**Discover**
**ASQ Philadelphia**

# Quality Courses


asqphilly.org

Philadelphia Section
The Global Voice of Quality™

## Discover
## ASQ Philadelphia

# Quality Courses

## Available Courses

This catalog lists some of our most popular courses. Details are subject to change. If there is a course topic you are interested in that is not listed, ASQ Philadelphia may already have a course for you or be able to design a course for your needs. Please visit our website calendar for upcoming courses or contact our Education Chair. We're happy to discuss options for your education!

## Attendance and Registration Guidelines

Visit our website for dates of our upcoming courses and for registration information. All courses must have a minimum of 6 to 8 registered and paid students for the course to be held, the minimum depends on the course. To ensure an accurate "Go/No Go" decision for a course, register at least one week before the registration closing date.

## On-site Courses

We come to you.

Most of the day and evening courses are available for presentation at your company, on your schedule, with the availability of the instructor. Additionally, each course can be presented with some customization for your specific issues and areas of interest or concern. All instructors will sign a Confidentiality Agreement to ensure your private information. Details of dates, times, place, and degree of customization are made directly with the Instructor.

On-site training requires a minimum number of students. There must be at least six students to hold most on-site courses. **Option:** If you cannot meet the minimum enrollment, the Section will, with your authorization, advertise this course is available to others in the quality community at your facility in order to fill the classroom. The billing will, of course, be kept separate.

## Course Cost Savings Options

Consider the value of expanding your knowledgebase in addition to these other potential savings:

- **ASQ membership** includes savings on tuition costs for the certification preparation courses and the purchase of additional books and reference materials from the ASQ Store.
- Coordinate with your coworkers and save: A fee reduction is available for classroom-based or online courses when **three or more register from the same company at the same time**.
- Most courses can be customized and are available **on site for a considerable savings (up to 30%)** over the per-person classroom cost. Additional savings can be realized when considering that on-site training does not require transportation and overnight accommodation of students.

## For more information

Please contact our Education Chair, visit our website at www.asqphilly.org, or contact us at info@asqphilly.org.

# Basic Quality Control

*BA-100*

*Instructor: Ray Lotfi*

## PREREQUISITE

None required but familiarity with basic algebra will be helpful.

## PROPOSED BENEFITS

This class explains the "How and Why" of the basic quality tools like histograms, data plotting, bell-shaped curves, and sampling for defects to a person beginning a career in the control of any process in manufacturing or service.

Becoming proficient in the content provides the customer with the foundation for further learning to professionally grow in the field of Quality. Mastery of these tools will assist in achieving certifications as a Quality Inspector, Quality Technician, Quality Engineer and eventually Six Sigma Green Belt.

The ROI for a company is an employee who is capable of monitoring a process and preventing the waste of time and materials.

## CLASS DETAILS

The classroom techniques will include lecture, individual participation, group problem discussion, case studies, and quizzes to test understanding.

In an instructor-led class, any individual's weaknesses of the subject matter are worked-on as a group so as to explain, clarify and fix the weakness.

In addition, a classroom-based class provides the camaraderie, collaboration, and connections with others in the field of Quality that may provide support and assistance in many other ways.

The class materials are derived from the instructor's 20+ years of experience that forms a class notebook containing a wide range of typical problems and their solutions.

**Instructor Spotlight**

**Ray Lotfi, BS in ME, and MS Engineering Management** is an independent consultant with over 20 years of operation experience with expertise in medical device and consumer product industries on Quality, Regulatory, R&D, Logistic, and Manufacturing issues. Ray has been the project leader on multiple projects, chaired FMEA teams and served on CAPA panels. He has authored Quality System Manuals, Standard Operation Procedures, and Manufacturing Operation Procedures. He has led commissioning projects - Installation, Operation, and Performance Qualification - for medical devices in aseptic environments. Ray has a Master of Science in Engineering Management from the Milwaukee School of Engineering and Bachelor of Science in Mechanical Engineering from the University of Wisconsin. His work has been published in ASQ Quality Progress.

