



The Industrial Extension Service at NC State University presents

Enhance Your Company's Performance Excellence

through

8 Essential Quality Management Systems Seminars

**Spring
2009
Training
Special**
See back cover
for more details

Empower your company to give consistent quality to meet the shifting expectations of your customers.

INDUSTRIAL EXTENSION SERVICE



- 1 Failure Mode Effects Analysis (FMEA)**
January 8, 2009—McKimmon Conference & Training Center, NC State University, Raleigh, NC
September 3, 2009—Guilford Convention Center, Greensboro, NC
- 2 Introduction to ISO 9001 Requirements**
February 3, 2009—JC Raulston Arboretum, NC State University, Raleigh, NC
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- 3 ISO 9001 Internal Quality Auditing**
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- 4 Effective Problem Solving and Root Cause Analysis**
March 3, 2009—McKimmon Conference & Training Center, NC State University, Raleigh, NC
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March 30 - April 3, 2009—Guilford Convention Center, Greensboro, NC
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- 8 Measurement Systems Analysis (MSA)**
October 7, 2009—Guilford Convention Center, Greensboro, NC

**Management
Systems'09
Summit**

The Industrial Extension Service presents the 2009 Management Systems Summit

Innovative Approaches to Increase Your Competitive Edge

September 17-18, 2009 www.ies.ncsu.edu/summit/

McKimmon Conference & Training Center, NC State University, Raleigh, NC

Mark your calendar and plan to attend!

Failure Mode Effects Analysis (FMEA)

January 8, 2009—McKimmon Conference & Training Center, NC State University, Raleigh, NC

September 3, 2009—Guilford Convention Center, Greensboro, NC

8:30 a.m. - 4:30 p.m.

Why You Should Attend

Learn how to apply Failure Mode Effects Analysis (FMEA) as a preventive tool for both design and process development. This course provides practical experience and skills in completing FMEAs. You will leave with a clear understanding of the steps required to produce FMEAs.

Attend and You Will Learn

- The relationship between FMEA and APQP
- How to define FMEA customers
- How to process FMEAs

- How to design FMEAs
- Risk priority numbers (RPN)
- How to design and process FMEA checklists
- The signs of a successful FMEA

Who Should Attend

- Quality managers
- Quality engineers
- Manufacturing managers
- Engineering managers
- Manufacturing engineers
- Shop floor leaders

Attend and You Will Receive

- 7 Professional Development Hours (PDHs)
- A networking luncheon
- A Certificate of Attendance

Your Instructor

A NCSU-IES Quality Systems Facilitator
See biography on page 6

Course Fee

\$395 for single registrations

\$375 per person for each additional person from the same company

Introduction to ISO 9001 Requirements

February 3, 2009—JC Raulston Arboretum, NC State University, Raleigh, NC

June 2, 2009—Guilford Convention Center, Greensboro, NC

December 1, 2009—McKimmon Conference & Training Center, NC State University, Raleigh, NC

8:30 a.m. - 4:30 p.m.

Why You Should Attend

Learn the concepts of ISO 9001 and how the standard can become a valuable part of your business management system. Understand how the process approach in conjunction with the requirements, can provide benefits for your organization and for your customers. You will engage in activities that create an understanding of each element and illustrate the organizational and individual benefits of a business management system.

Attend and You Will Learn

- The requirements of the standard clause-by-clause
- The definitions and basic quality system terminology

- The requirements of the standard through the use of innovative exercises to help you thoroughly understand the requirements of the standard

Who Should Attend

- Employees at every level of the organization
- Trainers who want a simple, effective method of explaining ISO 9001
- Newly assigned management representatives
- Management executives
- Anyone interested in learning about ISO 9001

Attend and You Will Receive

- 7 Professional Development Hours (PDHs)
- A networking luncheon
- A Certificate of Attendance

Your Instructor

A NCSU-IES Quality Systems Facilitator
See biography on page 6

Course Fee

\$325 for single registrations

\$295 per person for each additional person from the same company



2009 Management Systems Summit
September 17-18, 2009
Innovative Approaches to Increase Your Competitive Edge

“Attending the 2008 Management Systems Summit was truly a positive experience for me. I began my journey into ISO in 1997 and I have attended several meetings and training sessions, but I can truthfully say that the 2008 North Carolina Management Systems Summit is the best. The NC State IES staff did an excellent job with organizing the session and their enthusiasm generated a positive atmosphere for all of those in attendance. I’ve had a lot of experience organizing large events and it was clearly evident that exceptional planning and execution was accomplished in order for us to enjoy such a smooth and productive summit.

