

This Course Is For You If You:

- ◆ NEED TO BETTER UNDERSTAND YOUR CUSTOMER REQUIREMENTS AND TO SET REALISTIC SPECIFICATIONS
- ◆ NEED TO EVALUATE YOUR MEASUREMENT SYSTEMS FOR ACCURACY, PRECISION AND CONTROL
- ◆ NEED TO EVALUATE A NEW TEST
- ◆ NEED TO IMPROVE AN EXISTING TEST
- ◆ NEED TO DETERMINE YOUR PROCESS CAPABILITY (CPK, ETC.)
- ◆ NEED TO DEVELOP A PROCESS CONTROL PLAN
- ◆ NEED TO IMPLEMENT SPC
- ◆ NEED TO IMPROVE AN EXISTING PROCESS OR PRODUCT
- ◆ NEED TO DEVELOP A NEW PROCESS OR PRODUCT
- ◆ NEED TO EVALUATE A PROPOSED NEW PRODUCT OR PROCESS
- ◆ NEED TO EVALUATE A NEW OR OLD SUPPLIER
- ◆ NEED TO COMPARE TWO SUPPLIERS, PROCESSES, TESTS OR MEASUREMENT SYSTEMS
- ◆ ARE PLANNING ON TAKING THE CQE EXAM
- ◆ ARE CONSIDERING SIX SIGMA BLACK BELT TRAINING
- ◆ ARE A SIX SIGMA PROJECT CHAMPION
- ◆ HAVE TAKEN BLACK BELT TRAINING, BUT WISH TO BETTER UNDERSTAND STATISTICAL FOUNDATIONS



**STATISTICS:
THE FOUNDATION FOR
PROCESS
UNDERSTANDING,
CONTROL AND
IMPROVEMENT**

April 21 - 24, 2009

*Crowne Plaza Richmond West
Richmond, VA*

PRESENTED BY:

Quality Associates of Clemson

AND

IN COOPERATION WITH:



**The Richmond Chapter of
American Society for
Quality (ASQ Section 1104)**

***SPECIAL NOTE IF YOU ARE CONSIDERING THE
CERTIFIED QUALITY ENGINEER (CQE) EXAM***

The material covered in this course provides the necessary foundation not only to pass, but to excel on the CQE examination.

PO Box 1864 ■ Clemson, SC 29633-1864

■ phone: 864.356.9084 ■ fax: 864.639.6329 ■ e-mail: qualityassoc@aol.com

■ website: www.qualityassociatesofclemson.com

About the Program

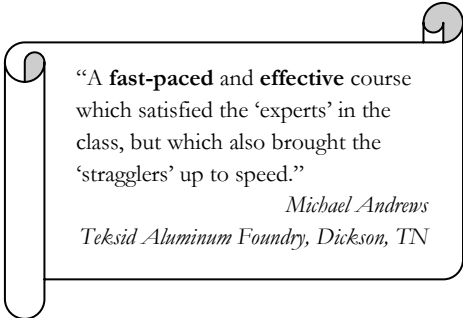
This practical, applications oriented course is designed for the person who wants to understand what it means to think statistically and to make decisions based on facts and data instead of opinion. The material presented lays the foundation for all statistical applications in industry and business organizations, both manufacturing and non-manufacturing. The course is full of real-world examples gathered from the instructor's more than 30 years' experience.

During the program you will discuss many real-world examples which are based on hypothesis testing and estimation. Six statistical distributions (Normal, Student t, Chi Squared, F, Binomial, and Poisson) are most often used in these real-world applications. You will come away from this course knowing when and how to use each distribution, the logic behind each, and how to properly interpret the results to achieve optimum decision making.

Don't let the terminology intimidate you. *Statistics* only sounds difficult. It is not!