## TOPICS TO BE COVERED

- ASQ's Aims and Concepts, History and Background of Quality Control. Philosophies and Progressive Developments and Terminology and Definitions
- Basic Statistical Concepts
- Practical Probability Relations, Frequency Distributions, and Measures of Central Tendency & Dispersion-
- Process Control Techniques
- Capability Studies, Measurement Variation Studies, Tolerance Determination, Variables Control Charts, and Charts for Attributes
- Acceptance Sampling
- Sampling Theory, Types of Sampling Plans, O. C. Curves, Advantages of Various Plans, and How-To construct your own plan with your data
- Quality Systems
- ISO 9000:2008, AS9100C, and QS9000
- Tools for Continuous Improvement
- Personnel Requirements, Functions & Training, Responsibility & Relationships, and Costs Related to Quality
- Summary & Introduction to ASQ Certifications

**Classroom Schedule: 6 hours of instruction, 2 sessions of 3 hours each**

**ASQ RU 0.8**

# Quality Costs

*QM 150*

*Instructor: Roy Kinkaid*

## PROPOSED BENEFITS

Organizations know the cost of operating their processes – materials, equipment, overhead, IT, staff, etc. But does the organization know the cost of non-quality of its processes?

To put it in context, does the organization know the cost of errors, defects, software defects, customer-compliant resolution, replacement, and correction, rework and vendor non-conformances? Does the organization track the trend in those costs and their impact on the bottom line? And are those costs used to drive improvement?

In this overview, participants will learn the components of quality costs, the application of the quality cost methodology and how to implement a quality cost program in the organization be it manufacturing, health care, education, service, software and non-profits.

## TOPICS TO BE COVERED

- Introduction - What is it? Why do it?
- Quality Costs Categories
- Quality Costs: The Implementation Process
- Select a product, process product line or supplier for a Quality Cost Pilot
- Form a Quality Costs Team
- Selection of Quality Costs by Category
- Getting Started
- Pilot of Quality Costs
- Project Plan for the Quality Costs Pilot
- Collecting the Quality Costs
- Pilot Progress Report Out and Review
- Implementation of the Quality Costs Program

**Classroom Schedule: 8 hours of instruction**
**ASQ RU 0.8**

ASQ public classroom-based course. A 10% discount will be given to the company when three or more register from the same company at the same time.

On-site course. As a private class, the course can be customized with current problems and or issues at the organization. O-site courses require consideration for food service and a suitable facility space to hold the class. Means of projection and training room to be provided by the organization.

# Basic Tools Workshop for Process Improvement

*QM 301*

*Instructor: Roy Kinkaid*

## PREREQUISITE

None required

## PROPOSED BENEFITS

Participants are taught or strengthened in the basic eight process improvement methodologies that are applicable in any organization (manufacturing, service, healthcare, education, and non-profits). This results in improved customer satisfaction and the reduction of waste and excessive cost.

In this one-day session, participants will learn how to select and apply the core tools to effect improvement.

The ROI for a company comes from the application of the core quality tools that were taught and the participant's application to a problem currently at their organization, returning value to their organization for the time and cost invested in training. The goal is to enable the participants to transfer the methodology learned and apply that learning to their organization.

## CLASS DETAILS

The basic tools class is presented in a learn/apply method. By using a dataset that can represent any organization, an activity model will be developed that creates a roadmap to follow in typical situations.

The classroom techniques will include lecture, exercises for quality tools taught, and hands-on applications to a problem currently at the participant's organization.

Case-study handouts, tool worksheets and the Goal/QPC Problem Solving Memory Jogger are provided as reference materials.

## TOPICS TO BE COVERED

- Flow charting – Process Maps
- Pareto Analysis, Trend Charting, Histogram, Fishbone Diagram
- Statistical Process Control
- Scatter Diagram
- Process Improvement Models – Define, Measure, Analyze, Improve, Control and the Plan/Do/Check/Act

**Classroom Schedule: 8 hours of instruction**
**ASQ RU 0.8**

# Risk Management / Analysis Workshop

*QM 421*

*Instructor: Roy Kinkaid*

## PREREQUISITE

None required

## PROPOSED BENEFITS

Risk Management is the process of identifying potential hazards, failure, interruptions in manufacturing, healthcare, service, IT, etc. processes that can have a negative consequence on operations and customers; and taking action to mitigate, and prevent hazards.

This workshop is applicable to all organizations (manufacturing, service, Health Care, IT) that are required or committed to the determination, assessment, and understanding of risk in their organizations.

Participants will be able to:

- Develop/deploy the FMEA methodology to product/process
- Apply basic tools of root cause analysis
- Apply the Bow Tie risk assessment model.

