

# Financial and Social Security Data Analysis Using Actuarial Mathematics

*Tokyo (Japan)*

*20 - 24 April 2026*

UK Traininig

# PARTNER



# Financial and Social Security Data Analysis Using Actuarial Mathematics

Code: FA28 From: 20 - 24 April 2026 City: Tokyo (Japan) Fees: 5700 Pound

## Introduction

In today's era of data analysis and data-driven decision-making, the significance of actuarial mathematics has never been greater. This comprehensive actuarial mathematics course is designed to equip professionals with advanced methodologies and quantitative tools for financial data analysis and social security office evaluations. Participants will gain a deep understanding of how to apply financial and actuarial mathematics in assessing future liabilities and developing robust models that support sustainable social protection systems.

Whether you're working with pension funds, insurance programs, or national social security plans, this data analysis training empowers you to apply advanced data analysis methods and software tools to perform high-impact forecasting, planning, and risk evaluation. Throughout the course, you will master the entire data analysis process and develop the data analysis skills needed to inform policy and strategic decisions in dynamic financial environments.

## Course Objectives

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

- Understand the definition of actuarial mathematics and its role in business data analysis and social security planning.
- Apply mathematical and statistical models to evaluate pension, insurance, and social protection systems.
- Perform financial data analysis and finance data analysis using tools like Excel, R, and Python.
- Build and interpret actuarial models for forecasting and risk assessment.
- Integrate data analysis methodology into designing and enhancing sustainable financial and social systems.
- Conduct effective data analysis projects that support evidence-based decision-making.

## Course Outlines

### Day 1: Fundamentals of Actuarial Science and Social Security

- Introduction to actuarial mathematics: concepts, principles, and applications.
- Overview of financial and actuarial mathematics for financial risk evaluation.
- Time value of money and discounting techniques.
- Types of social insurance and pension schemes.
- Key indicators and evaluation metrics in social security office programs.

### Day 2: Demographic and Financial Data Analysis

- Introduction to what is a data analysis and different types of data analysis.
- Life tables, mortality rates, and demographic projections.
- Sources and structures of financial and social data.
- Data cleaning and preprocessing using Excel and R.

The logo for UK Training Partner features the text 'UK Training' in a small, black sans-serif font above the word 'PARTNER' in a large, bold, black sans-serif font. The background of the logo is a stylized chessboard with several chess pieces (a king, a queen, a rook, and a pawn) in gold and silver, set against a backdrop of concentric circles.

- Case Study: National Pension Scheme data review and business data analysis.

### Day 3: Actuarial Models for Financial Planning

- Survival models and present value calculations.
- Estimating future liabilities for pensions and social benefits.
- Probabilistic models for risk assessment in finance data analysis.
- Introduction to pension funding methods.
- Scenario planning and stress testing for robust decision-making.

### Day 4: Tools and Software for Actuarial Data Analysis

- Using Excel for financial data analysis and actuarial calculations.
- Introduction to R and Python for data modeling and visualization.
- Dashboarding and advanced reporting of financial data.
- Building forecast models to support long-term sustainability.
- Case Study: Actuarial valuation of a pension fund and policy impact.

### Day 5: Applications, Policy Impact & Capstone Project

- Analyzing policy implications of actuarial findings in social security systems.
- Designing resilient and sustainable social security structures.
- Capstone Project: Presenting data-driven actuarial solutions for real-world challenges.
- Peer evaluation, expert feedback, and practical improvement strategies.
- Course wrap-up, key insights, and certificate presentation.

### Why Attend This Course: Wins & Losses!

- Gain hands-on experience in financial data analysis and real-world applications of actuarial methods.
- Learn to develop advanced data analysis projects that drive evidence-based decisions.
- Acquire critical data analysis skills to design, evaluate, and improve financial and social security systems.
- Understand what is actuarial mathematics and its applications in risk evaluation and future liabilities.
- Master the use of software tools like Excel, R, and Python to support data analysis methodology.
- Position yourself as a strategic analyst in the fields of finance, insurance, and social security reform.
- Enhance your ability to make informed, data-driven decisions that promote long-term sustainability.

### Conclusion

This five-day program provides a powerful blend of theory, practical application, and hands-on exercises in actuarial mathematics and data analysis. You will leave with a strong foundation in applying financial and actuarial mathematics to real-world scenarios, informed by global best practices and current policy considerations.

Whether you are a financial specialist, policy advisor, or data analyst, this course will empower you to make a real impact in financial data analysis and social protection reform. Be ready to lead your organization's journey towards more sustainable, data-driven decision-making.

A graphic of a chessboard with several pawns. In the foreground, a large gold king piece stands prominently. Behind it, several silver and gold pawns are positioned on different squares. The background features concentric circles emanating from behind the king piece.

