MERCURY

Aviation Statistical Analysis and Forecasting Techniques Course

6 – 10 December 2026
Cairo (Egypt)



Dubai - UAE: +971 4 450 5697
Istanbul - Türkiye: +90 539 599 1206
Amman - Jordan: +962 79 712 3347

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Ref: 15267_291073 **Date:** 6 – 10 December 2026 **Location:** Cairo (Egypt) **Fees:** 4000 Euro

Introduction:

The aviation statistical analysis and forecasting techniques course will equip participants with the necessary skills to apply statistical analysis and forecasting techniques within the aviation industry. This aviation training emphasizes practical sessions and workshops and aims to integrate quantitative analysis to enhance aviation analytical skills.

In this aviation statistical analysis and forecasting techniques course, participants will improve their understanding and practical application of these concepts in the field, such as aviation training, statistical analysis in aviation, aviation statistics, aviation analysis, aviation forecast, and aviation techniques.

Targeted Groups:

- Airline and airport staff are involved in management and statistical studies.
- Individuals responsible for planning and forecasting in aviation.
- Airport and Airline Operations and Management Personnel.
- Aviation inspectors require a comprehensive understanding of aviation statistics.

Course Objectives:

After this aviation statistical analysis and forecasting techniques course, participants will:

- Grasp the fundamental principles of Air Transport and comprehend the ICAO statistics program.
- Acquire in-depth knowledge about Airport System Components.
- Understand the principles governing international statistical activities in aviation and methods for measuring airport performance.
- Learn and employ principles of Descriptive Statistics and advanced Forecasting Techniques, including linear and multiple regression analyses.
- Become familiar with ICAO & ACI reporting forms.
- Develop skills for effectively presenting aviation data in tables and charts using advanced software tools like Microsoft Excel.
- Conduct proficient forecasting for aviation traffic using established aviation forecast techniques.

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Targeted Competencies:

In this aviation statistical analysis and forecasting techniques training, participants' competencies will:

- Airport performance measures and airline unit costs are calculated through robust statistical aviation analysis.
- Proficiency in forecasting using linear and multiple regressions.
- Know air transport principles, ICAO & ACI forms, and statistics programs.
- Explore a thorough grasp of the principles governing international statistical activities.
- Master Descriptive Statistics principles and present data visually through tables and charts, utilizing tools like Microsoft Excel.

Course Content:

Unit 1: Aviation Statistical Principles:

- Intro to the aviation training course.
- Overview of the Air Transport Industry.
- Examination of Aviation System Components.
- Learn the basics of data collection and introduce yourself to data analysis.
- Use MS Excel for robust aviation data analysis.
- Understand techniques for presenting data in tables and charts.

Unit 2: ICAO Statistics Program:

- Know and clarify terms used in Civil Aviation Statistics.
- Explore insights into the ICAO Statistical Program and its relevance to aviation analysis.
- Examine Commercial Air Carrier Statistics.
- Understand the Principles of International Statistical Activities as guided by the UN.
- Review of crucial Economic and Air Transport Indicators.

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Unit 3: Aviation Data Processing and Dissemination:

- Understand the forecasting timeframe and select appropriate aviation forecast techniques.
- Definitions of critical statistical parameters in the context of aviation statistics.
- Practical examples of Time Series Models using Excel.
- Intro to Regression Analysis for more precise aviation techniques.
- Conducting a Polynomial Trend Analysis.

Unit 4: Statistical Reporting Guide:

- Create an Econometric Model within the aviation training module.
- Know a summary of the vital aspects of the ICAO Statistics Programme.
- Dive into Commercial Air Carrier and Airport Statistics.
- Explore insights into statistics on En-route Facilities and Services.
- A review of state aviation statistics provides a broader understanding of aviation analysis.

Unit 5: ICAO Forms for CAA & Service Providers:

- Presentation of Air Transport Reporting Forms for Airports.
- Detailed look at Air Transport Reporting Forms for Air Navigation Service Providers ANSP.
- Examine Air Transport Reporting Forms for Air Carriers Parts I and II.
- Learn about Best Practices in Survey Design, Data Collection, and estimating missing data.
- Overview of Economic Statistics, the ACI Airport Economics Survey, and details about Airport User Charges.