INDIAN
INSTITUTE OF
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KHARAGPUR-721302

भारतीय
प्रौद्योगिकी
संस्थान
खड़गपुर

SUBIR CHOWDHURY SCHOOL OF QUALITY AND RELIABILITY

Dr. Rajiv Nandan Rai
Associate Professor

One Week Training Program Proposal

One week training program on "Design for Reliability & Reliability Engineering" **Organized by:** Subir Chowdhury School of Quality and Reliability, Indian Institute of Technology (IIT) Kharagpur **Venue:** NSTL Premises, Visakhapatnam **Dates:** 26–30 October 2026

1. Program Overview

This intensive one-week training program is designed to provide engineers and managers with advanced knowledge and practical tools to enhance product reliability and quality during the design and development phases, with a particular focus on defence systems.

The curriculum emphasizes the integration of **Reliability, Availability, and Maintainability (RAM)** requirements from the tender stage through the entire product lifecycle. Participants will gain hands-on experience in data collection, modelling, and analysis to support critical decision-making and strengthen organizational competitiveness.

2. Target Audience

- Engineers and managers engaged in product design and development
- Professionals working on defence-related projects requiring high reliability standards

3. Training Faculty

The program will be delivered by distinguished faculty members from IIT Kharagpur's Subir Chowdhury School of Quality and Reliability:

- **Prof. Sanjay Kumar Chaturvedi (SKC)**
- **Prof. Rajiv Nandan Rai (RNR)**
- **Prof. Heeralal Gargama (HG)**

4. Training Format

- **Mode:** Offline, in-person sessions at NSTL Premises
- **Course Material:** Soft copies of presentation slides
- **Certification:** Participants completing the full course will receive a certificate issued under IIT Kharagpur's Continuing Education Program

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5. Detailed Program Schedule

Day	09:30–11:00	11:15–12:45	14:00–15:30	15:45–17:15	17:30–18:00
1	Reliability Terms & Terminologies (SKC)	Reliability Allocation Methods (HG)	Distributions in Reliability (RNR)	Distributions in Reliability (RNR)	Discussions (All)
2	System Reliability Modelling I (SKC)	System Reliability Modelling I (SKC)	Reliability Prediction I (HG)	Reliability Prediction I (HG)	Discussions (All)
3	FMEA / FMECA (RNR)	FMEA / FMECA (RNR)	Fault Tree Analysis (HG)	Fault Tree Analysis (HG)	Discussions (All)
4	Highly Accelerated Life Testing (HALT) (SKC)	Reliability Growth Testing (RNR)	Accelerated Life Testing (HG)	Maintainability in Design (SKC)	Discussions (All)
5	Stress Strength Analysis (RNR)	Stress Strength Analysis (RNR)	Data Analysis – Non-Parametric (SKC)	Data Analysis – Parametric (SKC)	Discussions (All)

6. Budget Overview (Offline at NSTL Vizag)

Item	Amount (INR)
Trainers' Remuneration	4,87,500
Certificates & Mementos (Soft Copies)	30,000
TA/DA Expenses	80,000
Boarding/Lodging Expense	74000
Contingencies	19037
Auditors' Fee	1,770
IIT Overheads	1,38,462
Coordinators' Fee	69,231
Grand Total	9,00,000

- **Maximum Participants: 30**
- **Total Budget:** INR 9,00,000 (Nine Lakhs Only)
- **Budget Includes:** Faculty remuneration, IIT overheads, certificates, mementos, contingencies, Travel, Stay and coordinators' fee
- **Note:** GST is **not applicable** (Refer Ministry of Finance Notification No. 9/2017 Integrated Tax (Rate) dated 28 Jun 2017, under heading 9992, "Services provided to the Central Government, State Government, Union territory administration under any training programme for which total expenditure is borne by the Central Government, State Government, Union territory administration", the Integrated Tax leviable is NIL

Rajiv Nandan Rai 21/9/2026

Prof. Rajiv Nandan Rai
Subir Chowdhury School of Quality and Reliability
Indian Institute of Technology, Kharagpur

डॉ राजीव नंदन राय/Dr. Rajiv Nandan Rai
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