

APPLIED RELIABILITY



Introduction

Reliability - Have you ever wondered how a product could have lasted so long a time and given you such a pleasure to use? On the other hand, the same product could have performed poorly in a different environment and you swore never to use it again! They have a theme in common and that has to do with the Reliability of the product. Whether in new product development, production, maintenance of a system and the warranty of the product, we all deal with reliability in different ways.

This brief course is designed to impart a simple and systematic understanding of reliability engineering with a practical bent to the participant.

Duration

2 days | 9am – 5pm | 14 hours

Who should attend

This course is suitable for managers, engineers, engineering assistant from the Production, Process, Quality, Maintenance, Research & Development and Operation areas.

Entry Requirement

Participants should have basic knowledge of statistics and bring along a scientific calculator.

Course Fees

Member: S\$470.80

Non-Member: S\$524.30

Registration Fee of S\$17.12 apply

All fees stated are inclusive of 7% GST

Award of Certificate

Certificate of Completion will be issued to participants who have attended at least 75% of the course.



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Course Contents

- The evolution of Quality and Reliability
- Reliability and its relation to Quality
- What is Reliability? And how it's different from Quality
- How does Quality affect Reliability?
- Definition of Reliability and what does it mean?
- Does it make business sense anymore to have it more "reliable"?
- Perceptions of Reliability. How does one define reliability in quantitative terms?
- MTTF and MTBF
 - Dangers of mis-using MTBF / MTTF. How not to use this term wrongly.
 - Censoring Data; dealing with the lefts and rights of it.
- Failure rates and the Bathtub curve.
 - Decreasing, Increasing and Constant failure rates. What does it all mean?
 - The Weibull in action! An all in one solution?
- Probability Series, Parallel or mixed systems.
 - Building-in redundancy in products.
- Fault Tree Analysis
- Reliability Apportioning or Allocation
- Increasing the reliability of a system. Back to Quality!
- Maintenance and availability.
 - Coming up with a replacement strategy
 - How warranty costs make a lot of business cost sense?
- Reliability - the many facets of engineering and operations.
- Product Reliability Qualification Phases. How it all adds up? E.g. HASS / HALT / ALT
- Reliability in Production - Ongoing Reliability Monitoring or Testing (ORM / ORT)



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- ~ Organisation membership
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