## CLASS DETAILS

This course provides an overview and application of Risk Analysis and Risk Analysis models – FMEA, DFMEA, Bow Tie, to evaluate and identify risks in your organization.

Root Cause Analysis and Project Management as tools needed to take risk remedial action will be reviewed.

In addition the relationship between various standards – ISO, ISO Guide 83, ISO 31000-2009, TS 16949, FDA QSR, ICH Q9 – and Risk Analysis will discussed.

## TOPICS TO BE COVERED

- Risk Analysis
- Risk Management
- The relationship between Risk Analysis and various standards – ISO, TS, etc.
- Risk as an organizational strategy
- Satisfaction of risk requirements by various standards utilizing FMEA and Bow Tie models

## COURSE APPLICABILITY

- Employees that have responsibility for risk management applicable to various standards – ISO, TS, FDA QSR, ICH Q9, etc.
- All levels of quality staff: VP, Director, Manager, Supervisor, QE, Auditors

**Classroom Schedule: 8 hours of instruction over 1 day or 2 days**
**ASQ RU 0.8**

# Introduction to Quality Inspection Tools

*ES 131*

*Instructor: Ray Lotfi, BS in ME, and MS Engineering Management*

## PREREQUISITE

None required but familiarity with mathematics/algebra and Microsoft Excel worksheet will be beneficial

## PROPOSED BENEFITS

This course covers inspection, measurement, data/distribution and recording in a regulated environment.

The classroom techniques will include lecture, individual participation, group problem discussion, case studies, and quizzes to test understanding. In an instructor-led class, any individual's weaknesses of the subject matter are worked-on as a group so as to explain, clarify and fix the weakness.

## CLASS DETAILS

- Quality issues related to inspection and recording.
- Clear the area and remove all not related items,
- Consider and follow safety requirements,
- Approved document with rev level,
- Trained associates to conduct inspection or measurement,
- Paper with information (Lot #, P/N, date, initials, verifier) or all electronic,
- Blue pen for recording, keeping the original
- Measurements
- Calibrated instrument, proper recording self-identifier
- Decimal points, rounding, units of measurements and conversions
- Sampling Plans Acceptable Quality Level "AQL"
- AQL level for inspection, "What next if not meet", related charts
- Data Calculation
- Average, Standard Deviation, Upper Control Limits,
- Lower Control Limit, Capability Cpk
- Probability Distribution and Applications
- Normal, Exponential. Weibull
- Report Writing
- Samples contained with data, initials, witness,
- Nonconformance

**Classroom Schedule: 6 hours of instruction, 2 sessions of 3 hours each**
**ASQ RU 0.8**

# Process Improvement Using Statistical Tools

*ES-161*

## PREREQUISITES

High school level beginning algebra is strongly recommended

## PROPOSED BENEFITS

This course is for everyone desiring to know the fundamentals of statistics. It unveils the mystery and provides the logic behind statistical methodology. The attendee will be able to develop various charts to determine how well a process is doing. The various hands-on development of statistical data helps attendee to understand processes and control them.

Companies and organizations will benefit by sending their employees to this course by having their employees use these powerful tools to increase productivity and quality at a lower cost.

## CLASS DETAILS

This class provides an understanding of the fundamental concepts of descriptive statistics useful in any Manufacturing Operation and Service Industry. It is a foundation class for those who want to take and pass the various ASQ Certification Examinations.

It is intended to give the student a basic knowledge of statistics by providing hands-on examples to illustrate statistical theory and its applications. This is accomplished by determining the appropriate process variables for each statistical analysis and inputting the key values into the applicable equations.

It reveals the logic behind statistical methodology and shows how complex issues can be logically thought-out to improve operational dilemmas. Implementation of these powerful tools has been historically shown to increase productivity and quality while reducing operating costs.

The classroom techniques will include lecture, individual participation, group problem discussion, case studies, and quizzes to test understanding.

A calculator with standard statistical functions is required.

