


2-Day Course on

HRDF Claimable*

Design of Experiment

with computer application (Minitab)



@ 20 & 21 April 2010,
School of Industrial Technology,
Universiti Sains Malaysia, Penang.

Organised by



in association with



Course conducted by:
Professor Dr. Quah Soon Hoe
and
Associate Professor Dr. Abbas F. M. Alkarkhi

Who Should Attend?

**Engineers, Statisticians,
Technicians, Quality Controllers,
students and those who are
interested in the Design of
Experiments from various fields
application in their manufacturing
facilities.**

**Course Fee:
RM800 ONLY!!!**
Early Birds and Group
Discount Available
upon request...

*Subject to HRDF Approval

INTRODUCTION

Experimental design is an important tool for improving the performance of a manufacturing process. It also has extensive applications in the development of new process. 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. Experimental design is used to study the performance of processes and systems. The process can be visualized as a combination of machines, methods, people, and other resources that transform some input (often material) into an output that has one or more observable responses.

Experimental design enables us to determine which controllable variables are most influential on the response, where to set the influential controllable variables so that the response is almost always close the desired nominal value, where to set the influential controllable variables so that the variability in response is small, and to set the influential controllable variables so that the effects of the uncontrollable variables are minimized.

COURSE OBJECTIVES

The objective of this course is to present a user-friendly optimization technique, and show the benefits of optimization in improving, developing a product to meet customer requirements and reducing overall costs.

REGISTRATION FEE

RM800.00

(Covers course material, refreshment including lunch and Certificate of Attendance.)

EARLY BIRD DISCOUNT (register before 1 April 2010) – RM700.00 per participant

Group discounts and Postgraduate students – RM700.00 per participant (group minimum of 3 participants from the same organisation)

ENQUIRIES

Technical Details:

Associate Professor Dr. Abbas F. M. Alkarkhi
School of Industrial Technology
Universiti Sains Malaysia
04-653 3888 EXT 5203
abbas@usm.my

Registration and others:

KHAIROL ANUAR HAZIR MOHAMMED
USAINS Holding Sdn Bhd
04-653 4372 / 012-286 9048
khairol@usainsgroup.com/khairol_usains@yahoo.com

ACCOMMODATION

USM GUEST HOUSE

Universiti Sains Malaysia
11800 USM Pulau Pinang.
Tel: 04-653 2030 / 04-653 2050
Fax: 04-659 7124
E-mail: questhouse@usainsgroup.com
www.usainsgroup.com/guesthouse

HOTEL VISTANA

213, Jalan Bukit Gambir
Bukit Jambul, 11950 Pulau Pinang.
Tel: 04-646 8000
Fax: 04-646 8343
www.ytlhotels.com.my

B-SUITE

B Tower, Bayan Point
19 Medan Kampung Relau
11900 Bayan Lepas, Pulau Pinang.
Tel: 04-646 7777
Fax: 04-644 5000
www.b-suite.com.my

COURSE CO-ORDINATOR

PROFESSOR DR. QUAH SOON HOE

Dr. Quah was a professor of statistics at the School of Mathematical Sciences, Universiti Sains Malaysia, Penang. He recently retired from USM after have served for 30 years. Dr. Quah's main interest is in applying statistical techniques to solve real life problems in all areas of science and technology. He has consulted for governmental bodies as well as many multinational and local companies. Dr. Quah is an acknowledged expert in Statistical Process Control and Statistical Design of Experiments. He has been involved in Quality Management for many years. While at USM, Dr. Quah has collaborated with various manufacturing companies in the offering of short term courses as well as providing consultancy help for Applied Statistics students involved with industrial problems under the USM/industry industrial training scheme. Currently, he is a statistical consultant.

ASSOCIATE PROFESSOR DR. ABBAS F. M. ALKARKHI

Dr. Abbas is an associate professor at the School of Industrial Technology, his specialization is in statistics (optimization & experimental design and multivariate methods) and he has done research on optimization and taught courses in statistics. He has been teaching experimental design for technologists since 2002". His research interest is in applications of Experimental design and Multivariate analysis for technologist. Dr. Abbas has collaborated in offering of short courses as well as providing consultancy help to undergraduate and postgraduate students in the school of industrial technology. Dr. Abbas has published over 30 international papers in international journals.

