



Harrisburg Section 503

EDUCATION PROGRAM

2010–2011

**GENERAL COURSE OFFERINGS FOR:
HARRISBURG - LANCASTER -
YORK - LEBANON - CARLISLE**

ASQ CERTIFICATION REFRESHER COURSES

**INTRODUCTORY & ADVANCED QUALITY
COURSES**

ON-SITE COURSE OFFERINGS

American Society for Quality Inc.
Harrisburg Section 503

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Enclosed you will find an extensive listing of course offerings by the Harrisburg Section of the American Society for Quality. Course offerings range from an introduction to Quality Assurance/Control activities to more specialized courses in Quality Management, Design of Experiments and preparation classes for ASQ Certification Exams.

All courses offer an exceptional value to participants and are conducted by qualified local quality professionals.

Please follow the enclosed instructions to enroll in a course. Further information and additional copies of the education catalog can be obtained by contacting the Education Chair. Course information and registration is also possible via the Section homepage.

John Sharp
Education Chair
717-986-7692 (work)
717-938-9439 (home)
jsharp@tycoelectronics.com

Welcome to the 2010/2011 ASQ Harrisburg Section Education Program
ASQ Vision — Quality Now More Than Ever!

In these tough economic times making quality a global priority, an organizational imperative, and a personal ethic, is imperative. The American Society for Quality is the community organization for everyone who seeks quality technology, concepts or tools to improve themselves and their world.

The objective of ASQ and the Harrisburg Section is the advancement of the theory and practice of quality and the allied arts and sciences. Our education committee under the capable leadership of John Sharp, our Education Chair, has once again assembled a program of instruction that supports that vision and mission.

I encourage you to look over this catalog carefully as I am sure that you will discover meaningful opportunities to expand your personal knowledge and skill set as well as opportunities that your organization may wish to take advantage of.

Our purpose is to provide opportunities for improvement that will benefit the community as a whole. Please do not keep this catalog a secret, share it with others in your organization and community who may find benefit from its offerings. All of the offerings herein are available to ASQ members as well as non-members. We can also provide instruction for your organization tailored to fit your specific needs. Please contact John to explore those opportunities.

I, along with the entire Executive Committee of the Harrisburg Section, am committed to fostering the advancement of quality throughout the South Central PA region. Our programs for the coming year are our best efforts to further that end. If we can be of any assistance to you or your organization I hope that you will contact us.

Thank you.

Gregory M. Gurican, R.N.
Section Chair
ASQ Harrisburg Section

Do you or the business you work for have a product or service to offer area quality professionals?

Do you want to show your support and dedication to quality to the Greater Susquehanna Valley?

Advertising is available in the monthly newsletter of the ASQ Harrisburg section. **Quality Currents** is a monthly professionally printed newsletter that reaches over 700 quality professionals every month.

If you have a product or service to offer, consider advertising in Quality Currents. The rates are reasonable and are listed below.

For more information or a copy of a recent newsletter go to <http://www.asq-harrisburg.org/>.

**2010–2011 Rate and Fee Schedule for
Quality Currents
Monthly newsletter for Harrisburg Section ASQ
Published September thru June**

Full page	7 ½" x 10"	\$150
Half page	7 ½" x 4 ¾"	\$100
Quarter Page	3 ½" x 4 ¾"	\$60
Eighth page	3 ½" x 2 ½"	\$30

10% Discount on 3 or more insertions, payable in advance.

Full page inserts available by quote.

Sizes other than as noted above will be considered at same rate schedule.

Half page on a two column layout is the same as half price listed above.

Camera ready artwork please, simple layout and scanning at additional cost.

Section members may place advertisements at a reduced rate.

Employment / Placement firms general advertisement at full fee.

Specific openings in regional area at ½ the rate schedule fees.

ASQ – HARRISBURG MONTHLY MEETINGS

ASQ – Harrisburg meets monthly on the second Wednesday of each month from September through May.

Information regarding meeting topics and location as well as registration information can be found on the ASQ - Harrisburg website, <http://www.asq-harrisburg.org/> no later than the Monday of the week preceding the meeting date. Registration for monthly meetings ends the Friday before the meeting date.