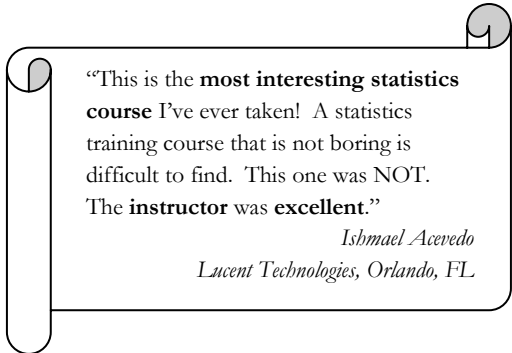
Agenda

- I. The Role of Statistics in Process Understanding, Control and Improvement
- II. The Three Key Areas of Statistics
 - A. Sampling
 - B. Descriptive Statistics
 - C. Statistical Inference
- III. The Importance of the Normal Distribution
- IV. Understanding Process Capability
- V. Developing Process Control
- VI. When the Normal Isn't Appropriate - the Student t Distribution
- VII. Understanding and Reducing Process Variability - the Chi Square Distribution
- VIII. Comparing Two Populations
 - A. Process Means
 - B. Process Variability - the F Distribution
- IX. Analyze Attribute Data
 - A. Binomial Distribution
 - B. Poisson Distribution
- X. Putting It All Together

A decorative scroll-shaped box containing a testimonial quote.

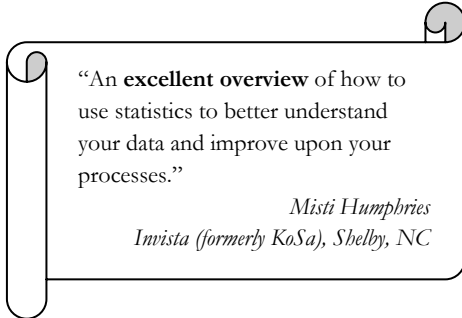
“A **fast-paced** and **effective** course which satisfied the ‘experts’ in the class, but which also brought the ‘stragglers’ up to speed.”

Michael Andrews
Teksid Aluminum Foundry, Dickson, TN

A decorative scroll-shaped box containing a testimonial quote.

“This is the **most interesting statistics course** I've ever taken! A statistics training course that is not boring is difficult to find. This one was NOT. The **instructor** was **excellent**.”

Ishmael Acevedo
Lucent Technologies, Orlando, FL

A decorative scroll-shaped box containing a testimonial quote.

“An **excellent overview** of how to use statistics to better understand your data and improve upon your processes.”

Misti Humphries
Invista (formerly KoSa), Shelby, NC

SPECIAL NOTE FOR CURRENT AND FUTURE SIX SIGMA PRACTITIONERS

Statistics forms the foundation for Six Sigma DMAIC methodology. This course will provide future Black Belts a firm foundation for maximum learning.

Current Black Belts can increase their effectiveness dramatically by improving statistical skills and understanding. In their critical leadership roles, Champions need a firm foundation in statistics to effectively communicate with their Black Belts. This course provides that ability.

Quality Associates, Inc.

PO Box 1864 ■ Clemson, SC 29633-1864

■ phone: 864.356.9804 ■ fax: 864.639.6329 ■ e-mail: qualityassoc@aol.com

■ website: www.qualityassociatesofclemson.com

Your Instructor



EARL BURCH is a Professor Emeritus of Business Administration and Mathematical Sciences at Clemson University. He has taught courses in Probability and Statistics for Engineers, Statistical Analysis for MBAs, design and analysis of experiments, applied regression analysis, exploratory data analysis, production planning and scheduling, advanced statistical process control and management science.

Dr. Burch has published extensively in journals such as the *Academy of Management Journal*, the *Journal of Quality Technology*, *Decision Sciences*, *Interfaces*, and the *Journal of Business*. He has been involved in all phases of quality management from the development of a corporate quality philosophy and the implementation of SPC to training operators in basic statistics, SPC, problem solving and team building. He has helped implement Six Sigma in a number of companies and provides Six Sigma training for executive leadership teams, champions, black belts and green belts. Clients have included: BYK, Cabot, Celanese, Inc., DuPont, Hercules, Inc., International Paper Co., Millennium Inorganic Chemicals, Mitsubishi, Monsanto Chemical Co., Oakley, Philip Morris, Printpack Inc., Wellman Fibers, W.R. Grace and many others.

About Us

QUALITY ASSOCIATES OF CLEMSON, SC - since 1980, has been providing training and consulting worldwide. Our focus is to provide the exact training needed to help our clients achieve their desired training and consulting objectives.

