# Short Term Training Program

On

Six Sigma Green-Belts

# Organized by Department of Applied Mathematics IIT(ISM), Dhanbad

With the support of Indian Statistical Institute

# **REGISTRATION FORM**

Name:		
Designation:		
Qualification:		
Organization:		
Address for Correspondence:		
Tel. (O)	(M)	
E-mail:		
DD Particulars:		
Amount	No	
Date Bank		
Accommodation Req	uired: Yes / No	
Date:		
Place:	Signature of the Applicant	

#### **CHIEF PATRON**

Prof. D.D. MISRA, Chairman BOG, IIT(ISM) Dhanbad

## PATRON

Prof. Rajiv Shekhar, Director, IIT(ISM) Dhanbad

### **ORGANIZING COMMITTEE**

Prof. A.Chattopadhyay, Dept. of Applied Mathematics Prof.G.S. Seth, Dept. of Applied Mathematics Prof. S. Gupta, HOD, Dept. of Applied Mathematics Prof. G.N. Singh, Dept. of Applied Mathematics Prof. R.K. Upadhyay, Dept. of Applied Mathematics Prof. B. Mukherjee, Dept. of Applied Mathematics Prof. M.K. Singh, Dept. of Applied Mathematics Dr. S. Chatterjee, Dept. of Applied Mathematics Dr. A. Prasad, Dept. of Applied Mathematics Dr. S.P. Tiwari, Dept. of Applied Mathematics Dr. B.S. Kushvah, Dept. of Applied Mathematics Dr. A. Jayswal, Dept. of Applied Mathematics Dr. Abha Rani, Dept. of Applied Mathematics Dr. P. S. Rao, Dept. of Applied Mathematics Dr. Abhay K. Singh, Dept. of Applied Mathematics Dr. G.K. Vishwakarma, Dept. of Applied Mathematics Dr. S. Kundu, Dept. of Applied Mathematics Dr. S. Sahu, Dept. of Applied Mathematics Dr. P.K. Kewat, Dept. of Applied Mathematics Dr. Abhishek K. Singh, Dept. of Applied Mathematics Dr. D. Pradhan, Dept. of Applied Mathematics Dr. Ramana Babu K., Dept. of Applied Mathematics Dr. N. K. Jana, Dept. of Applied Mathematics

# **SPEAKERS**

Dr. Ashis Chakraborty, Professor, SQC & OR Division ISI Kolkata, India.

Shri Subrata Rath, SQC & OR Division, ISI Pune, India.

Prof. G.N. Singh, Dept. of Applied Mathematics, IIT(ISM), Dhanbad.

Dr. N.K. Singh, Dept. of Mechanical Engg. IIT(ISM), Dhanbad



On Six Sigma Green-Belts

# June 11-15, 2018



Coordinator

Dr. Subhashis Chatterjee



Organized by DEPARTMENT OF APPLIED MATHEMATICS Indian Institute of Technology (INDIAN SCHOOL OF MINES) DHANBAD - 826 004 Jharkhand, India.

#### INTRODUCTION

Progressively, aggressively and incessantly keep on reducing variability to reach to defect level below 3.4 ppm- is what Six Sigma means in technical term. In broader context, Six Sigma calls for addressing overall sensitivity to all the stakeholders and thereby making an Organisation realize- "sustainable, predictable and desirable growth in profit following the laws of the lands". Typically R D M A I C S I approach is used for the purpose.

#### **ABOUT THE PROGRAMME**

- Introduction
- Recognise Phase-Proiect hopper, Organisation for Six Sigma
- Define Phase- Project charter, VoC, CTQ Tree, SIPOC, CAP
- Measure Phase- Data Collection Plan, MSA, Sampling, Process capability Analysis including sigma level
- Analyse Phase- Control chart, Process Analysis, Test of Hypothesis, Regression Analysis, Process FMEA
- Improve Phase- SPM, DoE, Piloting
- Control Phase- Control charts. Control plans
- Standardise & Integrate Phases

# **COURSE OBJECTIVES**

After completion of the training course, the participants will be able to:

- Start Six Sigma improvement initiatives
- Support larger scale Black Belt projects
- Improve processes using the DMAIC approach.
- ✤ Understand the role of Green Belt in changing management

## **ELIGIBILITYCRITERIA**

For academic aspirants: Faculty members, Research associates. Post-doctoral fellows. Research scholars, Scientists of different R&D organization sand Post-graduate students of engineering & science.

For corporate professionals: Junior/Middle level managers, Engineers (Mechanical, Electrical, Electronics, Civil, Computer Science, Mining, Petroleum, Chemical, Fuel & Mineral etc.) involved in operation, production, safety measures are highly expected to participate.

### **REGISTRATION FEE**

The following registration fee includes Kit, Tea, Lunch and Dinner.

For Faculty	Rs. 7500/-
	+18% GST
Research Scholars and PG Students	Rs. 5500/-
	+18% GST
Industry and R&D Organizations	Rs. 13000/-
	+18% GST

\*Accommodation in Guest house of IIT(ISM) will be provided on the request in twin sharing basis @ Rs.300/- per head per day, and single (without @ Rs.600/- per head per day. Also, sharing) accommodation can organize in hostel (depending on availability) on payment basis.

The registration fee should be paid through Demand Draft (DD) drawn on favor of "Registrar, Indian School of Mines, Dhanbad" payable at SBI, ISM Branch, Dhanbad. The filled in registration form along with the DD should be sent to: Dr. Subhashis Chatterjee, Coordinator

Associate Professor

Ph: 9431126486; E-mail: subhashis@iitism.ac.in

Last Date for Registration: 31<sup>st</sup> May, 2018

#### ABOUTTHEDEPARTMENT

The Department of Applied Mathematics is a highly reputed Department which functions with excellence as its motto. The Department was started in the year 1926 along with other Engineering and Science Departments of the institute and has established itself as a dynamic centre for academic and research activities. In addition to the teaching of courses in Mathematics for B.Tech M.Tech and Programmes, the Department offers two P.G. Programs, M.Sc (Mathematics & Computing) and 5 Yr. Int. M.Tech (Mathematics and Computing). The faculty is actively engaged in research in diverse fields such as Analysis, Algebra, Topology Operations Research, Cryptography, Graph theory, Solid Mechanics, Fluid Dynamics, Mathematical Modelling, Sampling Theory, Software Reliability and Theoretical Computer Science. At present, there are 23 members on the Teaching Faculty in the Department and more than 100 Research Scholars are working for their Ph.D.

#### **ABOUTTHEINSTITUTE**

The Indian National Congress at its XVII Session of December 1901 passed a resolution stating that "in view of the fact that the tendency of recent legislation namely, The Indian Mines Act VII of 1901, is that all Indian mines must be kept under the supervision of mining experts, the Congress is of opinion that a Government College of Mining Engineering be established in some suitable place in India on the models of the Royal School of Mines in England, Mining Colleges of Japan and at other places in the continent". The McPherson Committee formed by Govt. of India, recommended the establishment of an institution for imparting education in the fields of Mining and Geology, whose report, submitted in 1920, formed the main basis for establishment of the Indian School of Mines, Dhanbad.

#### **HOW TO REACH IIT(ISM)**

Dhanbad has an important railway station on East Central Railway and is very well connected with Delhi, Mumbai, Chennai, Kolkata and other important cities of India. It is 256 km away from Kolkata on Howrah-New Delhi Grand Trunk Road. It