UK Training  
**PARTNER**



## Blackbird Training Cities

### Europe



Malaga (Spain)



Sarajevo (Bosnia and Herzegovina)



Oporto (Portugal)



Glasgow (Scotland)



Edinburgh (UK)



Oslo (Norway)



Annecy (France)



Bordeaux (France)



Copenhagen (Denmark)



Birmingham (UK)



Lyon (France)



Moscow (Russia)



Stockholm (Sweden)



Podgorica (Montenegro)



Batumi (Georgia)



Salzburg (Austria)



London (UK)



Istanbul (Turkey)



Amsterdam



Düsseldorf (Germany)



Paris (France)



Athens (Greece)



Barcelona (Spain)



Munich (Germany)



Geneva (Switzerland)



Prague (Czech)



Vienna (Austria)



Rome (Italy)



Brussels (Belgium)



Madrid (Spain)



Berlin (Germany)



Lisbon (Portugal)



Zurich (Switzerland)



Manchester (UK)



Milan (Italy)



## Blackbird Training Cities

### USA & Canada



Los Angeles (USA)



Orlando, Florida (USA)



Online



Phoenix, Arizona (USA)



Houston, Texas (USA)



Boston, MA (USA)



Washington (USA)



Miami, Florida (USA)



New York City (USA)



Seattle, Washington (USA)



Washington DC (USA)



In House



Jersey, New Jersey (USA)



Toronto (Canada)

### ASIA



Baku (Azerbaijan)  
(Thailand)



Maldives (Maldives)



Doha (Qatar)



Manila (Philippines)



Bali (Indonesia)



Bangkok



Beijing (China)



Singapore (Singapore)



Sydney



Tokyo (Japan)



Jeddah (KSA)



Riyadh (KSA)



Melbourne (Australia)  
(Kuwait)



Phuket (Thailand)



Shanghai (China)



Dubai (UAE)



Kuala Lumpur (Malaysia)



Kuwait City



Seoul (South Korea)



Pulau Ujong (Singapore)



Irbid (Jordan)



Jakarta (Indonesia)



Amman (Jordan)



Beirut

UK Training  
**PARTNER**



## Blackbird Training Cities

### AFRICA



Kigali (Rwanda)



Cape Town ( South Africa)



Accra (Ghana)



Lagos (Nigeria)



Marrakesh (Morocco)



Nairobi (Kenya)



Zanzibar (Tanzania)



Tangier (Morocco)



Cairo (Egypt)



Sharm El-Sheikh (Egypt)



Casablanca (Morocco)



Tunis (Tunisia)



## Blackbird Training Clients



MANNAI Trading  
Company WLL,  
Qatar



Alumina Corporation  
Guinea



Booking.com  
Netherlands



Oxfam GB International  
Organization,  
Yemen



Capital Markets  
Authority,  
Kuwait



Waltersmith Petroman Oil Limited  
Nigeria



Qatar National Bank  
(QNB),  
Qatar



Qatar Foundation,  
Qatar



AFRICAN UNION ADVISORY  
BOARD ON CORRUPTION,  
Tanzania



KFAS  
Kuwait



Reserve Bank of  
Malawi,  
Malawi



Central Bank of Nigeria  
Nigeria



Ministry of Interior,  
KSA



Mabruk Oil Company  
Libya



Saudi Electricity  
Company,  
KSA



BADAN PENGELOLA  
KEUANGAN Haji,  
Indonesia



NATO  
Italy



ENI CORPORATE  
UNIVERSITY,  
Italy



Gulf Bank  
Kuwait



Defence Space Administration  
Nigeria



National Industries  
Group (Holding),  
Kuwait



Hamad Medical  
Corporation,  
Qatar



USAID  
Pakistan



STC Solutions,  
KSA



North Oil company,



EKO Electricity



Oman Broadband



UNITED NATIONS  
UN.



Authority for

UK Training  
**PARTNER**

## Blackbird Training Categories

### Management & Admin

Entertainment & Leisure  
Professional Skills  
Finance, Accounting, Budgeting  
Media & Public Relations  
Project Management  
Human Resources  
Audit & Quality Assurance  
Marketing, Sales, Customer Service  
Secretary & Admin  
Supply Chain & Logistics  
Management & Leadership  
Agile and Elevation

### Technical Courses

Artificial Intelligence (AI)  
Hospital Management  
Public Sector  
Special Workshops  
Oil & Gas Engineering  
Telecom Engineering  
IT & IT Engineering  
Health & Safety  
Law and Contract Management  
Customs & Safety  
Aviation  
C-Suite Training



 International House 185 Tower Bridge  
Road London SE1 2UF United Kingdom

 +44 7401 1773 35  
+44 7480 775526

 Sales@blackbird-training.com

 www.blackbird-training.com

UK Training  
**PARTNER**