Guests are always welcome at ASQ – Harrisburg meetings.

Cancellation and Refunds

If insufficient enrollment necessitates canceling the course, any tuition paid will be refunded. Refunds WILL NOT be granted after the third class session unless the course is cancelled by the Society. It is the Society's intention to complete all scheduled courses; however, if extenuating circumstances force cancellation, refunds will be prorated after the cost of materials has been deducted.

HOW TO ENROLL IN A COURSE

To enroll in one of the general course offerings, use one of the enrollment forms in the center of this brochure. Complete the form and mail to:

Harrisburg Section ASQ
Attn: John Sharp
30 Maplewood Drive
Etters PA 17319

Course information and enrollment instructions are also located on the Section homepage at:

www.asq-harrisburg.org

PAYMENT OF COURSE FEES

Course fees may be paid by personnel check, company check, or by company purchase order. ***Checks for course fees are due by the third class session unless other arrangements have been made with the Education Chair.*** If payment is to be by purchase order, the purchase order should be made out to and mailed to:

Harrisburg Section ASQ
Attn: John Sharp
30 Maplewood Drive
Etters PA 17319

Please do not process your purchase order or write the check for payment until you have been notified by the instructor that the course will be offered.

ON-SITE COURSE OFFERINGS

Any of the courses listed in this brochure can be presented on-site at your facility, subject to instructor availability. The only requirement for an on-site offering is a minimum enrollment of eight students. For additional information contact the Harrisburg Section Education Chair.

ENROLLMENT DEADLINES

The enrollment deadline for the general course offerings are as follows:

Fall 2010 Session — September 13, 2010
Winter 2011 Session — January 31, 2011

Enrollments must be received by these dates. Fall Session classes will begin by the end of September, Winter Session classes will begin by mid-February.

MINIMUM ENROLLMENTS

A course will not be offered unless there is a minimum enrollment of five students. For many of the courses we do not know if the minimum enrollment will be met until the actual enrollment deadline or, in some cases, not until a week after the deadline date. If the minimum enrollment is met and the course is to be offered:

YOU WILL BE CONTACTED BY THE INSTRUCTOR

COURSE TIMES & LOCATIONS

All courses will be conducted during weekday evening hours (Mon.–Thurs.) unless special arrangements have been made by the instructor. Normal course length is between 2–3 hours per session. Specific classroom sites will be selected by the instructor and students will be notified when their enrollment in the course is confirmed.

TEXTBOOKS

Numerous course fees include the textbook, while others do not. Textbooks are sold to students at ASQ Harrisburg Section cost.

SPECIAL COURSES

If a course or topic your organization would like to have offered is not listed in this brochure, please contact the Education Chair. Courses tailored to the specific needs of your organization can be arranged depending on the request and ASQ instructor availability.

QCE 308

Making Sense of Baldrige Criteria

Pennsylvania is now among the states promoting use of the Malcolm Baldrige Criteria for Performance Excellence to assess and improve work performance via the Keystone Alliance for Performance Excellence (KAPE). Stoner, Inc. in Quarryville won the 2003 Baldrige Award. Other PA business, educational institutions, and healthcare organizations will likely be interested in seeing if using Baldrige Criteria makes sense for them.

This course examines the strengths and weaknesses of the Baldrige Criteria and provides an innovative approach to effectively and efficiently using the Criteria to assess performance while building support for change.

Who Should Attend:

- Those considering whether or not to apply for the KAPE or Baldrige Awards or who plan to use the KAPE or Baldrige Criteria for assessing and improving organizational performance will benefit from this course.

What Participants Will Learn:

- The strengths and weakness of the Baldrige Criteria
- What to consider BEFORE applying for the KAPE or Baldrige Award
- What to consider BEFORE using the Baldrige Criteria to assess performance
- How to use the Baldrige Criteria as part of an ongoing assessment and improvement performance management system.

How Participants Will Benefit:

- Determine whether or not using KAPE or Baldrige Criteria makes sense for your organization.
- Gain insights onto how to effectively assess current organizational performance.
- Gain insights in how to make changes that actually result in improvement
- Acquire a set of innovative management practices and tools.