## TOPICS TO BE COVERED

- Introduction
  - management concepts, quality terms/definitions
  - quality history, quality personalities
- Review of fundamental algebra to understand data
- Development and classification of statistical data
  - ungrouped and grouped data for presentation in frequency distribution tables, i.e., histogram, frequency polygon, frequency bar chart
- Use of the Measures of Central Tendency
  - Mean, Median, Mode
- Use of the Measures of Dispersion/Variability
  - Range, Arithmetic mean, Standard deviation
- Correct use of the Normal Curve/Distribution
- Area under the curve
- When, where, and how to use Control Charting
  - Variable data (X & R), Attribute data (p, np, c, u)
  - Concepts of Cp and Cpk
  - Calculations, plotting data
- Review of standard management tools
  - Flow chart, Check sheet, Pareto principle, Cause and Effect diagram.

**Classroom Schedule: 18 hours of instruction, 6 sessions of 3 hours**

**ASQ RU 1.8**

# Failure Mode and Effects Analysis "FMEA"

*ES 211*

*Instructor: Ray Lotfi, BS in ME, and MS Engineering Management*

## PREREQUISITE

None

## PROPOSED BENEFITS

Risk Management (FMEA) is one of the most important components of design, validation, and verification of any product. It starts from concept and ends after product commercialization. Therefore any professional involved in this area will benefit from the knowledge learned.

Professionals attending the course will learn the general FMEA concept and apply to their product in the class.

The ROI for a company is that FMEA is a required body of knowledge in order to comply with ISO 13485:2003 used in the medical device and pharmaceutical industries. It is also part of the ISO 9001 and other international quality standards.

A successful FMEA action, once completed, will improve quality; reduce cost, increase safety, and increase confidence in your product or service.

## CLASS DETAILS

The classroom techniques will include lecture, individual participation, group problem discussion, case studies, and quizzes to test understanding where applicable. Detailed FMEA models will be presented for discussion and training.

In an instructor-led class, any individual's weaknesses of the subject matter are worked-on as a group so as to explain, clarify and fix the weakness.

In addition, a classroom-based approach provides the camaraderie, collaboration, and connections with others in the field of Quality that may provide support and assistance in many other ways.

The class materials are: textbook, handout, and models of FMEA.

## TOPICS TO BE COVERED

- Definitions and information - History, development, and correlation with ISO
- Definition, specification and method of generating FMEA
- Relation of FMEA and risk management
- Roll of statistics and probability in FMEA processes - Including past company data
- Team building and development - FMEA champion or leader, participants from all departments representing the product or process
- Examples development
- Discussion and best course of action
- Design FMEA
- Process FMEA
- Other custom application FMEA
- Areas of connection to other quality/engineering disciplines
- Utilization of other products/processes
- FMEA as a dynamic tool
- FMEA and CAPA - a great place for auditors
- Key success of FMEA (team playing)

## WHO SHOULD ATTEND

Staff that have responsibility for risk management applicable to various standards – ISO, TS, FDA QSR, ICH Q9, etc. All levels of quality staff: VP, Director, Manager, Supervisor, QE, Auditors

| **Classroom Schedule: 8 hours of instruction, 1 day or 2 half days** |
|---|
| **ASQ RU 0.8** |

# Root Cause Analysis

*ES 244*

*Instructor: Roy Kinkaid*

## PREREQUISITE

None required

## PROPOSED BENEFITS

Participants are taught tools (Fishbone Diagram, 5 Whys, Is/Is Not Matrix) and techniques to determine the root cause of problems faced in any organization (manufacturing, service, healthcare, education) that result in customer dissatisfaction, waste and excessive cost.

In this one-day session, participants will learn an effective strategy and how to select and apply the right tools to uncover the underlying root causes of problem to assure that the real problem is addressed, solved and permanently corrected.

The ROI for a company comes from the application of the tools of root cause analysis that were taught and the participants application to a problem currently at their organization, returning value to their organization for the time and cost invested in training. The goal is to enable the participants to transfer the methodology learned and apply that learning to their organization.

## CLASS DETAILS

The Root Cause Analysis class is presented in a learn/apply method. Classroom techniques will include lecture, videos, exercises for quality tools taught, cases studies (industry dependent) and hands on application to a problem currently at the participants organization.

