Life & General Insurance Actuarial Practices

7 – 11 December 2026
Cape Town (South Africa)



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Introduction

The insurance industry is undergoing rapid transformation, driven by economic uncertainty, evolving regulatory frameworks, demographic shifts, technological advancements, and rising customer expectations. As insurance markets become increasingly complex, actuarial science has become an essential discipline for supporting strategic decision-making, financial resilience, and effective risk management. Organizations operating in both life and general insurance rely extensively on actuarial methodologies to quantify uncertainty, develop sustainable pricing strategies, estimate technical reserves, assess capital adequacy, and maintain long-term financial stability.

The Life & General Insurance Actuarial Practices course provides participants with a comprehensive understanding of modern actuarial principles and their practical application across the insurance sector. The program combines theoretical foundations with real-world practices used throughout the insurance value chain, including product development, underwriting support, premium pricing, claims analysis, reserving, profitability measurement, solvency management, and regulatory compliance. Participants will gain practical insight into how actuarial techniques support sound business decisions while strengthening operational efficiency and sustainable growth.

Throughout the program, participants explore actuarial practices applied to life insurance, health insurance, property and casualty insurance, liability insurance, and specialty insurance products. The course covers mortality and morbidity analysis, claims frequency and severity modeling, reserving methodologies, experience studies, capital modeling, risk-based pricing, and actuarial valuation techniques. Practical exercises and industry case studies enable participants to apply actuarial concepts to realistic business scenarios while enhancing analytical thinking and professional decision-making skills.

By integrating actuarial theory with practical insurance applications, this course equips professionals with the knowledge and tools required to evaluate financial risks, improve pricing accuracy, optimize reserve adequacy, strengthen capital management practices, and ensure compliance with international insurance standards and regulatory requirements. These competencies contribute directly to improving organizational resilience, operational excellence, and long-term financial performance.

Course Objectives

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



- Understand advanced actuarial principles governing life and general insurance operations.
- Analyze the financial structure and technical characteristics of life and non-life insurance products.
- Apply actuarial methodologies to insurance pricing and premium calculation.
- Evaluate mortality, longevity, morbidity, and disability assumptions used in life insurance.
- Analyze claim frequency, claim severity, and loss development trends.
- Develop actuarial reserving methodologies for life and general insurance portfolios.
- Apply experience analysis to improve pricing accuracy and underwriting effectiveness.
- Evaluate insurance liabilities using actuarial valuation techniques.
- Perform capital adequacy and solvency assessments using actuarial methodologies.
- Apply risk-based pricing approaches to support profitable insurance operations.
- Develop actuarial models for forecasting future claims and insurance liabilities.
- Interpret actuarial reports to support executive and operational decision-making.
- Evaluate regulatory requirements governing actuarial practice within insurance organizations.
- Strengthen enterprise risk management through actuarial analysis and financial forecasting.
- Enhance actuarial governance by applying professional standards, model validation techniques, and best documentation practices.

Course Outlines

Day One: Foundations of Life and General Insurance Actuarial Practice

- Understanding the role of actuarial science within modern insurance organizations.
- Reviewing business models for life and general insurance companies.
- Exploring actuarial responsibilities across underwriting, pricing, reserving, and financial reporting.
- Understanding insurance risk classifications and exposure measurement techniques.
- Reviewing actuarial assumptions used in insurance modeling.
- Understanding international actuarial standards and professional practice frameworks.
- Examining the relationship between actuarial functions, finance, risk management, and regulatory compliance.

Day Two: Actuarial Pricing, Underwriting, and Insurance Risk Assessment

- Understanding actuarial pricing principles for life and general insurance products.
- Analyzing premium structures, including net premiums, gross premiums, and expense loadings.
- Applying actuarial techniques for insurance risk assessment and portfolio classification.
- Evaluating the impact of demographic, economic, and behavioral risk factors on insurance pricing.
- Utilizing underwriting data and historical experience to improve pricing accuracy.
- Examining the relationship between underwriting, pricing, profitability, and risk management.
- Reviewing practical case studies on data-driven pricing model development.
- Applying actuarial techniques to various insurance pricing scenarios.



