MERCURY

Actuarial Science Fundamentals Training Course

16 – 20 August 2027
Vienna (Austria)



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Ref: 15103_1081236 **Date:** 16 – 20 August 2027 **Location:** Vienna (Austria) **Fees:** 5900 Euro

Introduction:

Actuarial science evaluates risks and maintains the economic stability of insurance or financial organizations. Actuaries analyze past data and use that information to determine how much money to cover future financial losses.

This actuarial science course is for trainees from various backgrounds. Even if you don't have any background in calculus, for example, the course is so you can skip over these sections without affecting your understanding of the rest of the course.

You'll experience "hands-on" learning using Excel or an equivalent spreadsheet tool to project and investigate a company's financial condition, choosing appropriate strategies for the company through simulations.

Why Choose an Actuarial Science Program?:

Many choose to embark on a career in actuarial science due to its reputation for being challenging and rewarding, with a blend of mathematics, statistics, and financial theory applied to real-world problems. This program offers an actuarial science certificate and a deep dive into the core skills defining a qualified actuary.

What is an Actuarial Science Course?:

An actuarial science course imparts the fundamentals of actuarial science, encompassing the statistical and mathematical methods used in risk assessment within the insurance and finance sectors. This course offers rigorous actuarial science training and provides a comprehensive curriculum that prepares candidates for a successful career in this field.

Targeted Groups:

- Business Professionals.
- Business Analysts.
- Data Analysts.
- Research Analysts.
- Finance Professionals.

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Course Objectives:

At the end of this actuarial science course, the participants will be able to:

- Have familiarity with several of the technical tools, computer languages, or software packages used by actuaries.
- Learn how actuarial science applies mathematical and statistical methods to assess risk in insurance, finance industries, and other professions.
- Experience "hands-on" learning using Excel or an equivalent spreadsheet tool to project.
- Develop communication, leadership, and teamwork skills and understand their importance in the actuarial industry.
- Analyze actuarial data using advanced statistical techniques.

Targeted Competencies:

By the end of this actuarial science training, the participant's competencies will:

- Analytical Problem-Solving Skills.
- Technical Skills.
- Interpretation of large data sets.
- Establishing data integration.
- Developing dynamic dashboards and scorecards.
- Reporting, analysis, and reconciliation.

Actuarial Science Training Outline:

Unit 1: Valuing Cash Flows:

- Time Value of Money.
- Present Value.
- Accumulated Value.
- Valu Multiple Regular Payments.

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Unit 2: Applications of Valuing Cash Flows:

- Equations of Value.
- Example of the Annuity Certain.
- Apply in Spreadsheets.

Unit 3: Analysis of State Transitions:

- Introduction to State Transitions.
- Two-State Model Active/Dead.
- Calculate Probabilities using the Two-State Model.

Unit 4: The Life Table:

- Introduction to the Life Table.
- Calculating Probabilities using the Life Table.

Unit 5: Valuing Uncertain Cash Flows:

- Expected Present Value.
- Accumulated Value and Uncertainty.

Unit 6: Modeling a Life Insurance Company:

- The Life Insurance Company Scenario.
- A Single Projection.
- Analyze the Simulation Output.
- Reserves.
- Adjustments to Reserves.
- Additional Scenarios.

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Conclusion:

Underlying all the technical training, the fundamentals of actuarial science are paramount in driving success for future actuaries. This actuarial science program cultivates a solid foundation, enabling students to appreciate the meaning of actuarial science, understand definitions, and apply these concepts in real-world scenarios, leading to certification and practical expertise.