## TOPICS TO BE COVERED:

- Root Cause Analysis Overview and Definitions
- Improvement Teams
- The 7 Step Improvement Process
- Describing the Problem
- Gantt Chart
- Cost of Quality
- Process Maps
- Potential Cause Identification
- Brainstorming
- Affinity Diagram
- Fishbone
- 5 Whys
- Data Collection and Analysis Tools
- Tree Diagram
- Force Field Diagram
- Improvement Plan
- Pilot Test
- Control Plan

**Classroom Schedule: 8 hours of instruction**
**ASQ RU 0.8**

### Instructor Spotlight

**Roy Kinkaid** is an independent quality consultant (25+ years of experience) with an extensive background in the implementation of various quality management systems - Six Sigma/Lean, Baldrige, Continuous Improvement, ISO and the Carnegie Mellon Capability Maturity Model. Roy has a degree in management/ statistics from Philadelphia University, certification in Six Sigma/Lean, and is a member of ASQ. He has practical process improvement experience in manufacturing, non-profit, education, healthcare, service, software, and electronic commerce industries, helping companies to achieve Six Sigma quality performance levels. In addition Roy has hands-on experience with change management, coaching and the facilitation skills necessary to implement a quality program. He has extensive experience working in Europe, the UK and Asia.

# 8D – 8 Disciplines

*QM-451*

*Instructor: Roy Kinkaid*

## PREREQUISITE

Basic knowledge of quality tools

## PROPOSED BENEFITS

8D is a methodology standardized by the US Government during WWII as military standard 1520, and later adopted by the automotive industry (Ford during 1960-70).The methodology is a rigorous tool for responding to customer complaints and preventing recurrence. It helps and organization to focus on customers issue, implement temporary measures to prevent the customer from receiving further product/service in question in the near term, determine how the product/service in question "escaped" and develop a long term strategy to find the root cause and eliminate the causal factors of the problem. 8D is also a structured process, for responding to and taking action on customer complaints. Starting with supporting the customer complaint with data, putting together a team to resolve customer issues, assessment of replacement product to ensure customer satisfaction (manufacturing product in-stock, replacement service to be delivered), evaluation of similar product or service where the customer problem may exist, visual representation of the customer issue, and analytical steps to determine the root cause to prevent recurrence.

In this one-day session, participants will learn how to select and apply the process to effect improvement and prevent recurrence.

The ROI for a company comes from the application of the process that was taught and the participant's application to a problem currently at their organization, returning value to their organization for the time and cost invested in training. The goal is to enable the participants to transfer the methodology learned and apply that learning to their organization.

## CLASS DETAILS

Participants will learn to implement/apply the 8D methodology in their organization through learnings at each step and the utilization of a generic form provided in the session that requires documentation of each organizational, corrective, preventative action step.

Participants are encouraged to bring a problem from their organization to apply learnings. Let's make this a learn – apply, session.

## TOPICS TO BE COVERED

**The 8 Disciplines (8D)**

- Step 1 Establish the Team: establish a team to solve the problem and implement corrective actions.
- Step 2A Problem Definition: Part Number, Customer, Sketch/Photo of the Problem (sample from the customer).
- Step 2B Is – Is Not Matrix
- Step 2C Problem Description
- Step 3 Developing Interim Containment Actions: temporary actions to fix the problem
- Step 4A Identifying and Verifying the Root Cause: analyze for the root cause of the problem
- Step 4A Brainstorm the possible causes
- Step 4A Cause and Effect Diagram – Fishbone Diagram – Why did it get out?
- Step 4B 5 Why Analysis
- Step 4C Action Plan: plan to verify the root causes
- Step 5 Identify Permanent Corrective Actions
- Step 6 Implementing and Validating the PCA: validate that the corrective action does what it is supposed to do.
- Step 7 Prevent Recurrence: improvements to the system, process.
- Step 7A Address Similar Systems where the problem could occur.
- Step 7B Review of documents/systems that may need to be changed.
- Step 8 Congratulate Your Team
- 8D Document Sign off by Management

**Classroom Schedule: 8 hours of instruction**
**ASQ RU 0.8**

# Six Sigma/Lean Overview for Business

*ES 400*

*Instructor: Roy Kinkaid*

## PREREQUISITE

None

## PROPOSED BENEFITS

The outcome of the Overview of Six Sigma/Lean is to provide the participants an understanding of the methodology, its application to their organization and aid in making the decision – is Six Sigma/Lean right for my organization?

The overview provides an understanding of the strategic benefits of the improvement methodology (meeting customer requirements, improving organizational efficiency and reducing cost), and the methodology (Define, Measure, Analyze, Improve, Control).

