



Professional Education and Training

Short Course Programme

MIRCE Science Methods for Estimation of the Reliability of Components when Test Data are not Available

Introduction

This workshop covers the in-depth knowledge of the methods available for estimating the reliability characteristics of the components and modules of any system type, from a functionability point of view. This provides the opportunity for Engineers and Management professionals to create comprehensive and accurate predictions for the future behaviour of the systems, while they are still on the drawing board. The tangible benefit being the ability to make accurate predictions of the necessary logistic support resources, including spares, facilities and maintenance personnel, needed to support the Functionable System type when in operation. This has been the ultimate objective of reliability and logistics engineers for over half a century, but is now a reality, thanks to the body of knowledge contained in MIRCE Science. The unique methodology, which enables these objectives to be achieved, is based on the pioneering research conducted at the MIRCE Academy by Master and Doctoral students, supported by real world experiences of the Fellows and Members, under the leadership of Dr J. Knezevic..

Objectives

By the end of this course the participants should have:

- An enhanced understanding of how to mathematically describe the life distributions for components and estimate their appropriate parameters, where failure data does not exist, or exist only exists in globally summarised statistical averages for all failure mechanisms, such as the Mean Time Between Failure (MTBF).
- Knowledge of the benefit of applying these advanced estimating and prediction techniques.
- The ability to partition and separate several failure mechanisms and understand why this is of fundamental importance for the continuity of planning of logistics support resources and their budgeting.
- An understanding of how these enhanced methods and techniques lead to a significant increase in operational effectiveness and significant reductions in maintenance and support costs.

Consequently, the main purpose of this workshop is to introduce and consolidate these existing theoretical methods that can be used to shine more light on failure patterns and mechanisms in order that more accurate and meaningful predictions can be made, to increase the confidence in the expected operational reliability of a maintainable systems and reduce their life cycle cost and risks.

Course Content:

Science based Methods for the Assessment of Failure Distribution

In this training session the following methods, for the determination of Life and Failure Factors will be used, for the situations where the Time To Failure, TTF, data are not available

1. Expert Opinion/Experience TTF Method (for a single and multiple failure mechanisms)
2. Expert Opinion/Experience Percentual Method for a single and multiple failure mechanisms)
3. Expert Opinion/Experience Condition Based Method

Each of the above methods will be briefly presented with numerical examples.

The reliability data estimated for each components or module will then serve as the main source of information for the selection of maintenance policies and their frequencies, as well as the selection, provisioning and timing of spares parts acquisition and replenishment..

Designed For

This course has been designed for practicing engineers, analysts and managers and others who need to know how to predict reliability characteristics of their products without test data.

Length: 3 days

Key Information	
Dates	21 – 23 November 2017 or see website – www.mirceakademy.com .
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 per participant (tuition fee, course material, lunches lights refreshments during the three days at Woodbury Park Golf Course & Hotel premises. Free parking.
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 – available to download at www.mirceakademy.com .

Contact us

The MIRCE Akademy, Woodbury Park, Exeter, EX5 1JJ, United Kingdom

 +44 (0) 1395 233 856

 quest@mirceakademy.com

 www.mirceakademy.com