

About Your Instructor

Uwe Koehn, Ph.D. *Statistics, Emeritus Professor of Statistics, University of Connecticut*

Professor Koehn received his Ph.D. in Statistics from the University of Illinois at Champaign-Urbana. He was Head of the Department of Statistics at the University of Connecticut for 12 years and directed the department's statistical consulting service for more than 25 years. Having taken emeritus status, he is devoting his time to statistical consulting and research. He has consulted with and taught short courses to more than 30 companies and organizations, as well as having worked with numerous engineers and scientists within the University. Professor Koehn's consulting in the scientific and engineering fields has involved experiments in the biological and physical sciences as well as processes in manufacturing and chemical engineering. He is particularly interested in problems in process optimization.

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Introduction to Design of Experiments



*A Short Course for
Engineers, Scientists,
Designers and Quality
Assurance Managers*

Tuesday, June 14 and
Wednesday, June 15, 2005
9:00 a.m. - 5:00 p.m.

Sponsored by:

Institute of Materials Science &
IMS Associates Program
University of Connecticut
Storrs, Connecticut

Introduction to Design of Experiments

June 14 and 15, 2005

Registration Form

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*Please let us know if you require special services or arrangements due to a disability.***Registration Fee**

- \$600 Registration Fee
- \$500 Registration Fee for firm with 30 or fewer employees - or -
If more than one person from a firm of over 30 employees
- \$250 Registration Fee for IMS Associates Program member (one registration only at this rate; additional registrations \$500)

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Phone: 800-622-9905 or 860-486-1052**Fax: 860-486-5221****Online: continuingstudies.uconn.edu**

This course will start with the t-test, discussing its applicability and some extensions. Multiple sources of variability and blocking will be considered. For all designs we will see how to analyze the results both analytically and graphically. Orthogonal Arrays (Taguchi) and Plackett-Burman (Screening) designs will be introduced. Factorial designs, which allow the determination of the effect of important parameters and their interaction with each other, will be considered. When there are a number of different parameters, Fractional Factorial designs along with their resolution are studied because they can be more efficient. We will also consider using experiments sequentially so that prior experiments can be easily combined with current results. Throughout the course, Taguchi methods and philosophy will be discussed. Finally, sample size and power calculation will be introduced. These give the engineer insight into whether or not a proposed experiment is worthwhile.

Who should attend

Engineers and scientists wishing to increase the power of their experiments by using statistical design of experiments (DoE).

Course Location and Schedule

The course will be offered on the Storrs campus of the University of Connecticut, School of Business Building, Room 122 on June 14 and 15, 2005 from 9:00 am - 5:00 pm.

Registration

The registration fee of \$600 includes workshop attendance, set of course notes, a 30-day trial version of Minitab statistical software, lunch and coffee breaks each day. The fee does not include hotel accommodations. Registration for this course closes on June 1, 2005.

Discounts Available

Participants from firms employing 30 people or fewer receive a \$100 discount per participant (\$500). Companies employing more than 30 people can receive a \$100 discount per participant (\$500) by sending more than one participant to the course.

Refund and Cancellation Policy

The registration fee is refundable, less \$35.00, prior to the first day of the course only if you notify Professional Studies: 800-622-9905 or 860-486-1052. Partici-

pants who do not attend and fail to cancel are subject to the full fee. Participant substitutions may be made. The Institute of Materials Science reserves the right to change instructors and cancel or reschedule the course in the event of insufficient enrollment or unforeseen circumstances.

Further Information

Questions regarding the course should be directed to Ed Kurz at 860-486-4186 (voice), 860-486-4745 (fax) or ekurz@ims.uconn.edu. To register, you may mail or fax the registration form to Professional Studies or you may call them at 800-622-9905 or 860-486-1052.

Computer Requirements

In order to make best use of this course, all registrants should bring their own laptop. Two registrants may share a computer. All registrants will be given a trial version of Minitab. This software will be used during the course. This is the full version of Minitab, but will not run past the 30-day trial period, or on computers that have had the trial version previously installed.

System requirements:

<u>Recommended</u>	<u>Minimum</u>
Windows XP, 2000	Windows 98, ME, NT4
500 MHz Processor	300 MHz Processor
160 Mb RAM	64 Mb RAM
CD-ROM, 85 Mb Hard Disk space required for full install.	

Course Highlights

- Screening Experiments
- Analytical and Graphical Analysis of Results
- Taguchi Ideas
- Factorial and Fractional Factorial Designs
- Sources of Variation
- Statistical Computer Packages