## CLASS DETAILS

The overview is presented via lecture and specific business industry examples of application. Participation is encouraged, question and answer, to address issues that the attendees have in the understanding of the Six Sigma/Lean methodology (tools and techniques), its strategic fit and implementation in their organization.

Class materials are: handout of the overview slides and industry examples of application

## TOPICS TO BE COVERED

- Definition of the Six Sigma/Lean – Define, Measure, Analyze, Improve, Control (DMAIC) methodology as it applies to business.
- Quality tools included in the methodology and definition and examples of their application.
    - Articles (case studies) published by business organizations of successful application of the methodology.
    - Advantages of the methodology.
    - Awareness of the Section's On-Site Six Sigma/Lean training.

**Classroom Schedule: 4 hours of instruction**
**ASQ RU 0.4**

A minimum of 6 to 8 registrants is necessary for public and onsite classes, depending on the course. Contact our Education Chair for more information.

# Baldrige Overview for Business and Non-Profit/ Self-Assessment

*ES 500*

*Instructor: Roy Kinkaid*

## PREREQUISITE

None

## PROPOSED BENEFITS

The outcome of the Baldrige Overview is four fold: a basic understanding of the Baldrige Criteria, strategic benefits of the criteria, a high level self-assessment against the criteria, and help in answering the question – is the Baldrige right for my organization?

The overview will provide a high level understanding of the seven categories of the criteria (Leadership, Strategic Planning, Customer Focus, Measurement Analysis and Knowledge Management, Workforce Focus, Process Management, Results), a self-assessment by criteria category as the requirements for each category is explained.

## CLASS DETAILS

The overview is presented via lecture, industry-specific examples of application of the criteria, and hands on self-assessment by the participants against the criteria. Participation is encouraged, question and answer, to address issues that attendees have in understanding the criteria and its strategic fit in their organization.

Class materials are: handouts of the presentation slides and industry examples of application.

## TOPICS TO BE COVERED

- Understanding of the criteria – how it works
- Overview of the seven categories:
- Leadership – setting direction for quality, the customer, ethics
- Strategic Planning – the organizational plan current and future, input, process, deployment
- Customer Focus – customer requirement, engagement, satisfaction
- Measurement, Analysis and Knowledge Management key performance measures, review, actions taken to improve, sharing best practices within the organization
- Workforce Focus – staff hiring, retention, satisfaction, engagement
- Process Management – key process performance and improvement
- Results – organizational performance results, marks
- Getting started with the criteria
- Self-assessment

**Classroom Schedule: 4 hours of instruction**
**ASQ RU 0.4**

# Certified Quality Auditor Preparation / Refresher

*CP 180 and 190*

Also available Live Online

## PREREQUISITES

None required. However, attendees preparing to take the ASQ Certified Quality Auditor (CQA) examination must have the requisite experience and education to qualify for the examination. Go to www.asq.org and click on Certification to obtain all the information necessary to sit for the examination.

## PROPOSED BENEFITS

This course will help experienced auditors become better prepared for the CQA examination by having them become thoroughly familiar with the complete Body of Knowledge (see Topics to be covered below) for the CQA examination.

Class discussions will include an in-depth review of the examination process, and example test questions (over 700) and answers will be provided to offer attendees a better understanding of the basic principles and applications that will appear on the examination.

Companies and organizations will benefit by having their employees better prepared in auditing techniques to conduct audits. Audits should become more efficient and thorough which translates into reduced audit time, less interruption and quicker resolutions of findings. This should increase your bottom line thorough your employees' mastery of Quality Auditing skills. Having ASQ Certified Quality Auditors confirms your companies/organizations commitment to Quality.

## CLASS DETAILS

The classroom techniques will include lecture, individual participation, group problem discussion, case studies, and quizzes to test understanding. All questions will be answered

In an instructor-led class, any individual's weaknesses of the subject matter are worked-on as a group so as to explain, clarify and fix the weakness.

