



AN ONLINE SHORT TERM COURSE
ON



RELIABILITY ENGINEERING FOR DIQA OFFICERS

ORGANISED BY:

Subir Chowdhury School of Quality &
Reliability,
IIT Kharagpur

COURSE BRIEF

This training module enables trainee to understand the RAM requirements from the tender phase and how to address it across the life cycle of the defence equipment. The data plays an important role in all sort of the decision making and therefore Reliability data collection, modelling and analysis along with the added modules on Reliability Testing , Maintainability and Maintenance forms a major chunk of the course, to make sure that trainees shall be able to understand and perform basic data analysis to address RAM requirements and support the management in critical decision making.

This course will assist the Reliability and Quality Assurance service providers involved in the audit and inspection of the defence equipment in identification of various failure modes, conduct root cause analysis, collection and analysis of Failure data, assessment of RAM and RCM of the defence equipment.



APRIL 24, 2023 TO
MAY 26, 2023
WEEKDAYS (MON-FRI)



TIME (2 HOURS LECTURE EACH DAY)
14.30-15.25 HRS
15.30-16.30 HRS

COORDINATORS

Prof. Rajiv Nandan Rai
Prof. Sanjay K. Chaturvedi
Prof. Heeralal Gargama

CONTACT US

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TOPICS TO BE COVERED IN THE COURSE

- Reliability, its Importance & Applications
- Probability & Statistical Concepts
- Reliability Terms and Terminologies
- Distributions with Applications in Reliability
- Building Blocks of System Reliability Models and Analysis
- Reliability Data and Types
- Non-Parametric Data Analysis
- Parametric Data Analysis
- FMEA/FMECA
- Fault Tree Analysis (FTA)
- Design For Reliability (DFR): Reliability Allocation Methods
- Reliability/Redundancy Optimization
- Standard Based Reliability Prediction
- Stress Strength Interference
- Reliability Growth Testing
- DOE for DFR
- Introduction to Accelerating Life Testing (ALT)
- ALT Models
- Overview of HALT and HASS
- Burn-In and ESS Test
- Reliability Demonstration
- Life Cycle Costing
- Maintained System and Associated Definitions
- Maintainability Design Considerations
- Maintainability Analysis
- Availability Analysis
- Reliability Centered Maintenance (RCM)

COURSE COORDINATORS



PROF. RAJIV NANDAN RAI

RESEARCH AREAS

- RAMS Analysis
- Preventive Maintenance
- PHM
- Process Reliability
- TQM with Analytics
- Repairable System Reliability Analysis



PROF. SANJAY K. CHATURVEDI

RESEARCH AREAS

- FMEA/FMECA
- Reliability Apportionment
- Reliability based Design
- Reliability data Analysis
- Maintenance
- System Reliability Modelling and Analysis



PROF. HEERALAL GARGAMA

RESEARCH AREAS

- RAMS for Railway System
- Functional Safety for Automotive
- RBDO & Life Testing
- System Reliability Modelling & Analysis