Length: 8 hours

Cost: \$125

Instructor: Harrisburg, Phil Landesberg
Lancaster, York (717) 545-8649

QCE 307

Organizing for Success

Many performance problems in businesses and public sector organizations can be traced to faulty, but prevalent, leadership and management practices. Typically, performance problems are blamed on workforce problems (e.g., poor morale, resistance to change) or management shortcomings (e.g., failure to motivate employees).

This highly interactive course provides participants leadership principles and management practices that lead to increased quality and productivity and improved customer and employee satisfaction.

Who Should Attend:

- Business owners, managers, supervisors, team leaders and others involved in planning, directing, assessing and improving work to meet business objectives and customer needs will benefit from this course.

What Participants Will Learn:

- How to effectively plan for a better future.
- How to build enduring relationships with customers, suppliers, and employees.
- How to deal effectively with resistance to change.
- How to assess current performance and predict future results.
- How to make changes that actually result in improvement.

How Participants Will Benefit:

- Gain an understanding of the consequences of common management practices.
- Acquire a new set of leadership principles and management practices.
- Improve your ability to meet employee and customer needs.
- Improve your ability to develop and implement successful plans for improvement.
- Improve your ability to identify and manage risks.

Length: 16 hours

Cost: \$200

Instructor: Harrisburg, Phil Landesberg
Lancaster, York (717) 545-8649

WHAT IS CERTIFICATION?

Certification is formal recognition by ASQ that an individual has demonstrated a proficiency within and a comprehension of a specified body of knowledge at a point in time. It is peer recognition and not registration or licensure.

Quality Engineer Certification

Designed for those who understand the principles of product and service quality evaluation and control.

Quality Auditor Certification

Designed for those who understand the standards and principles of auditing and the auditing techniques of examining, questioning, evaluation, and reporting to determine quality system adequacy.

Reliability Engineer Certification

Designed for those who understand the principles of performance evaluation and prediction to improve product/systems safety, reliability, and maintainability.

Quality Technician Certification

Designed for those who can analyze quality problems, prepare inspection plans and instruction, select sampling plan applications, and apply fundamental statistical methods for process control.

Manager of Quality and Operational Excellence Certification

Designed for those who understand quality standards and concepts, implement organizational assessments, and maintain customer satisfaction and focus. Should manage projects supporting strategic objectives and motivate human resources.

Software Quality Engineer Certification

Designed for those who have a comprehensive understanding of software quality development and implementation; have a thorough understanding of software inspection and testing, verification, and validation; and can implement software development and maintenance processes and methods.

Quality Inspector Certification

Designed for those who, under professional direction, can evaluate hardware documentation, perform laboratory procedures, inspect products, measure process performance, record data, and prepare formal reports.

WHAT REQUIREMENTS MUST BE MET TO APPLY?

Each requires that you have at least eight years of work experience in one or more areas of the body of knowledge for that particular exam. This includes at least three years in a decision-making technical, professional, or managerial position.

If you have completed a degree, diploma, or certification program beyond high school, you may waive some of the required experience as follows:

Certificate from a technical or trade school	1 year
Associate degree (college or technical school)	2 years
Bachelor's degree	4 years
Master's or doctoral degree	5 years

EXAM FORMAT

All examinations consist of multiple choice questions that are carefully designed, reviewed for correctness, and computer-scored and analyzed to properly determine the degree of comprehension of the prescribed body of knowledge. The CQMgr exam does have essay questions.

For more information or for applications call ASQ at 1-800-248-1946

Free brochures on each exam are available by calling ASQ customer service at the above number. The brochures cover costs, application process, requirements to sit for the exams, body of knowledge and sample questions.

QCE 306

Advanced Management Skills and Concepts

Prevalent American management practices are based on faulty assumptions that have unintended, negative consequences. These practices harm quality & productivity and customer satisfaction, undermine improvement efforts, lead to resistance to change, and contribute to employee stress and dissatisfaction. Management can work more effectively with employees to meet organizational aims and provide products and services that will delight customers by learning and applying the following competencies:

- Systems thinking
- Statistical thinking (understanding the importance of variation and prediction)
- Adult and organizations learning
- Encouraging pride and joy in work through job design, training, and education

This highly interactive course provides knowledge that leads to a better return on investment and improves the ability to make changes that actually result in improvement.