Our teams of instructors and consultants are highly qualified academically and professionally, and have the depth of experience needed to handle the most difficult challenges. Averaging over 25 years' experience, our team members are uniquely capable of providing real-world solutions to your particular needs.

Quality Associates is effective at mentoring and training for all levels of your organization - from presidents and vice-presidents, to supervisors and operators, and all levels in between. We have been praised for our practical, hands-on consulting approach and our ability to make training effective and enjoyable.

About ASQ

The American Society for Quality (ASQ) was established in 1946 and is based in Milwaukee. You can trace its beginnings to the end of World War II, as quality experts and manufacturers sought ways to sustain the many quality-improvement techniques used during wartime. ASQ has played an important role in upholding these standards from the past while championing continued innovation in the field of quality.

In the 1980s, ASQ members began to see how quality could be applied beyond the world of manufacturing. Quality, they realized, could make a difference in any organization and touch every person in it. Because of this, the idea of quality began to morph into a much broader discipline aimed at leading, inspiring, and managing a broad range of businesses and activities, with a focus on excellence.

ASQ supports their members by providing a wide range of resources, from certification and training to publications and conferences. Globally, ASQ has formed relationships with nonprofit organizations that have comparable missions and principles, forming collaborative efforts to meet the quality needs of companies, individuals, and organizations worldwide.

The Society serves as an advocate for quality. Its members have informed and advised the U.S. Congress, government agencies, state legislatures, and other groups and individuals on quality-related topics. Since 1987, ASQ has administered the United States' premier quality award, the Malcolm Baldrige National Quality Award, which annually recognizes companies and organizations that have achieved performance excellence. The ASQ Dorian Shainin Medal is awarded annually for the Development and Application of Creative or Unique Statistical Approaches in the Solving of Problems Relative to the Quality of Product or Service. ASQ is a founding partner of the American Customer Satisfaction Index (ACSI), a prominent quarterly economic indicator.

"THE MISSION OF ASQ SECTION 1104 IS TO PROVIDE OPPORTUNITIES FOR A LIFELONG LEARNING ENVIRONMENT FOR OUR MEMBERS." VISIT US AT: WWW.ASQRICHMOND.ORG

"This is the **most useful** course of statistics I have attended so far."

Aleksander Raskin

BIO-RAD Laboratories, Hercules, CA

Quality Associates, Inc.

PO Box 1864 ■ Clemson, SC 29633-1864

■ phone: 864.356.9804 ■ fax: 864.639.6329 ■ e-mail: qualityassoc@aol.com

■ website: www.qualityassociatesofclemson.com

SEMINAR REGISTRATION

Enrollment Fee

Seminar fee per person: \$1,450
Program hours are 9:00AM to 4:30PM

Name of Attendee(s)

1. Mr./Ms. _____

Title _____

Email _____

Phone _____

2. Mr./Ms. _____

Title _____

Email _____

Phone _____

3. Mr./Ms. _____

Title _____

Email _____

Phone _____

Company Information

Organization _____

Address _____

Mail Stop _____

City _____ St _____ Zip _____

Fax _____

***PLEASE BRING A HAND-HELD
CALCULATOR***

Method of Payment

April 21 – 24, 2009 / Richmond, VA

Check enclosed made payable to:

Quality Associates

Mail to: **Quality Associates Inc.**

PO Box 1864

Clemson, SC 29633 – 1864

Purchase Order Attached:

Mail to the above address or

FAX to 864.639.6329 (our fax receives 24/7)

Pay Now - click below link

<http://www.qualityassociatesofclemson.com/registrationpage.html>

(\$25 cancellation fee will be assessed for all cancellations within 14 days of class start date)

Confirmation

If you have not received an email confirmation within 2 business days, please contact us.

Hotel Information

Crowne Plaza Richmond West

6531 West Broad Street

Richmond, VA 23230

Tel: 804.285.9951

Fax: 804.288.1252

www.crowneplaza.com/richmondva

Program Information

Times: 9:00am - 4:30pm Tuesday - Friday
Breaks, Lunch and Course Materials are provided

Quality Associates, Inc.

PO Box 1864 ■ Clemson, SC 29633-1864

■ phone: 864.356.9804 ■ fax: 864.639.6329 ■ e-mail: qualityassoc@aol.com

■ website: www.qualityassociatesofclemson.com