MiC Quality Online Courses

SPC, DOE, MSA/ GAGE R&R, SIX SIGMA

www.micquality.com

MiC Quality is a global provider of e-learning. We launched our first online course in 1998. Since then we have established a reputation for excellence in the quality of our courses and for exceptional customer service.

If you want to evaluate our approach with our free courses, please visit: www.micquality.com

Glen Netherwood
MiC Quality

Our Students Say

Albert Perrin, Engineer
"The course changed my thinking on measurement and experimentation. I have done dozens of Designed Experiments where a tremendous analysis of data was done while the measurement systems were not checked at all. Now I have much better awareness of all aspects of measurement and correction."

MiC Quality Online Courses

:: Statistical Process Control
:::Advanced SPC
:: Design of Experiments
:: Advanced DOE
:: Primer in Statistics
:: Advanced Statistics
:: Measurement Systems Analysis/ Gage R&R
:: Six Sigma Primer

Online Courses for:

:: Engineers and Managers
:: Quality Professionals
:: Healthcare Professionals
:: Chemists and Scientists
:: Six Sigma Green Belts and Black Belts
:: Six Sigma Master Black Belts
:: ASQ SSBB and CQE Aspirants

Features and Benefits

:: **results-oriented** - practical skills development
:: **cost-effective** - a total of **230 hours** of study from as little as **$5** per hour
:: **interactive** - many exercises, simulations and case studies
:: **comprehensive** - each course takes about 30 hours of study over a 6-week period
:: **flexible** - self-paced study and access anywhere, any time
:: **individual support** - questions answered by a highly-qualified course instructor, **expert advice** provided on how to apply the methods in practice

ASQ Certification

Our courses help prepare for the American Society for Quality (**ASQ**) Six Sigma Black Belt (**SSBB**) and Certified Quality Engineer (**CQE**) certification exams.

Up to **23 Re-certification Units** (RUs) can be earned for the ASQ certification renewal.

VISIT:: www.micquality.com :: Review Our FREE Courses

MiC Quality SPC and DOE Courses

Statistical Process Control
SPC and Advanced SPC

MiC Quality offers a basic **Statistical Process Control** course and an **Advanced SPC** course.

After completing the basic SPC course the participants will be able to design and use process capability studies and control charts for both variables and attributes.

The Advanced SPC course introduces **ten additional types of control charts** to deal effectively with the many types of processes found in practice, including short run and high volume.

Main Topics for the SPC Course

:: understanding variation
:: process capability & performance Cp, Cpk, Pp, Ppk
:: x-bar and R charts
:: attribute charts - p, np, c and u

Advanced SPC Course

:: control charts for given values
:: x-bar and s charts
:: median charts
:: demerits per unit (U) charts
:: individual and moving range (XmR/ImR) charts
:: short run SPC
:: pre-control
:: moving average (MA) charts
:: EWMA charts
:: CuSum charts
:: rational subgroups

Our Students Say

Dragos Gabriel Marin
Purchasing Analyst
Pratt & Whitney, Canada
"When I started the course my experience in statistics was a very traumatizing course at the university plus a number of unsuccessful attempts of studying SPC from books. Now, at the end of the course, I can say that yes, I understand the concepts, and I will apply them."

Design of Experiments
DOE and Advanced DOE

MiC Quality offers two courses in experimental design: the basic **Design of Experiments** course and the **Advanced DOE** course.

The basic DOE course concentrates on full and fractional **factorial designs**. The participants learn how to design and conduct the experiments and how to analyze the results correctly. The course uses the popular Minitab software.

The Advanced DOE course covers alternative approaches to experimental design that optimize the performance of processes.

Main Topics for the DOE Course

:: full and fractional factorial designs
:: foldover designs
:: screening designs, Plackett-Burman Designs
:: hypothesis testing, t-test and F tests
:: single factor experiments and ANOVA
:: residual analysis and normal probability plots
:: analyzing designs and transforms

Advanced DOE Course

:: Taguchi Signal to Noise Ratio
:: Taguchi approach to experimental design
:: Response Surface Designs (Central Composite and Box-Behnken)
:: Hill Climbing strategies
:: Mixture Designs

Our Students Say

April Baugher
Process Development Engineer
Applied Biosystems, US
"I've found that your course provides the same information given in the Montgomery texts, but your course supplies it in a palatable manner in which I can understand the applications. I've found myself glazing over looking at the SPC and DOE texts, which can read like a mathematics proof. Your course bridges that gap for me."

Statistics, MSA/ Gage R&R Courses

Statistics
Primer and Advanced Statistics

MiC Quality offers a **Primer in Statistics** and an **Advanced Statistics** course.

The Primer is intended for people with little or no previous exposure to statistics. After completing the course participants will be able to apply analytical and graphical methods that are often used in process improvement. It provides excellent support for **Six Sigma Green Belt** training.

The Advanced Statistics course covers the more powerful methods of statistics, with the emphasis on process improvement. It includes hypothesis testing, probability and distributions, regression analysis and ANOVA.