Who Should Attend:

- Anyone involved in planning, assessing, measuring and managing work, performance improvement, or re-engineering initiatives will benefit from this course.

How You Will Benefit:

- Gain a better understanding of the consequences of current management practices.
- Gain knowledge to help you develop a more effective approach to managing.
- Improve ability to achieve better organizational and program performance results.
- Improve ability to develop and implement strategies for change.

What You Will Learn:

- New management skills and concepts and how to apply them effectively.
- How to assess the performance of work processes, systems, and organizations.
- How to integrate planning, process improvement, and performance measurement
- How to make changes that actually result in improvement.

Length: 16 hours

Cost: \$200

Instructor: Phil Landesberg
(717) 545-8649

QCE 305

Dealing Effectively With Resistance To Change

Individuals and organizations achieve better results by learning and applying better ways of doing things. However, individuals and organizations often resist implementing the changes that can help them achieve performance excellence. This course will provide participants knowledge of principles and practices they can use to more effectively deal with resistance to change on a personal level and to build support within organizations for changes that result in improvement.

Who Should Attend:

- Anyone involved in planning and implementing change initiatives benefit from this course.

What You Will Learn:

- Three principles that help minimize resistance and build support for change.
- Practical management tools and practices to help plan and implement successful changes.
- Why change is resisted (even when it is perceived to be beneficial).
- Better approaches to dealing with resistance to change.

How You Will Benefit:

- Learn how to effectively use knowledge gained from resistance to change to build support for change.
- Improve your ability to deal with resistance to change—in yourself and others.
- Improve your ability to develop and successfully implement strategies for changes that actually result in improvement

Length: 8 hours

Cost: \$125

Instructor: Phil Landesberg
(717) 545-8649

COURSE DESCRIPTIONS FOR 2009/2010

QCE 100

Introduction to Quality Control

This course is designed for individuals who have not had prior training in the field of Quality control or SPC, and may have had only a limited mathematical background. The course provides a basis for understanding Statistical Process Control.

Topics: What is Statistical Quality Control
Benefits Derived from Statistical Q.C.
Construction & Interpretation Of X & R Charts
Frequency Distribution & Normal Curve
Averages & Individuals
Introduction to Attribute Charts
Simulating Processes for Control Charts
Introduction to Acceptance Sampling
Mil Std 105E

Length: 28 hours

Cost: \$275.00 including text

Instructor: Harrisburg, Dave Little
Lancaster, York Work: 810-3741

QCE 101

Statistical Process Control

This course is designed for Technicians, Engineers, And Managers. Shewhart's Control Charts, their construction, application and interpretation are covered in detail. The student will learn how to determine when a process is in "Statistical Control" and be introduced to Process Capability studies. Visual aids are used to reinforce theory. Analysis of data from students own job is encouraged.

Prerequisite: QCE 100 or equivalent experience

Topics: Fundamental Statistical concepts: Mean, Range, Standard Deviation, Variance.
Histogram and Frequency Distributions
Process Control Techniques
Control charts—Variables & Attributes.
Statistical Tolerancing.

Length: 28 hours

Cost: \$325.00 including text

Instructor: Harrisburg, TBD
Lancaster, York

QCE 304

Striving for Supervisory Excellence

Supervisors must, to be successful, direct and guide the work of employees to meet business and customer needs. Frequently, supervisors and team leaders have abundant technical skills but lack a comprehensive knowledge of requisite supervisory competencies and practices. This lack of knowledge can lead to problems in the workplace, including resistance to change, poor morale, stress and anxiety, and, as a result, poor work quality and low productivity.

Who Should Attend:

- This course provides an innovative approach to supervision, and will benefit prospective, new and experienced supervisors.

How Participants Will Benefit:

- Develop an effective approach to supervising employees.
- Improve your ability to work with employees to improve organizational performance.
- Develop an individualized basis for further learning about supervisory skills and practices.