From this experience, I learned some new and exciting management tools and also I was able to validate that many of the tools I’ve used can sustain our ISO Management Systems, I think both are important...it is always good to learn new “tricks” and leverage from the experiences of others, but I find it very reassuring to learn that other organizations implement and manage their systems in the same or very similar ways.”

—Jesse B. Bennett, Jr., ISO Systems Manager, Code 6.0D, Fleet Readiness Center, Cherry Point, NC

ISO 9001 Internal Quality Auditing

February 4-5, 2009—JC Raulston Arboretum, NC State University, Raleigh, NC

June 3-4, 2009—Guilford Convention Center, Greensboro, NC

December 2-3, 2009—McKimmon Conference & Training Center, NC State University, Raleigh, NC

8:30 a.m. - 4:30 p.m.

Why You Should Attend

Learn the concepts of ISO 9001 and how the standard can be a valuable part of any business management system. Acquire the skills to conduct successful internal quality system audits for ISO 9001.

Attend and You Will Learn

- The basic quality system terminology
- The process approach and its impact upon auditing techniques and methodology
- The purpose and role of the internal quality auditor

- Effective communication skills and techniques, including effective questioning and conflict management
- To plan, prepare and perform an internal quality audit—participate in audit team meetings, collect evidence and report your findings

Who Should Attend

- Anyone who needs to learn about ISO 9001 auditing
- Members of ISO 9001 implementation team
- Process owners from key functional groups
- Internal auditors for ISO 9001

Attend and You Will Receive

- 14 Professional Development Hours (PDHs)
- Two networking luncheons
- A Certificate of Attendance

Your Instructor

A NCSU-IES Quality Systems Facilitator

See biography on page 6

Course Fee:

\$525 for single registrations

\$495 per person for each additional person from the same company

Prerequisite

A working knowledge of the ISO 9001 standard or attendance in an Understanding ISO 9001 class.

Effective Problem Solving and Root Cause Analysis

March 3, 2009—McKimmon Conference & Training Center, NC State University, Raleigh, NC

June 9, 2009—Guilford Convention Center, Greensboro, NC

December 8, 2009—McKimmon Conference & Training Center, NC State University, Raleigh, NC

8:30 a.m. - 4:30 p.m.

Why You Should Attend

Problem Solving and Root Cause Analysis (RCA) are processes designed to facilitate the investigation of the fundamental or root causes for undesired outcomes (e.g. problems, accidents, mistakes, errors, increased cost) with a follow through to corrective action. By attending this course you will learn to identify, investigate, record and determine the necessary corrective actions to eliminate problems that drain your company's resources.

Attend and You Will Learn

- Several methods of problem solving, including root cause analysis
- How to identify problems for corrective action

- The investigation techniques needed to identify the root cause
- How to properly document the analysis
- How to determine corrective actions that will eliminate the problem

Who Should Attend

- Leaders of process improvement teams
- ISO 9001 implementation team members
- Management executives
- Process owners from key functional areas
- Quality professionals

Attend and You Will Receive

- 7 Professional Development Hours (PDHs)
- A networking luncheon
- A Certificate of Attendance

Your Instructor

A NCSU-IES Quality Systems Facilitator

See biography on page 6

Course Fee

\$325 for single registrations

\$295 per person for each additional person from the same company

RABQSA-Certified ISO 9001 Lead Auditor Training

March 30 - April 3, 2009—Guilford Convention Center, Greensboro, NC

October 5-9, 2009—Guilford Convention Center, Greensboro, NC

8:00 a.m. - 5:30 p.m.

