

# Reliability Mathematics – Basic Statistics Workshop for Aviation Engineers– 1 Day

## Introduction

An effective Aircraft maintenance Reliability System is about identifying failure-rate trends is not only a part of aircraft maintenance programme effectiveness, but also contributes to the overall exposure to safety risk as experienced by the entire business.

Effective statistical analysis provides the fundamental mechanism to proactively seek, identify and quantify aircraft maintenance reliability trends by utilising failure mode and failure rate data. Not least ascertain the effectiveness of the aircraft maintenance programme.

This highly interactive workshop delivers a practical understanding of the statistical mathematics behind aircraft maintenance reliability analysis.

During the workshop delegates will consider mathematical problems and interpret the data with a view to key decisions regarding maintenance programme or individual task development.

## Who is the course for?

It is for persons who are actively involved in the management or Interaction of the organizations Reliability Management System including Aircraft or Component Maintenance Planners, Maintenance Programme Engineers or Aircraft Maintenance Reliability Engineers.

## What is the Benefit of this training - What will I learn?

Delegates will achieve a detailed understanding of the statistical mathematics methodology:

State that Reliability is a function of mathematical probability an apply probability laws correctly

Ensuring the correct interpretation of reliability data with a view to ascertaining the effectiveness of the Aircraft Maintenance Programme.

When to alert, when to watch and when no action is necessary or when to clear from alert. The evaluation of component maintenance reliability and the setting and management of limits designed to trigger detailed investigations.

Provide & deliver effective reporting solutions that are immediately understood by personnel not familiar with reliability & statistical Analysis.

tel + 359 2 821 08 06  
email [team@sassofia.com](mailto:team@sassofia.com)

[www.sassofia.com](http://www.sassofia.com)

<b>Date</b>	On Demand
<b>Category</b>	Personal Development
<b>Vanue</b>	On Demand
<b>Level</b>	
<b>Price</b>	On Demand

## Detailed Content / Topics - The following Subjects will be addressed

- The Reliability Concept - Application of the basics and laws of mathematical probability.
- Understanding & Applying Sampling Theory.
- Using Distribution curves for forecasting reliability.
- Application of Standard Deviation to set and manage Upper Control Limits.
- Planning Sample Sizes for Aviation Reliability Analysis.
- Intuitive Reliability Reporting – Descriptive Statistics & other guidelines.

## Target groups

By the end of this workshop, the delegate will:

- Explain the reliability concept;
- Apply the laws of mathematical probability;
- Forecast failure rate or Failure probability using distribution curves;
- Explain Standard Deviation, set and manage Upper Control Limits;
- Plan and execute sample sizing;
- Describe graphical and tabular reporting, which to use and when.

## Pre-requisites

Completion of :

SAS Effective Aircraft Maintenance Planning – 5 Days

SAS Aircraft Maintenance Reliability Theory – 3 Days

A background understanding related to aviation reliability is an advantage, however, specific reliability competencies are not essential.

## Learning Objectives

Understand and apply the basic skills and knowledge to utilise statistical mathematics in terms of process for the correct analysis, interpretation and reporting of reliability data.

tel + 359 2 821 08 06  
email [team@sassofia.com](mailto:team@sassofia.com)

[www.sassofia.com](http://www.sassofia.com)

<b>Date</b>	On Demand
<b>Category</b>	Personal Development
<b>Vanue</b>	On Demand
<b>Level</b>	
<b>Price</b>	On Demand

## Certificate Wording

*Mathematical Probability & Aviation Reliability, Mathematical Experimentation, Calculating & Applying Standard Deviation, How and Where to use Alert Level Deviation, Unicorn Airlines Reliability Report Demonstration.*

## What do People Say about Sofema Aviation Services' Training?

*"Very effective, useful and informative training."*

*"Absolutely perfect examples and clear for understanding training."*

*"The instructor has excellent teaching skills and was sharing personal experience"*

*"Very effective, useful and informative training."*

*"All the practical examples provided during the training were useful."*

## Duration

1 day - The training day will commence at 09.00 and finish at 17.00, with appropriate refreshment breaks.

To register for this training, please email [team@sassofia.com](mailto:team@sassofia.com) or Call +359 28210806.



tel + 359 2 821 08 06  
email [team@sassofia.com](mailto:team@sassofia.com)

[www.sassofia.com](http://www.sassofia.com)

<b>Date</b>	On Demand
<b>Category</b>	Personal Development
<b>Vanue</b>	On Demand
<b>Level</b>	
<b>Price</b>	On Demand