What Participants Will Learn:

- How to effectively direct employees towards meeting business objectives.
- How to encourage the best efforts of employees in performing work tasks.
- How to increase customer and employee satisfaction.
- How to plan and implement changes that actually result in improvement.

Length: 12 hours

Cost: \$160

Instructor: Harrisburg, Phil Landesberg
Lancaster, York (717) 545-8649

QCE 203

Geometric Dimensioning and Tolerancing

This course focuses on the interpretation of engineering drawings which utilize geometric dimensioning and tolerancing according to the latest revision of the standard which is ANSI Y14.5M 1994. It is a comprehensive course applicable to the needs of the Engineer/Designer, inspector and those persons who must read or interpret drawings to this standard. The course reviews the additions modifications and clarifications to the previous revision, Y14.5M 1982, and serves as an entry level course as well as a refresher review of all changes to the previous standard.

Prerequisite: QCE 202 or the ability to read blueprints

Topics: Datums
Limits of Size
Position Tolerancing
Form Tolerancing
Runout and Profile
Virtual Size

Length: 24 hours

Cost: \$275.00 including text

Instructor: Harrisburg, Edward Hoehn
Lancaster, York Home: 299-1524

QCE 102

Probability and Sampling

This course is designed to provide the student with an understanding of the laws of probability, sampling theory and sampling plans for in-plant and supplier control.

Prerequisite: QCE 101 or equivalent

Topics: Quality Costs
Probability
Sampling Practice
Hypergeometric Distributions
Operating Characteristics Curve
Binomial and Poisson Distributions
Mil Std 105E (Attributes)
Mil Std 414 (Variables)
Other Sampling Plans

Length: 28 hours

Cost: \$350.00 including text

Instructor: Harrisburg TBD

QCE 103

An Introduction to ISO 9001:2000 Quality Systems

This course is designed to introduce participants to the ISO 9000 standards. It provides an understanding of the ISO 9000 standards, explains when compliance or registration to ISO is required or desirable, and describes how to document and implement a quality system. Participants receive a detailed analysis of the standards, as well as a comparison to help them understand the relationship among the ISO standards.

QS 9000 Standard will also be covered in this class as it applies to the automotive industry.

Prerequisite: None

Topics: What ISO 9000 Means to Your Industry
What Companies are Getting Registered and Why
Third-party Audit Concept
ISO 9000 Registration Process
Do's and Don'ts of Registration

Length: 15 hours

Cost: \$225.00 including text

Instructor: Harrisburg, Jim Pasquali
Lancaster Home: 691-0225

QCE 202

Blueprint Reading

This course is designed to develop the student's ability to read engineering drawings and shop prints for required dimensions, tolerances, shape description, machining and other essential data. This type of knowledge may be used by the worker or technician for layout, fabrication, construction and assembly by the Quality Control technician or inspector in inspecting and test of single parts or an assembly of many parts.

Topics: Three View Projection
Dimensioning—Linear and Angular
Decimal, Fractional & Angular
Tolerances
One and Two View Drawings
Taper, Screw Threads, Finish, Sections
Drilling, Tapping, Countersinks, Counterboring
Assembly Drawings

Length: 22 hours

Cost: \$250.00 including text

Instructor: Harrisburg, Ed Hoehn
Lancaster, York Home: 299-1524

QCE 201

Inspection and Gaging

This course is designed to provide inspection personnel with an understanding of their role in the quality function and the tools and equipment they have at their disposal.

Topics: Needs and Functions
Specifications, Standards, Tolerances and Language
100% and Process Inspections
Basic Principles and Techniques of Measurement
Attribute Gages
Surface Texture
Gage Blocks
Mechanical Indicating Equipment
Screw Threads
Gage Control Systems
Surface Plate Methods
Air Gaging
Optical Gaging Equipment

Length: 28 hours

Cost: \$275.00 including text

Instructor: Harrisburg, Ed Hoehn
Lancaster, York Home: 299-1524

NOTE: This is a Review Course. Individuals registering for this course are responsible for verifying that they have the prerequisite knowledge and experience. The course is fast paced and rigorous. This is not the class to take if you have no previous knowledge or experience in the topics to be covered.

