

Sept.-Oct. 2009 SEMINARS

DATA ANALYSIS USING MINITAB® SEPTEMBER 15-16, 2009

In today's quality-conscious world, statistical knowledge is essential for planning, decision-making, and process improvement. Many managers, engineers, and even operators are now expected to use statistical methods and/or interpret reports using statistical analyses. What do the results mean? Are they significant? Was the analysis done correctly? In this seminar you will learn the basic skills and knowledge to analyze data and apply statistical methods using Minitab statistical software. 1.4 CEUs

TOPICS INCLUDE

- introduction to Minitab
- statistical thinking
- sampling methods and data collection
- measures of dispersion and central tendency
- histograms, box plots, and scatter plots
- hypothesis testing and confidence intervals
- inferences about proportions and means
- correlation and regression
- one-way analysis of variance
- measurement system analysis
- components of variance
- basics of statistical process control

HOW YOU WILL BENEFIT

- see how data can be affected by the way it is collected
- gain insight into data by choosing the best statistic
- use computer software to make charts, tables, diagrams, and plots
- understand both the power and the limitations of data

INSTRUCTOR Peter Bajorski

COST \$695

PROCESS IMPROVEMENT USING DESIGNED STUDIES

SEPTEMBER 21-24, 2009

In this highly interactive seminar, you will learn how to go beyond using control charts studying only one factor, such as time, to improve processes. The more complex your process, the greater benefit you can obtain by using designed studies, where several factors can be studied (e.g., operators, machines, batches). These relatively inexpensive studies are often used before formal experimental design approaches are considered. To make the approaches understandable and practical, we will use actual physical studies and simulations. 2.8 CEUs

TOPICS INCLUDE

- the need for designed studies: the theory-data cycle
- random/fixed and crossed/nested factors: a key to designing and analyzing designed studies
- studying several processes simultaneously: the six-cavity mold example
- gage repeatability and reproducibility: length of a critical dimension example
- designed studies on production processes
- creating confidence intervals; are estimates reasonable?
- more complex designed studies

INSTRUCTOR Joseph Voelkel

COST \$1,095

For additional seminar information and to register go to
www.rit.edu/kgcoe/cqas

INTERPRETATION OF DATA WITH EXCEL

SEPTEMBER 28-29, 2009

In this hands-on, two-day seminar, you will learn how to interpret and synthesize data from multiple sources and perform concise and actionable analyses. You will also learn how to display data in the most effective way to support your analyses. You will know how to proactively identify business opportunities. Many business examples are used in this course, including those in manufacturing, insurance, marketing, and market analysis. No prior experience with data analysis is required. 1.4 CEUs

TOPICS INCLUDE

- graphical methods
- summary statistics
- correlation and trend analysis
- time dependent data

YOU WILL BENEFIT BY

- identifying implications and opportunities from data analyses
- shifting from data aggregator to "story teller"
- interpreting meaningful results from data
- utilizing Excel tools for graphs and data interpretation

INSTRUCTOR Peter Bajorski

COST \$695

ISO 9001:2008 OVERVIEW AND IMPLEMENTATION

OCTOBER 7, 2009

Organizations that have implemented the ISO 9001:2008 Quality Management System Requirements have reported significant improvements in their management system, increased customer satisfaction, and a positive return on their investment. This workshop is designed to familiarize you with how to develop a process approach, understand the specific requirements in the standard, and develop a plan for successful implementation.

WHO SHOULD ATTEND Management, ISO 9000 representatives, and those individuals responsible for implementing the standard.

TOPICS INCLUDE

- the eight quality principles
- the process model with four core processes: Management Responsibility, Resource Management, Product Realization, and Measurement, Analysis and Improvement
- developing a process approach
- the requirements associated with each core process
- examples on how to meet the requirements
- management's role
- strategies and plans for implementation

INSTRUCTOR Donald Baker

COST \$345

ISO 9001:2008 DOCUMENTATION OCTOBER 8, 2009

ISO 9001:2008 requires a process approach as the basis for the quality management system and uses measurable objectives to drive continual improvement and customer satisfaction. While it places less emphasis on documented procedures, it still requires a minimum of six documented procedures and a description of process interactions. This workshop takes a look at the intent of the ISO 9001:2008 requirements and offers approaches to implementing and maintaining an effective quality management system. You will be introduced to alternative approaches to meet the requirements of ISO 9001:2008, which include the tools to document processes and their interactions, develop measurable objectives, and establish the controls needed to maintain a formal quality management system focused on continual improvement and customer satisfaction. Exercises on evaluating and writing documentation are held throughout the workshop.

WHO SHOULD ATTEND Individuals responsible for establishing, maintaining and/or improving an ISO 9000-based quality management system.

TOPICS INCLUDE

- understanding the documentation
- requirements of the standard
- determining how much documentation is required
- establishing a quality manual
- flow charting
- creating "measurable" objectives
- developing effective procedures
- developing an effective document control procedure

INSTRUCTORS John Burr and Robert Berg

COST \$345

INTERNAL AUDITING TO ISO 9001:2008

OCTOBER 12-13, 2009

"Great!" "Very practical and humorous!" "There were no parts of the program I did not feel were an asset to me." These are typical comments on this popular seminar that develops auditing skills necessary to maintain and improve an ISO 9000 quality system. Through formal presentations, workshops, case studies and open-forum discussions, the ISO 9001:2008 standard and auditing skills are brought alive with humor. You will be instructed in the detailed requirements of the standard and how to audit to the new process approach. You will learn how to plan and perform an audit as well as how to report findings and review corrective action. While ISO 9001:2008 is used as a basis, these auditing skills are appropriate for any standard. 1.4 CEUs

WHO SHOULD ATTEND Individuals who will be conducting internal audits or supplier audits based on any quality system standard.

