



Mirce Mechanics: Education and Training Courses

Short Programmes

Probabilistic Principles of Mirce Mechanics

Introduction

Users and operators of maintainable systems would like to be able to accurately predict how likely is that all plains, trains, buses and similar revenue generating machines will be able to deliver functionality out of all of those expected to take place by well prepared and strategically determined business plans. Answers to these types of questions is essential for the prediction of the size of maintenance teams, number of spares parts, location of maintenance and support facilities and many similar considerations, which directly determine the cost of operation, maintenance and support, which are the main contributors to operational revenue, profit, customer satisfaction and similar business drivers. Any realistic predictions of those quantities, due to complexity of technological systems and business reality could be achieved only by making a use of the probabilistic regularity that governs occurrence of in-service events. This course is designed to introduce participants to the principles of the Probability Theory including philosophy, concept, definitions, axioms, methods and to equip them with initial skill required for understanding of in-service behaviour determined by probabilistic regularity.

Objectives

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

- Understand the necessity of understanding the in-service behaviour of maintainable systems through the principles of probabilistic regularity.
- Identify probabilistic processes and corresponding events
- Understand the Axioms and Principles of Probability Theory
- Calculate various probabilistic measures (including the use of Excel spreadsheets)
- Physically Interpret the probabilistic results obtained

Content

- Deterministic and Statistical Experiments
- Sample Space
- Probability Function
- Random Variable
 - Discrete
 - Continuous
- : Probability Distribution
 - Functional representations
 - Probability Density function
 - Probability Mass function
 - Cumulative Probability Function
 - Summary Measures
 - Measures of Central Tendency
 - Mean, Median, Mode
 - Measures of Dispersion
 - Variance and Standard Deviation

■ Discrete Probability Distributions:

- Binomial
- Poisson
- Geometric

■ Continuous probability Distributions

- Exponential
- Normal
- Lognormal
- Weibull

■ Conditional Probability

■ Applied Probability

- Durability Function
- Reliability Function
- Hazard Function
- Maintainability Function
- Supportability Function

Length: 3 days

Key Information	
Dates	See www.mirceakademy training courses
Time	0900 – 1700
Venue	Woodbury Park Hotel, Golf and Country Club –approximately eight miles by road from Exeter (the nearest major city).
Cost	£950.00 + VAT (tuition, course material, lunches, light refreshments and certificate)
Accommodation	<p>Accommodation is not included in the course fee. Participants are responsible for the arrangement and payment of their accommodation. Reduced rates are available at Woodbury Park Hotel – contact Woodbury Park Hotel Reservations direct requesting the ‘MIRCE’ rate. Contact details are –</p> <p>Woodbury Park Hotel, Golf and Country Club, Woodbury, Exeter, EX5 1JJ, United Kingdom</p> <p>Tel +44 (0) 1395 233 382 Fax +44 (0) 1395 233 384 Email enquiries@woodburypark.co.uk Web www.woodburypark.co.uk</p> <p>A list of alternative accommodation in other hotels and guesthouses in the area of the course venue is available from MIRCE Akademy on request.</p>
Booking	Please complete a Booking Form for each participant and return it to MIRCE Akademy that is available to download at www.mirceakademy.com under heading Communication and Training.

Contact us

Mirce Akademy
Woodbury Park
Exeter EX5 1JJ
United Kingdom

 +44 (0) 1395 233 856
 quest@mirceakademy.com
 www.mirceakademy.com