Actuarial Valuation Models and Assumptions Course

17 – 21 January 2027
Toronto

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Training Center

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Ref: 1044_177041 **Date:** 17 – 21 January 2027 **Location:** Toronto **Fees:** 12000 Euro

Overview

Actuarial Valuation Models and Assumptions Course is a one-week intermediate course for actuarial analysts, finance professionals, risk analysts, support teams, and managers, who leave with an Actuarial Valuation Review Workbook. Participants model contingent cash flows, apply survival and discount assumptions, calculate present values, reconcile liabilities, test experience and sensitivity, and document model controls. The course connects valuation calculations with evidence, review, and clear communication. Agile Leaders Training Center develops actuarial valuation capability.

Who Should Attend

- Actuarial analysis teams responsible for valuation inputs, calculations, and result review
- Finance teams responsible for liabilities, reserves, reconciliations, and reporting support
- Risk teams responsible for scenario analysis, uncertainty, and model oversight
- Pension and insurance support teams responsible for data, assumptions, and valuation evidence
- Managers responsible for reviewing actuarial outputs and communicating implications

The course assumes participants can use spreadsheets and interpret financial calculations, and it leaves professional qualification, regulatory approval, and authority to sign actuarial opinions outside its scope.

Departments and Industries

The course supports functions that prepare, challenge, or use actuarial valuation information.

- Actuarial, finance, accounting, and financial planning
- Risk management, model governance, internal control, and assurance
- Insurance, reinsurance, pensions, and employee benefits
- Banking, investment, consulting, and professional services
- Healthcare, public services, and organizations with long-term obligations

Learning Objectives

By the end of this course, participants will be able to:

- Build contingent cash-flow and probability structures for valuation
- Apply survival, decrement, discount, and payment-timing assumptions
- Calculate present values, reserves, and liability movements
- Analyze actual-versus-expected experience and assumption evidence
- Evaluate sensitivity, scenarios, data quality, and model limitations
- Design validation, documentation, governance, and communication controls

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Course Agenda

Day 1: Valuation Purpose and Cash-Flow Structure

- Valuation Purpose, Scope, and Measurement-Date Charter
- Benefit and Claim Cash-Flow Map
- Contingent Payment and Probability Tree
- Data Inventory and Lineage Register
- Assumption Ownership and Materiality Matrix

Day 2: Probability, Survival, and Discounting

- Survival and Decrement Probability Table
- Mortality and Exit Rate Interpretation
- Discount Factor and Present-Value Worksheet
- Expected Contingent Cash-Flow Model
- Timing and Payment-Frequency Convention Map

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Day 3: Assumptions, Reserves, and Liabilities

- Economic and Demographic Assumption Set
- Assumption Rationale and Evidence File
- Reserve and Liability Roll-Forward Bridge
- Asset and Liability Valuation Reconciliation
- Change-in-Assumption Impact Analysis

Day 4: Experience, Sensitivity, and Model Controls

- Actual-versus-Expected Experience Study
- Sensitivity and Scenario Testing Matrix
- Data Quality Exception Log
- Model Validation and Reasonableness Tests
- Governance, Version, and Review Controls

Day 5: Valuation Review and Communication

- Exercise: Build a Contingent Cash-Flow Model
- Exercise: Calculate Present Value and Liability
- Exercise: Test Assumptions and Sensitivities
- Exercise: Prepare a Valuation Findings Summary
- Capstone Exercise: Actuarial Valuation Review Workbook

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Practical Exercises

The course uses suggested activities that connect valuation logic, calculations, evidence, controls, and communication.

- Suggested activity: map contingent benefits or claims into probability-weighted cash flows
- Suggested activity: calculate present values under alternative discount and survival assumptions
- Suggested activity: reconcile a liability roll-forward and diagnose actual-versus-expected differences
- Suggested activity: document sensitivity results, model limitations, and review conclusions

FAQs

Who suits actuarial valuation models and assumptions training?

Actuarial analysts, finance and risk professionals, support teams, and reviewing managers suit the training. Participants should already use spreadsheets and interpret financial calculations.

How does actuarial valuation training differ from introductory actuarial mathematics?

Actuarial valuation training integrates cash flows, assumptions, liabilities, experience, sensitivity, controls, and communication. Introductory actuarial mathematics focuses more narrowly on foundational probability, interest, survival, and calculation techniques.

How are actuarial valuation assumptions selected and documented?

Assumptions are selected using valuation purpose, observable experience, relevant characteristics, credible evidence, materiality, and consistency as a set. Documentation records rationale, data, ownership, limitations, and review decisions.

Why is sensitivity analysis used in actuarial valuation?

Sensitivity analysis shows how valuation results respond to changes in material assumptions. It supports uncertainty assessment, reasonableness review, model communication, and decisions about further scenarios or evidence.

Conclusion

Participants take back an Actuarial Valuation Review Workbook containing cash-flow maps, assumption evidence, present-value calculations, liability bridges, experience analysis, sensitivities, validation tests, and review controls. It makes valuation reasoning traceable from data through results. Teams can use it to challenge models and communicate uncertainty and implications clearly.