Why You Should Attend

Learn the concepts of ISO 9001 and how your quality management system can become a valuable part of your business management system. This hands-on certification course highlights the importance of the process approach to ISO 9001. Certified by RABQSA, this course meets the training portion of the requirements for certification of individual QMS Auditors.

Attend and You Will Learn

- The requirements of ISO 9001
- The process approach and how it impacts the use of ISO 9001
- A full range of auditing skills that will help you become a strong advocate and leader in your company's efforts

to obtain maximum value from their commitment to ISO 9001

- How to plan and report the results of an audit

Who Should Attend

- Anyone who needs to learn how to audit an ISO 9001 quality management system
- Employees at every level
- Trainers who want an effective method of explaining ISO 9001 to employees

Attend and You Will Receive

- Five networking luncheons
- A certificate of successful completion for those who pass
- A certificate of attendance for those who do not pass

Your Instructors

The course trainer is a Senior Quality Management System trainer for PLEXUS Corporation. PLEXUS trainers have numerous years of experience in the Quality Management field and bring a wealth of practical quality knowledge to the course. They have provided hundreds of domestic and international training sessions for ISO 9001, ISO/TS 16949, and RABQSA Lead Auditor and Internal Auditor Training.

Course Fee

\$1,595 for single registrations

Advanced Product Quality Planning with Control Plans and PPAP

September 1-2, 2009—Guilford Convention Center, Greensboro, NC

8:30 a.m. - 4:30 p.m.

Why You Should Attend

Advanced Product Quality Planning (APQP) and Production Part Approval Process (PPAP) are two important aspects of becoming registered to an automotive quality management system standard. APQP incorporates "the voice of the customer" into the design process. It seeks to ensure that the product and processes are designed around the customers' needs and requirements. PPAP confirms, through customer approval, that the APQP has been properly completed.

Through active learning, you will acquire the skills needed to implement the advanced product quality planning process, develop control plans, and complete the production part approval process within your organization.

Attend and You Will Learn

- Basics of quality planning and APQP
- Control plans
- Production part approval process

Who Should Attend

- Quality managers
- Quality engineers
- Manufacturing managers
- Engineering managers
- Manufacturing engineers
- Customer service representatives

Attend and You Will Receive

- 14 Professional Development Hours (PDHs)
- Two networking luncheons
- A Certificate of Attendance

Your Instructor

A NCSU-IES Quality Systems Facilitator
See biography on page 6

Course Fee

\$595 for single registrations

\$575 per person for each additional person from the same company

Understanding and Implementing Statistical Process Control (SPC)

October 6, 2009—Guilford Convention Center, Greensboro, NC

8:30 a.m. - 4:30 p.m.

Why You Should Attend

Gain an understanding of the basic concepts of stability and capability performance. You'll develop your understanding of key Statistical Process Control (SPC) methodologies through group activities and individual participation.

After attending this course, you will be able to identify the need for SPC tools within your organization; select the appropriate tool for an identified purpose or recognize a more complex methodology; apply the selected tools; interpret the results of the application; and make correct decisions based on the interpretation. This "hands-on" course will provide you with both functional and applicable skills.

Attend and You Will Learn

- Basic concepts of statistical process control
- Variation and its causes
- Stable and unstable processes
- Process control and process capability
- Planning for control charting
- Types of charts used
- How to interpret a control chart
- Control charts for individual measurement
- Control charts selection procedures
- Capability/performance indices
- How to plan a capability study

Who Should Attend

- Quality managers
- Quality team leaders
- Anyone involved in engineering, manufacturing or quality control

Attend and You Will Receive

- 7 Professional Development Hours (PDHs)
- A networking luncheon
- A Certificate of Attendance

Your Instructor

Certified PLEXUS trainers. Each Plexus trainer/coach has assisted numerous companies in training and implementing quality systems, or has completed a rigorous schedule of the interactive Plexus Learning Model, quality system assessment techniques, and specific understanding and implementation details on quality system tools.

