

INTRODUCTION

Design of Experiments, a systematic, efficient method that deals with planning, conducting, analyzing and interpreting controlled tests to evaluate factors that control the value of a parameter or a group of parameters. In simple terms, DOE is a mathematical approach to find the importance of the input (x) factor on some output (y) factor and Optimize the setting of x factors. DOE is typically used in Lean concepts & TQM in manufacturing and at the Improve stage of DMAIC in Six Sigma approach.

DOE can be applied in Design, Sales, Production, Logistics, Human Resource and Finance departments. DOE helps identify the most important input factor for Sales volume, Production, Recruitment, Budgeting, Revenues etc. This helps decide the focus for the relevant input factor like Advertisements, Training, Technical parameters in the machine, etc.

This workshop is designed in such a way that a person without having any statistical or core mathematical background can also use DOE in the work.

FOCUS AREAS

- What is Quality : Modern Definitions
- Reactive Vs Proactive Quality
- Introduction Normal Distribution
- Introduction to Hypothesis testing
- Concept for Alpha and Beta risks
- Concept for Confidence intervals
- Introduction to Correlation analysis
- Regression Analysis
 - Simple liner regression
 - Multiple regression
 - Non liner regressions
 - Regression for Attribute Data
- Introduction to ANOVA – one way ANOVA
- Introduction to Design of Experiments
- Pre-requisites of conducting DOEs
- Full factorial DOEs
- Conducting full factorial DOEs
- Response optimization using DOEs
- Linkages of DOEs to SPC and MSA
- Fractional Factorial DOE
- DOEs for Product optimization
- Sustenance of DOE outputs and further steps

KEY TAKE AWAYS

- Conceptual clarity on Key statistical concepts from inferential statistics
- How to optimize the process parameters
- Implementation of DOE for optimization
- Response optimization
- Break through improvements in COPQ and Failure rate

PARTICIPATION FEE

Rs. 9500/-
+18% GST

**IMTMA Members/ Micro Companies/ Individuals/
Educational Institutions / Students/ IMTMA Non
Members/ Others**

USD 380/-
Overseas Participants

Group Concession : 10% for 3 to 5 and 20% for 6 and more delegates being nominated from the same company

PARTICIPANT PROFILE

Prerequisites and assumptions:

- Participants are assumed to be aware about:
 - SPC
 - MSA
 - Root cause analysis tools
- Participants are expected to join with Laptop loaded with Minitab.
- Live data from the organization is requested to in class exercises.

FACULTY

This programme will be conducted by **Mr. Charudatta Atre.**

Mr. Charudatta Atre is a Qualified Mechanical Engineer and industry expert with more than 30 years of experience the field of Quality, Lean Management, Six Sigma, Lean Six Sigma etc. Mr. Charudatta is qualified Master Black Belt in Lean Six Sigma. He has conducted several training programs, work shops in topics related to Lean Management, Six Sigma, Lean Six Sigma etc. Mr. Charudatta Atre is former Associate Vice President of Quality with Kalyani Maxion Wheels Pvt Ltd. He has also served in TUV SUD South Asia, Saint Gobain Sekurit Ltd.

For Registration Contact

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REGISTRATION : Prior registration for participation is necessary. Number of participants is limited and will be accepted on 'First Come First Serve' basis. A Certificate of participation will be issued to participants.

Important Information : Participation fee includes, course material, working lunch and tea / coffee. Interested companies are requested to register online by clicking on 'REGISTER' button and by filling up the nomination authority and participant's details in specified form.