TOPICS INCLUDE

- overview of ISO 9001:2008
- characteristics of a good auditor
- auditing a process and systems approach
- planning the audit and setting objectives
- developing questions and checklists
- reporting findings
- verifying corrective action

INSTRUCTORS John Burr and Robert Berg

COST \$695 (Add \$50 for optional exam)

DESIGN OF EXPERIMENTS (DOE)

OCTOBER 26-29, 2009

Effective experimental design and analysis are critical to improving products and processes, reducing waste, lowering costs and improving productivity. This seminar focuses on the application of strategies, with the use of software, for selecting the best design to answer the underlying experimental questions, and interpreting results more efficiently and effectively. 2.8 CEUs

TOPICS INCLUDE

- strategy of experimentation
- summarizing results: main effects and interactions
- two-level designs for 3-5 factors: the 2k designs
- introduction to variation when conditions are held constant
- randomizing and blocking
- handling variation in two-level designs
- nonreplicated experiments
- selecting the correct number of runs
- the role of center points and their dangers
- fractional factorial (2k-p) designs: studying 5-15 factors or more simultaneously
- foldover designs
- introduction to response-surface designs
- case studies, simulations, physical experiments, numerous exercises

INSTRUCTOR Joseph Voelkel

COST \$1,095

LEAN SIX SIGMA Sessions

Elimination of waste and improved process capabilities are common goals of both Lean and Six Sigma. The integration of these systems provides a process improvement methodology that addresses the responsiveness and capability of the entire value delivery system. Attendees participate in projects that reinforce learning and can generate substantial cost savings. **Both Green Belt and Black Belt programs are available on a contract basis at your facility or on an open-enrollment basis on the RIT campus.**

www.rit.edu/cqas/SixSigma/Comprehensive.htm

TOPICS INCLUDE

- ▶ Problem Solving
- ▶ 5-S and Visual Controls
- ▶ Statistical Thinking
- ▶ Value Stream Mapping
- ▶ Measurement Systems Analysis
- ▶ Data Analysis and Graphing
- ▶ Kaizen and Kanban
- ▶ Design of Experiments
- ▶ Multiple Linear Regression
- ▶ Hypothesis Testing
- ▶ Response Surface Methods
- ▶ Multi-Vari Charts

OPEN ENROLLMENT SESSIONS begin September 14, 2009

**FOR TRAINING AT YOUR SITE, call Greg Evershed
at 585-475-5442**



Registration

SEMINAR TITLE(S) _____

SEMINAR DATE(S) _____

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

(____) _____ (____) _____
PHONE FAX E-MAIL

SUPERVISOR _____ TITLE _____

\$ _____ check payable to **Rochester Institute of Technology**

Invoice P.O. # _____

Visa or MasterCard _____
CREDIT CARD # _____ EXP. DATE _____

CARDHOLDER NAME _____

SEMINAR REGISTRATIONS will be confirmed upon receipt of a registration form (photocopies welcome). General information and cancellation/refund policies available at www.rit.edu/kgcoe/cqas

TO REGISTER
Rochester Institute of Technology
Center for Quality and Applied Statistics
98 Lomb Memorial Drive
Rochester, NY 14623-5604

OR CALL: 585-475-6990
FAX: 585-475-5959
EMAIL: cqas@rit.edu

For additional dates, a complete listing of seminars and information:
www.rit.edu/kgcoe/cqas

First Class Mail
U.S. Postage
PAID
Rochester, NY
Permit 626

R.I.T
COAS
98 Lomb Memorial Drive
Rochester, NY 14623-5604

R·I·T

ROCHESTER INSTITUTE OF TECHNOLOGY
THE JOHN D. HROMI CENTER FOR QUALITY AND APPLIED STATISTICS
KATE GLEASON COLLEGE OF ENGINEERING

COAS

Sept.-Oct. 2009 SEMINARS

September - December Lean Six Sigma Open Black Belt

September - December Lean Six Sigma Open Green Belt

Sept. 15-16 Data Analysis Using Minitab®

Sept. 21-24 Process Improvement Using Designed Studies

Sept. 28-29 Interpretation of Data with Excel

Oct. 7 ISO 9001:2008 Overview and Implementation

Oct. 8 ISO 9001:2008 Documentation

Oct. 12-13 Internal Auditing to ISO 9001:2008

Oct. 26-29 Design of Experiments

Graduate Programs

ONLINE OR ON-CAMPUS ▲ PART-TIME OR FULL-TIME

MS in Applied Statistics

The MS degree emphasizes practical, applications-oriented knowledge useful in technical fields. We focus on the application of statistical thinking and statistical methods while providing the underlying theory. Graduates can use what they learn to obtain and analyze data relating to manufacturing, education, service and healthcare industries.

Advanced Certificates

- Advanced Certificate in Statistical Quality
- Advanced Certificate in Statistical Methods for Product and Process Improvement

— SIX SIGMA BLACK BELT OPTION —

Webinars

We Now Offer The Following Topics Online

- Data Collection/Analysis
- Excel – Formulas & Graphs
- Minitab – Basic Statistics/Variability
- Design of Experiments

visit

www.rit.edu/kgcoe/cqas/publicseminars/index.htm

for more info

For information on all of the Center's offerings, visit our website at
www.rit.edu/kgcoe/cqas