Course Fee

\$395 for single registrations

\$375 per person for each additional person from the same company

Measurement Systems Analysis (MSA)

October 7, 2009—Guilford Convention Center, Greensboro, NC

8:30 a.m. - 4:30 p.m.

Why You Should Attend

Gain an understanding of Measurement Systems Analysis (MSA) and its impact on quality management. In this one-day course, you will learn about the elements of MSA and the relationship of MSA to a quality system. You will also become familiar with organizational applications, categories of measurement system variation, and gage repeatability and reproducibility. MSA has direct application to ISO/TS 16949.

Attend and You Will Learn

- Categories of measurement error
- Measurement system study and planning
 - Bias
 - Linearity
 - Stability
 - Repeatability
 - Reproducibility

- Measurement Systems Analysis and studies
 - Short and long variable gage studies
 - Short and long attribute gage studies
 - ANOVA
 - Long study graphical analysis
 - Measurement system error

Who Should Attend

- Quality managers
- Quality team leaders
- Laboratory and technical personnel
- Design, manufacturing, process, quality, and test engineers
- Calibration and maintenance personnel
- Inspectors, technicians, SPC coordinators

Attend and You Will Receive

- 7 Professional Development Hours (PDHs)
- A networking luncheon
- A Certificate of Attendance

Your Instructor

Certified PLEXUS trainers. Each Plexus trainer/coach has assisted numerous companies in training and implementing quality systems, or has completed a rigorous schedule of the interactive Plexus Learning Model, quality system assessment techniques, and specific understanding and implementation details on quality system tools.

Course Fee

\$395 for single registrations

\$375 per person for each additional person from the same company

About Your Instructors

Sonja Hughes, a Quality Systems Facilitator with the NC State University Industrial Extension Service based in Greensboro, North Carolina, provides quality services to companies throughout the state. Sonja facilitates training, implementation, and auditing programs for companies pursuing quality management systems registration.

Sonja has more than 20 years experience in manufacturing and production management. Prior to joining IES, she worked with Guilford Technical Community College, where she facilitated Kaizen events and process mapping projects. Previous to that, Sonja was the Quality Systems Manager for ABCO Automation, a custom automation firm, where she led the implementation of their quality management system and their ERP system in addition to managing various automation projects and other functional departments. Sonja was also Manufacturing Manager for Avery Dennison, Soabar, where she led process improvement teams that reduced product lead times and improved throughput; she was also Plant Manager for Tyco Toys in Portland, Oregon, with responsibility for all production and maintenance operations. Sonja has held the positions of Engineering Systems Manager and Industrial Engineer with responsibility for implementing new products, establishing and monitoring labor standards and leading process improvement and cost reduction activities.

Sonja has a B.S. in business from Portland State University and an M.B.A. from UNCG.

Nora Milley is a Quality Systems Facilitator with the NC State University Industrial Extension Service. She helps companies pursuing quality management systems registration to achieve their goals.

Nora's manufacturing and quality experience started in Mexico City, first with the beverage industry, followed by the automotive industry. She brings more than seven years of experience facilitating and implementing quality management systems and quality tools such as ISO 9000, QS 900, ISO/TS 16949, APQP, PPAP and FMEA. Five of those years, she served the automotive industry across North America in project management, process optimization, industrial engineering, training and facilitation programs.

Nora has presented at several ASQ international conferences. She has a B.S. in industrial engineering from Universidad Panamericana and is an ASQ Certified Quality Improvement Associate (CQIA).

Phil Mintz is a Delivery Services Manager with the NC State University Industrial Extension Service where he leads a team of continuous improvement project facilitators. Phil has over 20 years of manufacturing and engineering experience and routinely facilitates training,

implementation, and auditing activities for the development and maintenance of business quality systems statewide. He is a PLEXUS Quality Systems Trainer for ISO 9001, and ISO/TS 16949.

Phil has a B.S. in engineering operations (1983) from NC State University and an M.S. in industrial engineering (1988) from NC A&T State University.