QCE 104

Principles of Quality Engineering

This course is designed as a review course for individuals already having a background in the various quality disciplines. The course is demanding and is open to those who are interested in preparing for the Certified Quality Engineering Exam. The individual taking this course should have completed QCE 101, 102, and 107; or their equivalent.

Topics: Quality Management, Organization and Tasks
Quality Costs
Quality Motivation
Basic Concepts of Probability
Statistical Sampling for Attributes and Variables
Design of Experiments
Metrology
Nondestructive Testing
Reliability

Length: 30 hours

Cost: \$350.00 including text

Instructor: Harrisburg, Lancaster
Team Instruction:
J. Sharp
Terri Kinsey
William Foley

Note: this is a *Review* Course. Individuals registering for this course are responsible for verifying that they have the prerequisite knowledge and experience. The course is fast paced and rigorous. This is not the class to take if you have no previous knowledge or experience in the topics to be covered.

QCE 105

Certified Quality Inspector Refresher

This course is designed to prepare the student to pass the Certified Quality Inspector exam. The individual taking this course should have completed QCE 100, 101 and 201, or their equivalent.

Topics: Technical Mathematics
Blueprint Reading
Inspection Tools and Equipment
Materials and Processes
Inspection Planning
Inspection Technology
Statistics
Sampling and Sampling Plans

Length: 28 hours

Cost: \$325.00 including text

Instructor: Harrisburg, York Dave Little
Work: 810-3741

QCE 119

Certified Quality Improvement Associate (CQIA)

The CQIA exam is designed for people who work outside of traditional quality areas. This course is designed to cover basic knowledge of quality tools and their uses by individuals who are involved in quality improvement projects, but do not necessarily come from traditional quality areas.

The pilot exam was given on January 27, 2001. The experience needed to take this exam is two years of general work experience or at least an Associate Degree from a post-secondary school.

Topics: Terms, concepts and Principles
Benefits of Quality
Teams and Group Dynamics
Continuous Improvement
Quality Improvement Tools
Customer-Supplier Relationships
Preparing for the Audit
Performing the Audit
Follow-up

Length: 24 hours

Cost: \$300.00 including text

Instructor: David Little
Work: 810-3741

QCE 118

Internal Auditing

This course will cover the methodology of performing an internal audit for system, process and product. This course is for practitioners of auditing within their organizations. It is not a detailed preparation for the Certified Quality Auditing exam.

Topics: Checklists
Audit Trails
Report Writing
Sampling Plans
Non-compliance
Notes
Preparing for the Audit
Performing the Audit
Follow-up

Length: 24 hours

Cost: \$300.00 excluding text

Instructor: Harrisburg, Jim Pasquali
Lancaster, York Home: 691-0225

QCE 106

Total Quality Management

This course is designed to provide the practicing Quality Engineer or Quality Manager with a better understanding of TQM concepts. Concentration will be on customer satisfaction, continuous improvement and employee involvement techniques/principles.

Prerequisite: None

Topics: Management Participation and Leadership
Education and Training
Goals and Objectives
Employee Involvement and Recognition
Customer Emphasis
Supplier Certification and Partnerships
Interlock / Closed Loop System
Quality Function Deployment
TQM and MIL-Q-9858A / ISO 9000 series

Length: 30 hours

Cost: \$350.00 including text

Instructor: Harrisburg John Sharp
986-7692

QCE 107

Design of Experiments I

This course is designed to provide the practicing engineer and technician with tools necessary for evaluating data from controlled and uncontrolled experiments. Students will be encouraged to use actual data from their plant.

Topics: Reference Distributions
Experimentation Techniques
Experimental Error (Noise)
Central Limit Theorem
Normal Probability Plots
Z, t, F, CHI-Square Tests
Contingency Test
One Tail & Two Tail Tests
Null Hypothesis Test
Interval Estimate of Variance (Confidence Interval)
Pooled Variance
Analysis of Variance (ANOVA)
Randomized
Randomized Block Design
 Two Way
 Latin Square
 Graeco-Latin Square
 Hyper-Graeco-Latin Square

Study Aids: Hand calculator with statistics capability (a necessity)
Statistical computer program (i.e., Minitab, Statgraphics, True Epistat or equivalent. Not required but would be helpful). Minitab 10 will be used as part of the Training Program.

