GAUTAM BUDDHA UNIVERSITY
GREATER NOIDA

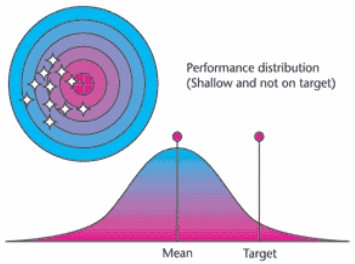
ANNOUNCES

Short Term Training Programme (STTP)

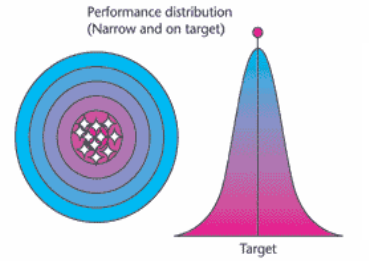
on

Taguchi : A Statistical Technique

(Dec. 26th – Dec. 30rd, 2011)



Process before statistical design (out of target and more variation)



Process after statistical design (on target and less variation)

Organised by

SCHOOL OF ENGINEERING

ABOUT THE UNIVERSITY

Gautam Buddha University, established by government funding in 511 acres lush green campus at Greater Noida encourages multidimensional growth through its education, training and research. The University envisions becoming a world class centre for excellence in education & research. The academic programmes, designed in line with the best universities around the world, combine the best practices of pedagogy and class room teaching, complemented by practical training and experiential learning. In order to promote value-based education, research and training, the University has established seven schools. To cater the engineering disciplines; School of Engineering and Information & Communication Technology offers Post Graduate & Doctoral level studies in of the branches of Engineering & Technology including interdisciplinary domains. In terms of infrastructure the University can boost of having world class facility.

ABOUT SCHOOL OF ENGINEERING

School of Engineering has been conceptualized and established with an objective to work out and develop a dependable model for growth, consistency and significant breakthrough in cutting edge technology and innovation. The rapid diffusion of core engineering fields like Mechanical and Electrical Engineering has the potential of bringing improvement in productivity and

efficiency in almost every aspects of our life and consequently turning out to be a key driver of our economic growth. We ensure that our graduate students possess necessary skills like Creativity, Innovation, Critical Thinking, Problem Solving and Collaboration.

INTRODUCTION

As a researcher in Electronic Control Laboratory in Japan, **Dr. Genechi Taguchi** carried out significant research with DOE techniques in the late 1940's. He spent considerable effort to make this experimental technique more user-friendly (easy to apply) and applied it to improve the quality of manufactured products. Dr. Taguchi's standardized version of DOE, popularly known as the Taguchi method or Taguchi approach, was introduced in the USA in the early 1980's. Today it is one of the most effective quality building tools used by engineers in all types of manufacturing activities.

The DOE using Taguchi approach can economically satisfy the needs of problem solving and product/process design optimization projects. By learning and applying this technique, engineers, scientists, and researchers can significantly reduce the time required for experimental investigations. DOE can be highly effective when yow wish to:

- Optimize product and process designs, study the effects of multiple factors (i.e. variables, parameters, ingredients, etc.) on the performance, and solve

production problems by objectively laying out the investigative experiments (Overall application goals).

- Study Influence of individual factors on the performance and determine which factor has more influence, which ones have less. You can also find out which factor should have tighter tolerance and which tolerance should be relaxed. The information from the experiment will tell you how to allocate quality assurance resources based on the objective data. It will indicate whether a supplier's part causes problems or not (ANOVA data), and how to combine different factors in their proper settings to get the best results (Specific Objectives).

SCOPE AND OBJECTIVES OF STTP

Taguchi is a statistical technique that can be used to tackle some of the more challenging quality improvement needs. The use of experimental design can result in products that are easier to manufacture, products that have enhanced field performance and reliability, lower product cost, and shorter product design and development time.

The objective of this course is to provide in depth knowledge to the participants about Taguchi designs and orthogonal experiments, Conduct experiments and analyze data using ANOVA, improve Quality of products and process through Robust Design. In addition to this the objective of this course is to present a user-friendly optimization technique, and show the benefits of optimization in improving and developing a product to meet customer requirements and reducing overall costs.

COURSE CONTENTS

1) Application areas of Taguchi Designs
2) Experiment planning & problem formulation
3) General factorial designs
4) Taguchi Methods
5) One-way ANOVA, Two-way ANOVA
6) Data analysis & Computer applications - Case Studies

RESOURCE PERSONS

Expert course faculty in this field shall be drawn from various IITs, NITs and GBU.

REGISTARION FEE

Participation from Industry : Rs. 5000/-
Institutional Participants / Faculty Members and Research Fellow : Rs. 4000/-

Lodging and lunch will be provided to the participant free of cost in the boy's hostel of Gautam Buddha University.

IMPORTANT DATES

Last date for submission of Registration form with Fees : 30 Nov. 2011
Intimation of confirmation : 10 Dec. 2011

(Demand draft is to be in favour of "Gautam Buddha University" payable at Greater Noida)

Please send your registration form to:

Dr. Satpal Sharma, Assistant Professor,
School of Engineering,
Gautam Buddha University,
P.O. Kasna, Greater Noida,
Uttar Pradesh – 201310.

PROGRAMME COORDINATORS

1. Dr. Satpal Sharma
   Assistant Professor (Mechanical Engineering),
   School of Engineering,
   Email: satpal68sharma@yahoo.co.in
   Ph: +91-8527429173(M), 0120-2346001 (O)

FOR QUERRIES, MAIL TO

Satpal68sharma@yahoo.co.in, satpal@gbu.ac.in

REGISTRATION FORM *

Taguchi : A Statistical Technique

Full Name:_____

Designation:_____

Department:_____

Organisation:_____

Experience (in years) Teaching:_____ Industry:_____

Address of Correspondence:_____

_____

_____

Pin Code:_____ Phone:_____

Mobile No.:_____ E.mail:_____

Registration Category: (Please Tick)

- ☐ Participants from Industry
- ☐ Students & Research Scholars
- ☐ Institutional Participants / Faculty Members

Details of Registration Fee:

Name of Bank & Branch :_____

DD No.:_____ Dated:_____

For Rs.:_____

(DD should be in favour of "Gautam Buddha University", Payable at Greater Noida)

Date: Signature of Participant

The applicant is hereby sponsored and will be permitted to attend the STTP.

Signature and stamp of the Sponsoring Authority

- **No TA/DA will be paid.**