Barbara Williams is a Senior Quality Facilitator of the NC State University Industrial Extension Service and serves as the Quality Management Systems program coordinator. She has over 17 years of manufacturing and engineering experience with over nine years directly related to facilitating training and implementation programs for quality management systems. Barbara joined IES in 2001 from her career as an ISO 9000 consultant who provided services to companies in the metal fabrication, industrial painting, rubber products, medical/industrial gases, and textiles industries.

She holds related certifications as an ASQ Certified Quality Auditor (CQA), an RABQSA Quality Management Systems Lead Auditor (QMS-LA), and as a PLEXUS Quality Systems Trainer for ISO 9001, ISO/TS 16949, and ISO 14001.

Barbara has a B.S. in mechanical engineering (1987) from North Carolina Agricultural and Technical State University.

On-Site Training Available!

IES can provide expert training at your facility, offering all standard courses or using course content tailored to meet your company's needs.

Benefits include:

- Flexibility of course content, timing and delivery
- Increased relevance and applicability to your business
- The opportunity to use company-specific case studies, enhancing the value of training courses
- Use of internal system documentation which reinforces policies and procedures you already have in place
- A highly cost-effective training option

If you require on-site coaching/facilitation for your management system implementation program for ISO 9001, ISO/TS 16949, AS 9100, or ISO 13485, IES can provide qualified trainers to assist you in meeting your registration goal.

In addition to the classes listed in this brochure, the following on-site classes are also available:

- Understanding AS 9100
- AS 9100 Internal Quality Auditing
- Understanding ISO/TS 16949

- ISO/TS 16949 Internal Quality Auditing

- Understanding ISO 13485
- ISO 13485 Internal Auditing

In-house training is available for classes of 8-20 participants; all materials are supplied (implementation program size can vary). For more information contact **Barbara Williams** at barbaraL_williams@ncsu.edu or by phone at 336.202.8307.

How to Enroll

On-line at
www.ies.ncsu.edu/events

Call **919.515.2261**

Fax your registration to **919.515.7614**

Mail to
Registration Coordinator
NC State University
Office of Professional Development
Box 7401
Raleigh, NC 27695-7401

For more information E-mail
ContinuingEducation@ncsu.edu

Method of Payment

Payment must accompany registration and be received by the first day of the program.

The easiest way to guarantee your place is to pay by credit card.

Payer:

Company Individual

Please check one:

Visa MasterCard American Express

Corporate Card: Yes No

Credit Card Information

Card # _____

Expiration Date _____

Amount \$ _____

Cardholder's Name (please print) _____

Signature (required) (seal) _____

Check Enclosed (U.S. banks only)
 (do not fax registration)

Make check(s) payable to:
North Carolina State University

Please write the name(s) of the participant(s) on the face of your check(s).

If you wish to pay by purchase order, please submit your purchase order and this registration form by mail or fax them to **919.515.7614**.

IDT (NC State University employees only)

OUC # _____

Project (FAS) # _____

Registration Form Quality Management Systems Seminars

Priority Code **S 9 1 0 W B**

Note: To help us serve you better, please enter the priority code from your mailing label. Enter this code even if label is addressed to someone else. **Thank you!**

Check Course(s)

