JUPITER PRIME
Consulting • Training • Advisory
جوبيتر برايم للاستشارات والتدريب

COURSE BROCHURE

Actuarial Science for Policy Decision Making Training Course

1 – 5 August 2027
Muscat

jupiterprime.uk
info@jupiterprime.uk
Registered in the United Kingdom and Saudi Arabia

Actuarial Science for Policy Decision Making Training Course

Ref: 1822_66978 **Date:** 1 – 5 August 2027 **Location:** Muscat **Fees:** 5500 GBP

Actuarial Science for Policy Decision Making is a 1-week training course for policy and finance decision makers who must commit funds today against obligations that fall due decades later, and it ends with an actuarial decision brief for one live funding question. Ageing populations, longer lives and tighter budgets make long-horizon promises harder to price and easier to underfund. Jupiter Prime Training brings actuarial reasoning to those who sign off these promises.

Why Actuarial Science for Policy Decision Making Matters Now

Three forces push actuarial questions onto the decision maker's desk. Demographic shifts change how many people draw on pensions, health cover and social benefits, and for how long. Investment returns and inflation move unpredictably, so assumptions set a decade ago may no longer hold. Boards, auditors and the public increasingly expect funding choices to be explained in plain terms. Treating a valuation as one certain number risks deficits, abrupt benefit cuts or idle reserves.

Who Gains Most from Actuarial Science for Policy Decision Making

- Leaders who set contribution rates or benefit levels for pension and social security schemes
- Finance heads responsible for reserves, provisions and long-term liabilities on the balance sheet
- Policy advisers who model the cost of new entitlements or eligibility changes
- Risk and investment committee members who weigh funding strategy against asset allocation
- Insurance and health-fund executives who must challenge reserving recommendations

Pension trustee boards and fund oversight committees gain most when several members attend together and build a shared language for questioning their actuary.

Actuarial Science for Policy Decision Making Capabilities

Participants move from receiving actuarial reports to interrogating their assumptions and turning projections into defensible funding choices.

- Assess mortality, longevity and discount-rate assumptions behind a valuation — the board approving contributions
- Calculate present values of future benefit cash flows at a decision-ready level — funding targets
- Test projections under alternative demographic and economic scenarios — the resilience of a scheme
- Weigh reserving approaches and their effect on reported liabilities — finance and audit committees
- Communicate uncertainty ranges without false precision — ministers, members and the public
- Specify a funding path that balances contribution stability against deficit risk — long-term sustainability

Key Actuarial Science for Policy Decision Making Terms

- Present value — today's worth of a future payment after discounting for time and interest.
- Life table — a schedule of the probability of survival or death at each age for a defined population.
- Technical provisions — the amount set aside now to meet expected future claims or benefit payments.
- Funding ratio — assets held divided by the present value of liabilities, showing surplus or shortfall.
- Stochastic projection — a simulation running thousands of possible futures to show the spread of outcomes, not one forecast.
- Sensitivity analysis — measuring how much a result changes when one assumption moves by a set amount.

Actuarial Science for Policy Decision Making Day by Day

Day 1: Probability and Long-Horizon Obligations

- Probability Foundations for Decision Makers — Reading Likelihood Rather Than Certainty
- Time Value of Money and Discounting — Choosing the Rate That Shapes Liabilities
- Defined Benefit and Defined Contribution Structures — Who Carries the Risk
- Social Insurance Financing Methods — Pay-As-You-Go Versus Funded Schemes
- Actuarial Report Anatomy — Where Key Judgements Sit in a Valuation

Day 2: Mortality, Longevity and Population Change

- Life Tables and Survival Curves — Estimating How Long Benefits Run
- Mortality Improvement Assumptions — The Cost of People Living Longer
- Dependency Ratio Projection — Contributors Versus Beneficiaries Over Decades
- Morbidity and Health Claim Trends — Pricing Long-Term Care and Medical Cover
- Experience Studies — Checking Assumptions Against What Actually Happened

Day 3: Reserving and Valuation Choices

- Technical Provisions and Reserve Adequacy — Setting Aside Enough Without Hoarding
- Chain Ladder Reserving Method — Projecting Claims Still to Emerge
- Funding Ratio and Deficit Recovery Plans — Pacing Contributions to Close Gaps
- Asset-Liability Matching — Aligning Investments With Payment Timing
- Valuation Basis Comparison — Prudent, Best-Estimate and Market-Consistent Views

Day 4: Scenarios, Uncertainty and Communication

- Deterministic Scenario Sets — Testing Recession, Inflation and Longevity Shocks
- Stochastic Projection Outputs — Reading Fan Charts and Percentile Ranges
- Sensitivity Tables — Which Assumption Moves the Answer Most
- Uncertainty Communication Techniques — Explaining Ranges to Non-Specialist Audiences
- Intergenerational Fairness Tests — Who Pays and Who Benefits Over Time

Day 5: Practising the Actuarial Decision Brief

- Assumption Challenge Session — Questioning a Sample Valuation Report
- Benefit Reform Costing Exercise — Pricing a Change in Retirement Age
- Funding Strategy Options Appraisal — Contribution Rise, Benefit Change or Investment Shift
- Board Presentation Rehearsal — Defending a Recommendation Under Scrutiny
- Actuarial Decision Brief — Final Options, Ranges and Recommended Funding Path

Applying Actuarial Science for Policy Decision Making After the Course

- Lead a structured challenge of the most recent valuation's mortality and discount-rate assumptions with the appointed actuary.
- Commission a sensitivity table for one pending benefit or contribution decision and present its range to the oversight committee.

Actuarial Science for Policy Decision Making Questions FAQ

What is actuarial science for policy decision making and why does it matter now?

It is the use of probability, mortality and discounting to guide funding and benefit choices. It matters now because longer lives, volatile returns and stricter scrutiny make long-term promises harder to price and defend.

Which roles gain most from actuarial science for policy decision making?

Leaders who approve contributions, reserves or benefit changes gain most. That includes pension trustees, insurer finance heads and policy advisers.

How does actuarial science for policy decision making differ from an actuarial qualification course?

It prepares decision makers to question and use actuarial advice, not to become actuaries.

What do you bring back from actuarial science for policy decision making training?

You bring back a decision brief for one real funding question. It sets out the assumptions tested, the scenario ranges, the options compared and a recommended path you can defend to your board.

Actuarial Science for Policy Decision Making: The Way Forward

The actuarial decision brief first informs whether a scheme or fund changes contributions, benefits or investment strategy. Trustees, finance committees and policy leads use it to agree a path they can explain, from public pension schemes to insurers' health reserves. After the next valuation, the longevity assumptions deserve a fresh look against emerging experience.