Professional Education and Training

Short Course Programme

Maintainability Engineering and Analysis

Introduction

This course has been developed to enable participants to understand the relationship between the engineering design and maintainability and maintenance engineering and how to adopt an integrated approach in the design process. Participants will be introduced to requirements identification and development and will learn to integrate maintainability in design by focusing on factors such as configuration commonality and inter-changeability, use of standard parts and fasteners, and adherence to open system standards

Designed For

This course has been designed for practicing engineers, analysts and managers and others who need to gain basic knowledge and understanding of analytical tools and techniques that are essential for the successful completion of all Maintainability Engineering. Functions during the system engineering process.

Objectives

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

- Define and develop system maintainability requirements
- Conduct system functional analysis and allocate system maintainability measures
- Identify strategies to design and improve system maintainability
- Understand the integration of maintainability modelling, prediction, and analysis tools and techniques in the system engineering process
- Identify system architecture and configuration weaknesses and corrective actions

Content

- Maintainability Definition and Concept
- Maintenance Tasks:
  - Types
  - Duration
  - Frequency
  - Statistics
- Maintainability Engineering Methods
  - Requirements
  - Accessibility
  - Modularity
  - Interchangeability
  - Standardisation
  - Differentiation
  - Testability
  - Built-In Test
  - Built-In Test Equipment
- Maintainability Analysis
  - Identification of User Population and Data
  - Evaluation of Engineering Drawings
  - Computer-Aided Design Tools
  - System Mock-up Analysis
  - Test, Demonstration, and Verification
- Prediction of Maintainability Statistics
  - Maintenance Activity Diagram
  - Maintainability Measures for:
    - Simultaneous Tasks
    - Sequential Tasks
    - Combined Tasks
  - Analysis of Complex Maintenance Tasks
  - Maintainability Function
  - Mean Duration of Maintenance Task
- Maintainability and Functionability

Case Studies: Examples, such as the development of the TGV train, the Boeing 777 and the Saab Grippen, F1 and rally cars, are used to illustrate what can be achieved when maintainability and maintenance are effectively addressed and integrated in design.

Length: 3 day

Key Information	
Dates	Please 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	Please see website – www.mirceakademy.com.
Accommodation	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 – Woodbury Park Hotel, Golf and Country Club, Woodbury, Exeter, EX5 1JJ, United Kingdom Tel +44 (0) 1395 233 382 Fax +44 (0) 1395 233 384 Email enquiries@woodburypark.co.uk Web www.woodburypark.co.uk A list of alternative accommodation in other hotels and guesthouses in the area of the course venue is available from MIRCE Akademy on request.
Booking	Please complete a Booking Form for each participant and return it to MIRCE Akademy – available to download at www.mirceakademy.com.

Contact us

Mirce Akademy
Woodbury Park
Exeter EX5 1JJ
United Kingdom

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