DESIGN OF EXPERIMENT PROGRAM SCHEDULE

DAY 1 : 20 APRIL 2010

8:30 am – 8:55 am	Registration
9:00 am – 10:45 am	What is DOE? Application areas of DOE Basic experimental designs Graphical presentation of variability
10:45 am – 11:00 am	Tea Break
11:00 am – 12:45 am	Hypothesis Testing One-way ANOVA Two-way ANOVA Regression models
12:45 pm- 1:00 pm	Q&A
1:00 pm – 2:00 pm	Lunch
2:00 pm – 3:30 pm	Computer applications
3:30 pm – 3:45 pm	Tea break
3:45 pm – 5:15 pm	Computer applications (cont'd)
5:15 pm – 5:30 pm	Q&A

DAY 2 : 21 APRIL 2010

9:00 am – 10:45 am	General factorial designs Advantages of factorial designs over one-at-a-time designs Two-level factorial & fractional factorial designs Three-level factorial & fractional factorial designs
10:45 am – 11:00 am	Tea break
11:00 am – 12:45 pm	Response surface methodology (RSM) Multiple responses Optimization
12:45 pm – 1:00 pm	Q&A
1:00 pm – 2:00 pm	Lunch
2:00 pm – 3:30 pm	Computer applications
3:30 pm – 3:45 pm	Tea break
3:45 pm – 5:15 pm	Computer applications (cont'd)
5:15 pm – 5:30 pm	Q&A

REGISTER NOW !

DESIGN OF EXPERIMENT

Contact: Khairol Anuar at 04-653 4372 / 012-286 9048 / email: khairol@usainsgroup.com or khairol_usains@yahoo.com

Fax or send registration form to : **USAINS Holding Sdn. Bhd.**, Ground Floor, Kompleks EUREKA, Universiti Sains Malaysia, 11800 USM PENANG. Fax : 04-657 2210

Please register the following name/names: (Please use separate sheet, if required)

Item	Participants Name (Please print clearly or attach business card)	Position & Email
*1.		
2.		
3.		
4.		
5.		
Industry Sector:		
Company:		
Address:		
Postcode:		
*Primary Person:		*Mobile Phone:
*Telephone No.:	*Fax No.	*E-mail:

Mode of Payment

		Number	Bank	No. of Participants:	
I enclose	<input type="checkbox"/>	Crossed Cheque		Early Birds:	
	<input type="checkbox"/>	Bank Draft		Group Discount:	
	<input type="checkbox"/>	Money Order			
	<input type="checkbox"/>	LO/PO		Total Sum:	RM
Payment must be made payable to 'USAINS Holding Sdn. Bhd.'					

1. **Bank Transfer** [Please fax your Bank-in Slip (Print your name & details on the slip)].

Payee Name: **USAINS Holding Sdn. Bhd.**
Details: **DESIGN OF EXPERIMENT**
Name of Bank: **CIMB Bank Berhad (USM Branch), Universiti Sains Malaysia, 11800 USM Penang.**
Account Number: **0709-0006708-05-7**

2. A **Local Order (LO)** or **Purchase Order (PO)** must be presented before the event.

The Organizer reserves the right to refrain a registered participant from taking part in the event if no proof of payment can be presented. This only applies to registered participants who have NOT paid the registration fee PRIOR to the event date.

Cancellation / Substitution

A full refund less administration fee of RM50.00 will be given for cancellation received not later than 5 days before the course. No refund will be made after this period. However, substitute participants are welcomed at no extra charge provided written notice of at **least 5 days** before the event is given to the Organizer.

Disclaimer

The Organizer reserves the right to reschedule or cancel any part of its published programme or venue due to unforeseen circumstances and will not accept liability for costs incurred by participants or their organizations for the cancellation of travel arrangements and/or accommodation reservations as a result of the course being cancelled or postponed. Advance notice will be given if there is such changes or cancellation.