Certification in Reliability Engineering for Electrical Industry Professionals

(16 June – 15 December, 2025)

Organized By:

**Subir Chowdhury School of Quality and Reliability
IIT Kharagpur, INDIA
&
Indian Electrical & Electronics Manufacturers'
Association (IEEMA)**

About Subir Chowdhary School of Quality and Reliability, IIT Kharagpur

IIT Kharagpur is the largest technical institution in India. It is ranked among the top five Indian universities by ranking agencies. The Subir Chowdhury School of Quality and Reliability was formerly known as Reliability Engineering Centre (REC). REC came into existence in 1983. It offers M Tech, MS, and PhD degree programs in Quality and Reliability Engg. The school is actively engaged in research and consultancy projects for the government and private organizations. It also offers certificate courses to industry participants.

Brief About the Course

This certificate program is exclusively designed in collaboration with Indian Electrical & Electronics Manufacturers' Association (IEEMA) and offered to industry participants only. This course will help participants to understand Reliability Engineering concepts. It will enable them to apply concepts for better product life cycle management. This course is a good blend of theoretical knowledge, practice sessions, and practical applications. The schedule is stretched over six months so that participants would not feel the burden and get ample time to learn and practice the concepts. Participants are encouraged to take up a small reliability engineering project for their organization which will help them to apply and showcase the benefits of reliability engineering principles to their organizations. An active involvement from higher management is also encouraged to define project goals along with IIT Kharagpur team and participate in the review process.

Who Should Attend?

Practicing professionals, Engineers and Managers in the fields of design, Research & Development, Manufacturing, Operations, Maintenance and QA/QC/Testing etc.

Venue

Subir Chowdhury School of Quality and Reliability, IIT Kharagpur

Program Modules

1

Jun 16-19

Reliability Basics
- Reliability Definitions
- Probability Basics
- Probability Distributions
- System Reliability Modeling
- Practice Problems

2

Aug 18-21

Reliability Testing and Estimation
- Highly Accelerated Life Testing (HALT)
- Accelerated Life Testing (ALT)
- Burn-in, Env. Stress Screening, Highly Accelerated Stress Screening (HASS)
- Non-parametric Data Analysis
- Distribution Parameter Estimation

3

Oct 13-16

Design for Reliability
- Reliability Specification and Allocation
- Reliability Prediction
- Failure Modes, Effects, and Criticality Analysis (FMECA)
- Reliability Improvement by Design
- Maintainability and Availability Evaluation

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Final PPT: 15 Dec

Project on Product Reliability
- To be defined by the end of Module-1
- Reviewed every two months
- Confidentiality is protected
- Scheduling doubt-clearing sessions on request.

How to Apply
- You can register for the course after logging in to the IITKGP site https://erp.iitkgp.ac.in/CEP/courses.htm
- Course Fee: Rs. 1,00,000.00 per participant
- Accommodation is reserved for participants at the IIT Kharagpur Technology Guest House. The guests need to pay the actual room and food charges.
- The account and other payment details will be shared after shortlisting of the participants.

Some Important Points
- A maximum of six participants can be sponsored from one organization.
- Participants can do an application project in teams of up to 3 persons from the same organization.
- The classes will be conducted in offline mode.
- For certification, it is essential to attend all classes. Certification will be in the following three categories:
  - Basic: All classes are attended, and in-class quizzes are answered.
  - Practitioner: Basic criteria + satisfactory assignments submission for each module
  - Proficient: Practitioner criteria + successful project completion with significant benefits to the organization

Principal Coordinator
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Faculty
Experts from IIT Kharagpur and Industries with relevant experience will deliver lectures and interact with participants during this course.