Main Topics for the Primer in Statistics

:: central tendency; mean, median, mode
:: understanding process variation
:: box plots, quartiles & percentiles
:: histograms, Pareto charts, stem & leaf plots,
:: variance and standard deviation
:: normal distribution
:: normal probability plots
:: scatter graphs, multi- vari charts
:: correlation, hypothesis testing, calculating the sample size

Advanced Statistics Course

:: confidence intervals, t-distribution, t-tests
:: central limit theorem
:: hypothesis testing
:: type I and II errors and power
:: chi-square distribution
:: contingency tables
:: regression analysis
:: correlation, residual analysis
:: Analysis of Variance (ANOVA)
:: probability
:: binomial, Poisson and hypergeometric distributions

Our Students Say

Jennifer McClare, Engineer, Canada

"Very practical, lots of examples, easy to understand. Rather than just a review of math, the course was very applied with a number of very practical real-world examples. It showed me that I already knew enough to be making improvements in processes, but just didn't know how to apply it. The email support was very thorough and contained personal responses, not "canned" answers."

Measurement Systems Analysis
Gage R&R

After completing the MSA/ Gage R&R course participants will be able analyze measurement systems to ensure that they are capable of achieving the **accuracy** and **precision** needed to effectively control processes. The participants will also be able to identify, and correct, weaknesses in measuring systems.

Measurement system studies are carried out using **interactive simulations** of measuring instruments. This ensures the skill and confidence needed to apply Measurement Systems Analysis/ Gage R&R in practice.

Main Topics for the MSA/ Gage R&R

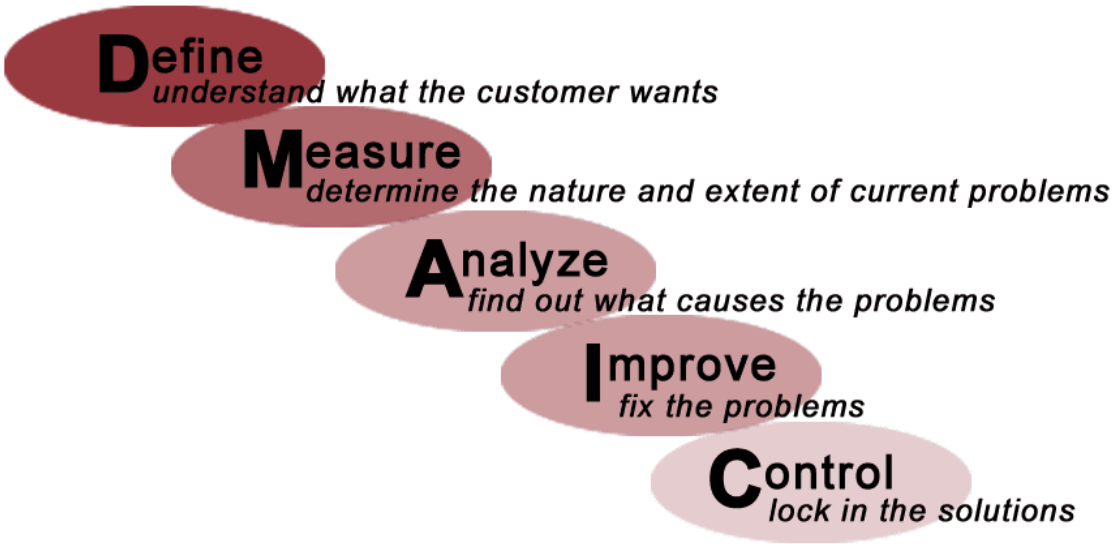
:: control chart methods
:: repeatability and reproducibility
:: Gage R & R studies
:: using Minitab
:: ANOVA method
:: capability, bias, linearity, stability
:: attribute studies - attribute agreement and analytical methods

Costs

Licenses and Volume Discounts are Available

Course or Package	Cost
Single course (20 hours) Six Sigma Primer	**$190**
Single course (30 hours each) SPC, Advanced SPC, Primer in Statistics, Advanced Statistics	**$190**
Package (2 courses) Both Statistics or both SPC	**$290**
Single course (30 hours each) DOE, Advanced DOE, MSA/ Gage R&R	**$250**
Package (2 courses) Both DOE	**$390**
Package (7 courses) All courses without Six Sigma Primer	**$990**
Package (8 courses) All courses	**$1,150**

SIX SIGMA Primer *In-Depth Overview*



This course provides a comprehensive overview of **Six Sigma**. It takes the course participant through each stage of the DMAIC sequence using case studies to show how, and when, to use the most important methods and tools.

After completing the course the participants will:

:: understand how the Six Sigma **DMAIC** sequence provides a logical framework for process improvement

:: be familiar with the **methods and tools** that are used at each stage of the DMAIC sequence

Main Topics for Six Sigma Primer

:: Deployment
:: Six Sigma metrics
:: the DMAIC sequence:
  : Define
  : Measure
  : Analyze
  : Improve
  : Control
:: Lean methods
:: Design For Six Sigma (DFSS)

Our Students Say

Mark Walsh, Consulting Engineer

"I have now completed the Statistical Process Control, Design of Experiments and Measurement Systems Analysis courses and found this has given me an excellent grounding in the theory behind Six Sigma methodologies. I am now confident to start applying these techniques on a day to day basis. The way in which the structure makes you go through the practical exercises is ideal, and really reinforces the concepts in a practical manner."

FREE Six Sigma Resources :: Glossary with 500+ Terms :: www.micquality.com

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