Fee/Discounted Fee*

<input type="checkbox"/> Failure Mode Effects Analysis	January 8, 2009	\$395/\$375	EIQUALS09/EIFMEAS09
<input type="checkbox"/> Introduction to ISO 9001 Requirements	February 3, 2009	\$325/\$295	EIQUALS09/EIUI9S09
<input type="checkbox"/> ISO 9001 Internal Quality Auditing	February 4-5, 2009	\$525/\$495	EIQUALS09/EI9IQAS09
<input type="checkbox"/> Effective Problem Solving and Root Cause Analysis	March 3, 2009	\$325/\$295	EIQUALS09/EIEPSS09
<input type="checkbox"/> RABQSA-Certified ISO 9001 Lead Auditor Training	March 30 - April 3, 2009	\$1,595	EIQUALS09/EIRABS09
<input type="checkbox"/> Introduction to ISO 9001 Requirements	June 2, 2009	\$325/\$295	EIQUALS09/EIUI92S09
<input type="checkbox"/> ISO 9001 Internal Quality Auditing	June 3-4, 2009	\$525/\$495	EIQUALS09/EI9IQA2S09
<input type="checkbox"/> Effective Problem Solving and Root Cause Analysis	June 9, 2009	\$325/\$295	EIQUALS09/EIEPS2S09
<input type="checkbox"/> Advanced Product Quality Planning with Control Plans & PPAP	September 1-2, 2009	\$595/\$575	EIQUALF10/EIAPQPF10
<input type="checkbox"/> Failure Mode Effects Analysis	September 3, 2009	\$395/\$375	EIQUALF10/EIFMEAF10
<input type="checkbox"/> RABQSA-Certified ISO 9001 Lead Auditor Training	October 5-9, 2009	\$1,595	EIQUALF10/EIRABF10
<input type="checkbox"/> Understanding and Implementing Statistical Process Control (SPC)	October 6, 2009	\$395/\$375	EIQUALF10/EISPCF10
<input type="checkbox"/> Measurement Systems Analysis (MSA)	October 7, 2009	\$395/\$375	EIQUALF10/EIMSAF10
<input type="checkbox"/> Introduction to ISO 9001 Requirements	December 1, 2009	\$325/\$295	EIQUALF10/EIUI9F10
<input type="checkbox"/> ISO 9001 Internal Quality Auditing	December 2-3, 2009	\$525/\$495	EIQUALF10/EI9IQAF10
<input type="checkbox"/> Effective Problem Solving and Root Cause Analysis	December 8, 2009	\$325/\$295	EIQUALF10/EIEPSF10

*The discounted rate is extended to each additional participant from the same company attending the same seminar.

First Name _____ Middle Initial _____ Last Name _____ Date of Birth[†] ____/____/____

Title _____ Badge Name _____
(If different from above)

Company _____

Work Address _____

City _____ State _____ Zip _____

Work/Day Phone _____ Fax _____

E-Mail _____

Name and Title of Manager Approving Your Training _____

Please duplicate this form for multiple registrations. You may want to make a copy for your records.

[†] In lieu of SSN, your date of birth is required as a personal identifier for internal record keeping by this university.

Events, Call 919.515.2261, or Fax 919.515.7614

Empower your company to give consistent quality to meet the shifting expectations of your customers. 8 seminars that will enhance your company's performance excellence.



NC STATE UNIVERSITY

Office of Professional Development
Box 7401
Raleigh, NC 27695-7401

If you receive more than one brochure, please pass the extra along to an associate. If the addressee is no longer employed, please forward to his/her replacement.

Call 919.515.2261 to update your record.

Attention Mail Room Personnel:
Please re-route if necessary!

S910

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Spring Training Special! Save 20%

Quality Management System Certification Preparation Program (ISO 9001, AS 9100)

Seats Limited: Space available for only four companies

The Quality Management System Certification Preparation Program aims to bring 3–4 companies together to develop and implement their quality management systems. This program supports a company's registration goal of completion in approximately 9-12 months. The interactive coaching sessions are typically held at convenient off-site locations statewide every three to four weeks during the first seven months of the program. The training is then completed at the participating company sites supporting each individual certification goal. Additional features of this program include the opportunity to network with peer companies for additional implementation ideas during sessions. The on-site visits will further assist your implementation team with identifying conformance gaps, training employees, conducting audits and adhering to an implementation schedule.

Our comprehensive program includes the following:

- Eight off-site coaching sessions
- Up to three participants per session per company
- Two days of off-site training for internal quality auditors
- Two days of on-site facilitation for your internal audits
- A formal review of your completed documentation
- A pre-assessment audit performed prior to your initial certification audit
- Continuous individual company support
- Lunch and break service for all classroom sessions
- All materials are provided

Cost: \$17,500—a 20% savings over an individual implementation program

Locations: Asheville: Chris McGraw 828.231.4038;
Salisbury: Gene Beneduce 704.369.9019; Raleigh: Doug Hummer 919.291.1268 or Marie Griffin 919.830.7206;
Kinston: Dick Oates 252.643.1086