and early choices decide decades of rate.

### Which roles gain most from life-of-well architecture and concept selection?

Well engineers, completion specialists and well delivery leads gain most. Production technologists and integrity engineers also benefit, because their inputs shape the concept.

## How does life-of-well architecture differ from a casing design or drilling operations course?

It looks across the whole well rather than one discipline. A casing design course checks string strength; a drilling operations course covers execution. This course compares complete concepts on production, intervention, integrity and life-cycle cost before detailed design begins.

## What do you bring back from life-of-well architecture and concept selection?

You bring back a concept review method and a worked example. It includes scored casing and completion options, tubing sensitivities and life-cycle cost figures.

## Life-of-Well Architecture: The Way Forward

The well concept selection and optimisation review gives the well team one document that links casing, completion and cost to the production forecast. Its first use is the concept gate of the next development well, where drilling, completion and production leads agree the design. Once the well has produced, actual rates are worth comparing with the assumptions.