Length: 26 hours

Cost: \$375.00 including text

Instructor: Harrisburg, York TBD
Lancaster Harlan Zimmerman
 684-5916

QCE 117

Certified Quality Technician Course

This course will cover the body of knowledge, as described by ASQ, for the CQT certification exam. Structure of the exam will be reviewed. The course is designed to supplement attendees prior quality practices/principles educational and work experience background. Recommended textbooks to be reviewed prior to sitting for the exam will be discussed.

Topics: ASQ Body of Knowledge for CQT
Measurement Methods/Techniques
Sampling Plans
Elementary SPC Methods
Quality Standards
Quality Management
Quality Costs
Basic Auditing Techniques

Length: 24 hours

Cost: \$325.00 including text

Instructor: Harrisburg, Ed Hoehn
Lancaster, York Work: 299-1524

QCE 116

Certified Quality Manager Refresher Course

This course will cover the body of knowledge, as described by ASQ, for the new CQMgr certification exam. Structure of the exam and sample essay questions will be reviewed. The course is designed to supplement an attendees prior quality practices/principles educational and work experience background. Recommended textbooks to be reviewed prior to sitting for the exam will be discussed.

Topics: ASQ Body of Knowledge for CQMgr
Quality Standards
Organizations and Their Functions
Quality Needs and Overall Strategic Plans
Customer Satisfaction and Focus
Project Management
Continuous Improvement
Human Resource Management
Training and Education

Length: 30 hours

Cost: \$375.00 including text

Instructor: Harrisburg John Sharp
Work: 986-7692

QCE 108

Design of Experiments II

This course is a continuation of QCE-107 and is designed to further the skills of the practicing engineer to evaluate data from experiments.

Topics: Review of Analysis of Variance (ANOVA)
Balanced Incomplete Block Design Exp
(Youden Square)
Components of Variances
Two Level Factorials
Two to the Three Factorial Design
Two to the Four Factorial Design
Fractional Factorial Design
Correlation and Regression
Planar and Non-Planar Response Surface
Methodology
Survey of Taguchi Methods

Study Aids: Hand calculator with statistics capability (a necessity)
Statistical computer program (i.e., Minitab, Statgraphics,
True Epistat or equivalent. Not required but would be
helpful).
Minitab 10 will be used as part of the Training Program.

Length: 26 hours

Cost: \$275.00 (same text as for QCE 107)

Instructor: Harrisburg, York TBD
Lancaster Harlan Zimmerman
684-5916

QCE 109

Principles of Quality Auditing

This course is designed to provide participants with skills and knowledge in Quality Auditing. Various types of audits will be discussed, as well as how to develop supplier certification partnerships. The course is designed for Quality Auditors, Auditor Trainers, Supplier Quality Engineers, and anyone experienced in and involved with auditing and vendor certification programs. For those participants with previous experience and knowledge, this course will serve as a review for anyone planning to take the ASQ Certified Quality Auditor examination.

Prerequisite: None. (If taking the course as a CQA review, experience with auditing or vendor certification is a prerequisite).

Topics: ISO-9000 Requirements
Basic auditing techniques
Dos and don'ts of auditing
Methods of performing audits
Internal and external audits
Types of audits:
 Systems
 Process
 Product
Auditor characteristics
Developing supplier certification partnerships
Documenting the audit
Reporting audit results and findings
Follow-up of audits
Preparation for ASQ CQA exam

Length: 30 hours

Cost: \$350.00 including text

Instructors: Harrisburg, Terri Kinsey
Lancaster, York Work: 810-3726

QCE 115

Failure Modes and Effect Analysis (FMEA)

This course is designed to provide the student with a working knowledge of the FMEA process as it is applied to product, process, or system. References will be made to ISO-9001, and QS-9000 standards. Failure Modes and Effect Analysis is a critical step in the development of a new product or in the modification of existing products. The purpose of the FMEA is to identify potential modes of failure and their relationship to product design or manufacturing process and their effects, if known, on the end use of the product.

