



Introduction to Reliability Principles

Learn the fundamental principles of reliability by through applications-oriented problem solving activities. There will be introductory statistical calculations as they apply to the demonstrated software. The workshop will provide techniques for the use of reliability techniques to improve business performance. There will be an introduction to a number of reliability tools for finding cost issues and identifying methods for improving them.

Length: 3 days

CEUs: 2.1

Prerequisites: *None*

WHAT YOU WILL LEARN

- Reliability tools necessary for the solution of internal business problems
- Identify and apply the methods necessary for performing reliability audits
- Reliability testing strategies
- Understand and apply Bath tub Curves for modes of failure
- Determine how to identify and apply effectiveness, availability, reliability, maintainability, and capability techniques
- Monte Carlo Models
- Weibull Principles, Normal and Log-Normal probability plots

PLEXUS LEARNING MODEL

Learning is maximized through participation. That is why Plexus training avoids lecture-based teaching and focuses on group activities, case studies and hands-on applications. *Learn by doing.*

WHO SHOULD ATTEND

- Design, Engineering, and Quality Staff responsible for reliability principles

ITEMS TO BRING

- Engineering calculator
- Laptop loaded with Microsoft Excel and Identified Demo Software

INSTRUCTORS

Plexus Master Trainers. Plexus Master Trainers train and evaluate:

- ISO 9001:2008, ISO/TS 16949:2009, AS9100, ISO 14001:2004 Environmental Management Systems, ISO 22000:2005 Food Safety, ISO 9001:2008 for Healthcare and ISO 13485:2003 for Medical Devices.
- Plexus trains 3rd party auditors and wrote the materials used to certify all of them
- Supplier Auditors

Quality Tools

AGENDA

Day 1

- ❖ Introduction to the Course Requirements
- ❖ Introduction to Reliability
- ❖ Identifying reliability data problems and deficiencies
- ❖ Computer applications and use of probability plots
- ❖ Work-Based Project
- ❖ Team Exercises

Day 2

- ❖ Introduction to Reliability Models
- ❖ Use and application of Monte Carlo Models
- ❖ Identifying and implementing Reliability Management Systems
- ❖ Work-Based Project
- ❖ Team Exercises

Day 3

- ❖ Introduction to Software reliability
- ❖ Application of reliability testing
- ❖ Reliability Management
- ❖ Management's role in reliability improvements
- ❖ Completion of Work-Based Projects
- ❖ Completion of Team Exercises
- ❖ Questions and Answers