QUEST
Professional Center

PROFESSIONAL TRAINING COURSE

Course No. 1831

Insurance Pricing & Actuarial Pricing Models Training Course

ACTUARIAL SCIENCE & INSURANCE ANALYTICS
INSURANCE & RISK MANAGEMENT

DURATION
5 Days

DELIVERY
Classroom

Course Overview

The Insurance Pricing & Actuarial Pricing Models Training Course provides a comprehensive and practical framework for developing, evaluating, and applying insurance pricing methodologies and actuarial pricing models. The course focuses on the analytical principles required to establish technically sound, risk-sensitive, and commercially sustainable premiums across different insurance products and portfolios.

Participants will explore the key components of insurance pricing, including exposure, claim frequency and severity, expected losses, expenses, risk margins, profitability requirements, and pricing assumptions. The course examines how historical claims experience, portfolio characteristics, inflation, market conditions, reinsurance costs, and emerging risks influence pricing decisions.

The program introduces actuarial pricing approaches used to estimate expected claims costs and develop appropriate premiums. Participants will examine experience-based pricing, exposure-based approaches, risk classification, segmentation, credibility considerations, trend analysis, and the use of statistical and actuarial models to improve pricing accuracy.

The course also addresses pricing governance, model validation, monitoring, portfolio profitability, price adequacy, and the management of pricing uncertainty. Through practical exercises, case studies, and pricing simulations, participants will develop the ability to assess pricing models, challenge assumptions, interpret results, and translate actuarial analysis into commercially sound insurance pricing decisions.

Objectives

- By the end of the course, participants will be able to:
- Explain the fundamental principles and components of insurance pricing.
- Analyze exposure, claims frequency, severity, and expected loss costs.
- Develop structured approaches to calculating technically appropriate insurance premiums.
- Apply actuarial pricing models to different insurance products and risk segments.
- Evaluate historical claims experience and its relevance to future pricing assumptions.

- Assess the impact of inflation, claims trends, market conditions, and emerging risks on pricing.
- Apply risk classification and segmentation techniques to improve pricing accuracy.
- Evaluate expense loads, risk margins, profitability requirements, and pricing adequacy.
- Apply credibility and experience-based approaches to insurance pricing.
- Conduct pricing sensitivity, scenario, and stress analysis.
- Evaluate pricing model assumptions, limitations, uncertainty, and performance.
- Strengthen pricing governance, monitoring, validation, and portfolio profitability management.

Who Should Attend

This course is designed for actuaries, actuarial analysts, insurance pricing specialists, underwriting professionals, insurance analysts, product managers, portfolio managers, risk professionals, and finance professionals involved in insurance pricing, product development, underwriting, or portfolio performance.

It is also suitable for senior insurance managers, claims professionals, financial controllers, insurance executives, internal auditors, risk and capital professionals, and decision makers who need to understand actuarial pricing methodologies and evaluate the financial and risk implications of pricing decisions.

The program is particularly valuable for professionals seeking to strengthen their understanding of actuarial pricing models and improve the connection between technical pricing, underwriting strategy, portfolio profitability, risk appetite, and broader insurance business objectives.

Learning Outcomes

- Upon successful completion of the course, participants will be able to:
- Explain the structure and purpose of actuarial pricing models.
- Analyze insurance exposure and historical claims data for pricing purposes.
- Estimate claim frequency, severity, expected losses, and technical premium requirements.
- Apply appropriate pricing methodologies to different insurance portfolios.
- Develop risk classifications and pricing segments based on relevant risk characteristics.
- Interpret actuarial pricing assumptions, parameters, and model outputs.

- Evaluate pricing adequacy, profitability, and risk-adjusted returns.
- Assess the impact of inflation, claims trends, exposure changes, and market conditions on premiums.
- Apply credibility concepts and experience-based pricing techniques.
- Conduct sensitivity analysis, scenario analysis, and stress testing of pricing assumptions.
- Identify pricing model limitations, uncertainty, bias, and sources of pricing risk.
- Evaluate pricing model performance through monitoring and validation.
- Communicate pricing recommendations effectively to underwriting, finance, management, and executive stakeholders.
- Apply actuarial pricing insights to support sustainable portfolio and product decisions.

Course Outline

DAY 01

Foundations of Insurance Pricing

- Principles and objectives of insurance pricing
- Exposure, claim frequency, claim severity, expected losses, and technical premium
- Pricing components including expenses, risk margins, profit requirements, and contingencies
- Pricing considerations across personal, commercial, property, casualty, and specialty insurance

> **PRACTICAL APPLICATION**
> Analyze an insurance portfolio and identify the key components of a pricing framework

DAY 02

Actuarial Pricing Models & Loss Cost Analysis

- Fundamental actuarial approaches to insurance pricing
- Frequency and severity modelling for insurance claims
- Expected loss cost estimation and loss ratio approaches
- Experience-based and exposure-based pricing methodologies

DAY 02 — CONTINUED

> **PRACTICAL APPLICATION**
> Develop a simplified actuarial pricing model and evaluate expected loss costs

DAY 03

Risk Classification, Segmentation & Pricing Adequacy

- Risk classification and segmentation principles
- Identifying relevant rating variables and risk characteristics
- Credibility concepts and the use of historical experience
- Evaluating pricing adequacy, profitability, and portfolio performance

> **PRACTICAL APPLICATION**
> Build risk segments and assess pricing adequacy across different categories

DAY 04

Pricing Trends, Uncertainty & Model Evaluation

- Impact of inflation, claims trends, exposure changes, and market conditions
- Pricing assumptions, uncertainty, bias, and model limitations
- Sensitivity analysis, scenario analysis, and stress testing
- Pricing model validation, monitoring, and performance assessment

> **PRACTICAL APPLICATION**
> Conduct pricing sensitivity and scenario analysis for an insurance portfolio

DAY 05

Pricing Governance, Strategy & Business Application

- Pricing governance, controls, approval processes, and accountability
- Integrating actuarial pricing with underwriting strategy and risk appetite
- Monitoring price adequacy, portfolio profitability, and emerging pricing risks

DAY 05 — CONTINUED

- Communicating actuarial pricing results and recommendations to management

FINAL WORKSHOP

Develop an integrated insurance pricing framework covering data, loss modelling, segmentation, premium calculation, profitability, uncertainty, governance, and strategic recommendations

Register or Request More Information

Course page: https://quest-training.com/courses/insurance-pricing-actuarial-pricing-models-training-course
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