Prerequisite: None required

Topics: This systematic approach parallels, formalizes and documents the mental disciplines that an engineer normally goes through in any design process. Discussions on FMEA history, methods, types, responsibilities, documentation, implementation and software will be reviewed and presented.

Length: 12 hours

Cost: \$175.00 including text

Instructor: Harrisburg, David Little
Lancaster Work: 810-3741
Home: 665-9340

QCE 114

Lean Manufacturing

(A Systematic Approach to Waste Reduction)

This course is designed to provide an introduction to the concepts of JIT, TQM, TEI, and TPM. The student will leave the course with a basic understanding of the tools used by manufacturing and service industries that have successfully achieved continuous improvement within their organizations.

Prerequisite: None

Topics: Total Productive Maintenance: a tool used by operators to perform preventative maintenance of equipment to ensure defect-free production and zero breakdowns of machines. Just-In Time: a system to deliver products exactly when needed through the elimination of work-in-process inventories. Total Quality Management: an analysis of all facets of an organization's processes that relate to the design, production, sale, delivery, and service for its customers. Total Employee Involvement: an emphasis on the involvement of all of the employees that make up an organization in regard to decision making, internal activity participation, and communication of information.

Note: A brief overview of topics relating to re-engineering, team building, and workplace organization will also be covered in this course.

Length: 30 hours

Cost: \$300.00 including text

Instructor: Harrisburg TBD

QCE 111

Introduction To Reliability Engineering

This course is designed to be a elementary review of various Reliability Engineering and Management disciplines. The course is open to those who are preparing for the Reliability Engineering Certification Examination and to others who are interested in a thorough review in the various reliability disciplines.

Prerequisite: QCE 101 or equivalent

Topics: Reliability Concepts, Probability
Normal, Lognormal, Binomial, Poisson and
Weibull Distributions
Reliability Data Analysis
Reliability Program Requirements
Reliability of Design
Maintainability and Availability

Length: 28 hours

Cost: \$350.00 including text

Instructor: Harrisburg TBD
Lancaster TBD

QCE 112

Root Cause Analysis—Getting Started

Root causes can be uncovered and analyzed by using a number of approaches, techniques, and tools that help the problem-solver get to the heart of the problem. This course is intended to apply various known tools; using case studies to demonstrate application of methods to determine root cause.

Prerequisite: None

Topics: Practical Problem Solving
Root Cause Analysis
Tools for Problem Understanding
Tools for Possible Cause Generation and Consensus Reaching
Tools for Possible Cause and Data Collection
Tools for Possible Cause Analysis
Tools for Cause and Effect Analysis
How to Select the Right Tool

Length: 16 hours

Cost: \$150.00 per part

Instructor: Harrisburg Dave Little
Work: 810-3741
Home: 665-9240

QCE 113

Self-Assessments Based on Baldrige Criteria

This course is intended to familiarize the student with the Malcolm Baldrige Award application criteria guidelines and through review of published case studies provide guidance as to how to use for self-assessments. Collaborative assessment process uses a combination of synergism, consensus, collaboration, humor and candor to get to the “truth” about the performance. See how fun and friendly the Baldrige process can be!

Prerequisite: None

Topics: Leadership of the Quality Process
Management of Quality Data
Quality Planning
Employee Involvement, Training, Recognition and Measurement
Design, Processing and Supplier Improvement
Benchmarking
Quality Improvement Reporting
Change Agent Process

Length: 15 hours

Cost: \$150.00

Instructor: Harrisburg Don Parrish
Home: 751-0991

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ASQ HARRISBURG SECTION 0503
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QCE 115—	HARRISBURG		
QCE 116—	HARRISBURG		
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QCE 118—	HARRISBURG	LANCASTER	YORK
QCE 119—	HARRISBURG	LANCASTER	YORK
QCE 201—	HARRISBURG	LANCASTER	YORK
QCE 202—	HARRISBURG	LANCASTER	YORK
QCE 203—	HARRISBURG	LANCASTER	YORK
QCE 304—	HARRISBURG		
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