



RELIABILITY ENGINEERING
CENTRE, IIT KHARAGPUR



IMRT

INSTITUTE OF METRO
& RAIL TECHNOLOGY

Short Term Course RAMS FOR RAILWAY SYSTEMS

**JULY 21 – 25, 2014
RELIABILITY ENGINEERING CENTRE,
IIT KHARAGPUR**

ORGANISING INSTITUTES

IIT Kharagpur:

Indian Institute of Technology Kharagpur (IIT KGP) is set in a sylvan surrounding only 120 km away from the hustle bustle of the city of Kolkata. IIT Kharagpur is the largest technical institution in India and ranked as the best institution in the country imparting technical education and research. The Reliability Engineering Centre came into existence in 1983 with financial support of more than Rs. 10 million from the Ministry of Human Resource Development, Government of India. The Centre runs academic programs in M. Tech., M.S. & Ph.D. The centre also offers certain electives to undergraduate students of the Institute. A total of more than 300 engineering graduates including about 100 sponsored engineers from Industries, R&D and Defence establishments have successfully undergone the M. Tech. program. The M.Tech. course offered has been rated as the best in the country by many industries and R&D establishments which have always been looking forward to employ our students. Besides, the centre is actively engaged in sponsored research and offers consultancy services to various public and private organizations.

IMRT Hyderabad:

The Institute of Metro & Rail Technology (IMRT) is a pioneering effort towards creating a world class Research & Training institution in Rail technology. An initiative of Balaji Railroad Systems Limited (BARSYL), IMRT has been promoted to address the need for professionally qualified and trained manpower for the growing Metro and Railway sector in the Indian and global market. IMRT envisages becoming a Centre of Excellence in Rail technology. As part of this, several Modular Programs are being designed.

WHO SHOULD ATTEND?

This course is intended primarily for Engineers and Managers from Companies in the Railway and Metro Rail industry and associated Industries. It will also benefit Reliability and Safety Engineers.

PROGRAM OUTLINE

- Basics of Reliability Engineering
- Basic Probability and Statistics
- Reliability Modeling
- Maintainability Analysis
- Availability Analysis
- Repairable System Reliability Analysis
- Hazard Identification and Analysis
- Failure Modes, Effects and Criticality Analysis (FMECA)
- Fault Tree Analysis
- Event Tree Analysis
- Basics of Verification and Validation
- Introduction to SIL Standards
- CENLEC standards
- RAMS assurance of railway systems
- Case studies of RAMS application to Railways

APPLICATION PROCESS

Organisations can send the nominations of their employees by sending a mail to:

Dr. Neeraj Goyal: ngoyal@hijli.iitkgp.ernet.in or

Binoy Aravindakshan: binoy.a@imrtindia.edu.in

Individuals interested in attending this course can send their applications directly to any of the above mentioned emails. The applications must reach the Organising Institutes by July 06, 2014. The admission to course is on first-come-first-served basis. Total number of seats is restricted to **TWENTY** to enable proper interaction among the candidates and faculty.

Participants are encouraged to bring their practical problem(s) and data related with the subject. A practical solution/guideline for the problem will be sought.

PROGRAM FEES

The Program Fee of Rs. 60,000/- per participant is inclusive of boarding, lodging and local hospitality. The Program Fee is to be paid as a Demand Draft of Rs. 60,000/- (Rupees Sixty Thousand only) drawn in favor of **CEP-STC, IIT Kharagpur at Syndicate Bank, IIT Kharagpur**. The principal coordinator may be contacted for any clarification or information required

PROGRAM COORDINATORS

Principal Coordinator

Dr. N. K. Goyal

Reliability Engineering Centre, Indian Institute of Technology Kharagpur

Kharagpur, West Bengal

PIN -721 302

Joint Coordinator

Dr. P. Raja Goundan

Institute of Metro Rail Technology; First Floor, 160, Patny Square

Hyderabad, Andhra Pradesh

PIN- 500 003

The course coordinators and the faculty delivering lectures in the course are practicing RAMS experts in research and development especially in the Railway and Metro Rail industry.

HOW TO REACH KHARAGPUR

Kharagpur is well connected through railway network to all major cities of India. The nearest airport is Kolkata from where either a train can be taken or taxi can be hired to reach Kharagpur. The coordinator may be contacted in case any support is required for local travel. However, the charges will be borne by the participant(s).

CORRESPONDENCE ADDRESS

All correspondences about the course can be sent to:

Prof. N. K. Goyal
Reliability Engineering Centre,
IIT Kharagpur
Kharagpur, West Bengal
PIN -721 302

Tel: (office) : 03222-283990
(Res) : 03222-283991
FAX : 03222- 282290
Email ID : ngoyal@hijli.iitkgp.ernet.in

OR

Mr. Binoy Aravindakshan
Institute of Metro Rail Technology
First Floor, 160, Patny Square
Hyderabad, Andhra Pradesh
PIN- 500 003

Tel: (office) : 040-27903311
Email ID : binoy.a@imrtindia.edu.in

APPLICATION FORM

PROGRAM ON RAMS FOR RAILWAY SYSTEMS JULY 21 – 25, 2014

APPLICANT DETAILS

*** Required fields**

Name* :

Organisation* :

Designation* :

Address for Communication*:

Contact (Mobile)* :

Contact (Email)* :

Contact (Office) :

PAYMENT DETAILS

Bank* :

DD Number* :

Amount* (Rs.) :

Date* :