

Actuarial Science for Insurance Professionals

Duration: 5 Days

Language: en

Course Code: PO5-135

Objective

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

- Understand the role of actuarial science in insurance operations and strategy.
- Apply actuarial models to risk assessment, product pricing, and reserving.
- Analyse mortality, morbidity, and loss data to inform insurance decisions.
- Evaluate solvency requirements and capital adequacy frameworks.
- Explore the integration of actuarial science with modern technologies such as predictive analytics and AI.
- Apply actuarial concepts to ensure regulatory compliance and financial resilience.

Audience

This course is ideal for:

- Insurance professionals seeking actuarial knowledge.
- Junior actuaries and actuarial trainees.
- Risk managers and financial analysts.
- Underwriters and claims managers.
- Regulators and compliance officers.
- Academics and consultants specialising in insurance and finance.

Training Methodology

The course combines expert-led lectures, actuarial modelling demonstrations, and group discussions. Participants will work with practical data sets, apply actuarial tools, and analyse real-world insurance case studies.

Summary

This advanced training course introduces participants to the principles and practices of actuarial science, with a strong focus on its applications in the insurance industry. Actuarial science combines mathematics, statistics, and financial theory to assess risk, design insurance products, and ensure the financial stability of insurance companies.

Participants will explore the key actuarial methods used in life, health, property, and casualty insurance. The course also covers regulatory requirements, reserving techniques, pricing strategies, and the role of actuaries in solvency management and risk assessment. Practical case studies will demonstrate how actuarial insights drive decision-making and support long-term sustainability in insurance operations.

Course Content & Outline

Section 1: Introduction to Actuarial Science in Insurance

- Definition and scope of actuarial science.
- The role of actuaries in insurance markets.
- Overview of insurance mathematics and risk theory.

Section 2: Probability, Statistics, and Risk Modelling

- Fundamentals of probability distributions in insurance.
- Statistical techniques for analysing claims and loss data.
- Risk pooling and the law of large numbers.
- Practical exercises in risk modelling.

Section 3: Product Design, Pricing, and Reserving

- Actuarial pricing methods for life, health, and general insurance.
- Reserving techniques: incurred but not reported (IBNR), loss development.
- Mortality and morbidity tables and their applications.
- Case studies of actuarial product design.

Section 4: Solvency, Capital, and Regulation

- Solvency frameworks (Solvency II, RBC models).
- Capital adequacy and risk-based capital requirements.
- Regulatory compliance and actuarial responsibilities.
- Stress testing and scenario analysis.

Section 5: Emerging Trends and Technology in Actuarial Science

- Predictive analytics and machine learning in actuarial work.
- Big data applications in claims and underwriting.
- The future role of actuaries in digital transformation.
- ESG and sustainability considerations in actuarial practices.

Certificate Description

Upon successful completion of this training course, delegates will be awarded a Holistique Training Certificate of Completion. For those who attend and complete the online training course, a Holistique Training e-Certificate will be provided.

Holistique Training Certificates are accredited by The CPD Certification Service (CPD), and are certified under ISO 9001 and ISO 29993 standards.

CPD credits for this course are granted by our Certificates and will be reflected on the Holistique Training Certificate of Completion. In accordance with the standards of The CPD Certification Service, one CPD credit is awarded per hour of course attendance. A maximum of 50 CPD credits can be claimed for any single course we currently offer.

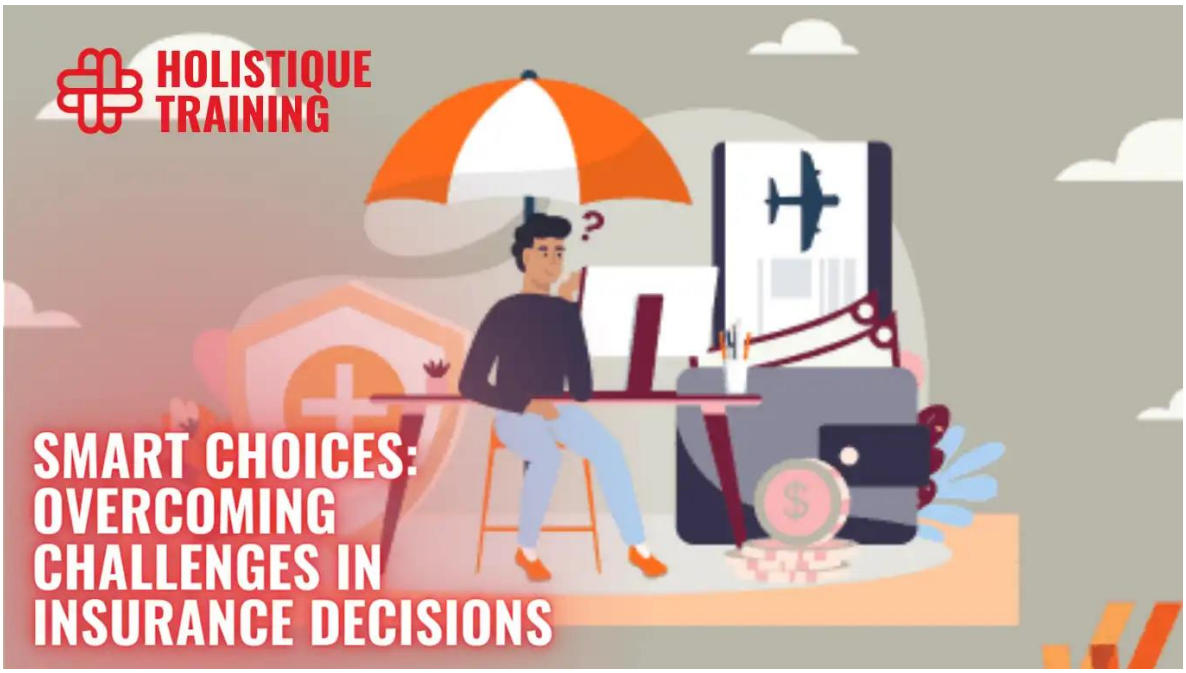
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Tags

Insurance, Actuarial Science

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