Day Three: Actuarial Reserving, Financial Valuation, and Liability Management

- Understanding technical reserving methodologies for life and general insurance.
- Applying actuarial techniques to evaluate current and future insurance liabilities.
- Analyzing reported and incurred-but-not-reported IBNR claim reserves.
- Evaluating long-term cash flows and insurance obligations using actuarial models.
- Studying claims development patterns and future loss estimation techniques.
- Applying actuarial valuation methods for asset and liability management.
- Assessing the impact of discount rates, inflation, and mortality assumptions on valuations.
- Developing reserve models through practical actuarial exercises.

Day Four: Capital Management, Solvency, and Enterprise Risk Management

- Understanding capital management and solvency requirements within insurance companies.
- Applying Risk-Based Capital RBC principles.
- Analyzing insurance, market, credit, and operational risks.
- Evaluating capital adequacy using actuarial indicators and financial modeling techniques.
- Exploring Enterprise Risk Management ERM practices in the insurance sector.
- Conducting stress testing and scenario analysis to assess organizational resilience.
- Reviewing international regulatory frameworks governing solvency and risk management.
- Linking actuarial model outputs to strategic management decisions through practical applications.

Day Five: Integrated Actuarial Applications, Model Validation, and Professional Reporting

- Developing a comprehensive actuarial project covering the insurance business lifecycle.
- Applying actuarial methodologies to real-world life and general insurance case studies.
- Validating actuarial models using testing, verification, and review techniques.
- Assessing data quality, model assumptions, and sources of uncertainty.
- Preparing professional actuarial reports for executive management and regulatory authorities.
- Presenting actuarial findings using key performance indicators and financial analysis.
- Reviewing best practices in actuarial model governance and lifecycle management.
- Completing a comprehensive practical assessment to demonstrate applied actuarial competency.



Why Attend This Course: Wins & Losses!

- Developing a comprehensive understanding of actuarial practices across life and general insurance.
- Strengthening the ability to design actuarial models for pricing, reserving, and liability management.
- Enhancing risk assessment capabilities through advanced statistical modeling and actuarial analysis.
- Improving expertise in evaluating solvency, capital adequacy, and regulatory compliance.
- Applying advanced methodologies for claims analysis, experience studies, underwriting, and pricing optimization.
- Gaining practical experience in using actuarial indicators to support financial planning and portfolio management.
- Developing professional actuarial reporting skills that support executive decision-making.
- Strengthening enterprise risk management through integrated actuarial analysis and strategic planning.
- Improving the evaluation and development of insurance products aligned with market needs and risk profiles.
- Understanding the relationship between actuarial models, asset-liability management, profitability, and financial sustainability.
- Applying international best practices for actuarial model validation, assumption management, and data quality assurance.
- Building the analytical capability to transform insurance and financial data into actionable business insights.

Conclusion

The Life & General Insurance Actuarial Practices course provides a comprehensive framework for understanding and applying modern actuarial methodologies across life and general insurance operations. The program covers the complete actuarial lifecycle, from risk assessment and product development to pricing, reserving, capital management, solvency assessment, and professional reporting.

Participants gain practical experience in analyzing insurance data, evaluating claims patterns, forecasting future liabilities, and developing actuarial models that support pricing strategies, portfolio management, and financial planning. The course also emphasizes best practices in model validation, assumption management, and data quality to improve the reliability and accuracy of actuarial analysis.

In addition, the program demonstrates how actuarial science supports enterprise risk management, capital adequacy assessment, regulatory compliance, and long-term financial sustainability. Through practical exercises and real-world case studies, participants develop the knowledge and technical skills required to address complex actuarial challenges, improve insurance operations, and support strategic decision-making in today's dynamic insurance environment.