Taking this course does not require you to sit for the next exam. The information can be used to learn the fundamental elements that a Quality Auditor should know and be prepared to implement

## TOPICS TO BE COVERED

- CQA Overview
- ASQ Code of Ethics, Audit Program and Business Applications
- Auditing Fundamentals
- Definition of Audit Terms, Audit Types, Applications and Specific Terms
- Audit Process
- Sampling for Audits, Organizing for the Audit Function, Staffing and Training the Audit Function, Audit Scheduling, Conducting the Audit, Reporting Audit Results
- Auditor Competencies
- Quality Tools and Techniques
- Corrective Action and Follow-up, Supplier Audits/ Survey, Statistical Concepts

**CP 180 - Classroom Schedule: 30 hours of instruction, 10 sessions of 3 hours each**

**CP 190 - 30 hours of instruction, 4 sessions of 7-1/2 hours each**

**ASQ RU 3.0**

ASQ Philadelphia offers preparation/refresher courses for many additional ASQ certifications that are not listed in this catalog. Visit our website for dates of our upcoming courses and for registration information. Contact us if you have an interest for a course that is not on the calendar.

# Certified Quality Engineer Preparation / Refresher

*CP 200*

Also available Live Online

## PREREQUISITES

None required. However, attendees preparing to take the ASQ Certified Quality Engineer (CQE) examination must have the requisite experience and education to qualify for the examination.

## PROPOSED BENEFITS

This course will help attendees become better prepared for the CQE examination by having them become familiar with the complete Body of Knowledge (see Topics to be covered below) for the CQE examination.

Class discussions will include an in-depth review of the examination process, and example test questions (over 700) and answers will be provided to offer attendees a better understanding of the basic principles and applications that will appear on the examination.

Companies/organizations will benefit by having ASQ Quality Engineers because they are professionals who understand the principles of product and service quality evaluation and control. This Body of Knowledge and applied technologies include, but not limited to, development and operations of quality control systems, application and analysis of testing and inspection procedures, the ability to use metrology and statistical methods to diagnose and correct improper quality control practices, familiar with quality cost concepts, and the knowledge and ability to develop and administer management information systems. Having ASQ Certified Quality Engineers confirms your companies/organizations commitment to Quality.

From WWW.ASQ.COM,"Since 1991, certification has been rated as one of the three most valued benefits of ASQ membership. A professional certification offers tangible benefits to both the individual and the employer. Invest in yourself and your career with this mark of excellence. Gain an advantage over your competition, and increase the potential of earning a higher salary."

## CLASS DETAILS

The classroom techniques will include lecture, individual participation, group problem discussion, case studies, and quizzes to test understanding. All questions will be answered.

In an instructor-led class, any individual's weaknesses of the subject matter are worked-on as a group so as to explain, clarify and fix the weakness.

In addition, a classroom-based class provides the camaraderie, collaboration, and connections with others in the field of Quality that may provide support and assistance in many other ways.

Taking this course does not require you to sit for the next examination. This course can be used to learn the fundamental elements that a Quality Engineer should know and be prepared to implement.

The *CQE Primer from the Quality Council of Indiana* will be given to each attendee as well as *ASQ Phila. Section Handouts* that will be used as the principle class guide.

## TOPICS TO BE COVERED

- Audits, Calibration, Control Charts, Corrective/Preventive Action
- Data Processing, Experimental Design, ISO 9000, Metrology
- Malcolm Baldrige Award, NDT, Procurement QC, Probability
- QA/QC Management, Quality Costs, Reliability & Maintainability
- Sampling, SPC, Statistics, Surveys, Testing

**Classroom Schedule: 36 hours of instruction, 12 sessions of 3 hours each**

**ASQ RU 3.6**

# Certified Manager of Quality / Organizational Excellence (CMQ / OE) Preparation / Refresher

Also available Live Online

*CP350*

## PREREQUISITES

There are no prerequisites for this preparation/refresher class; however, 10 years of on-the-job experience is required in applying for the certification examinations.

## PROPOSED BENEFITS

Certification from ASQ is considered a mark of quality excellence in many industries-- not just through mastery of the body of knowledge in quality systems and tools, but also through ability to build alliances across functions.

The seven broad topics of the CMQ/OE Body of Knowledge include:

- Leadership
- Strategic Plan Development and Deployment
- Management Elements and Methods
- Quality Management Tools
- Customer-Focused Organization
- Supply Chain Management
- Training and Development

Having the CMQ/OE certification in your resume might very well differentiate you and your company.

- Managing Quality in or outside the quality functional organization
- Leveraging the quality organization and management systems
- Motivating and evaluating staff
- Managing projects and human resources
- Leading teams in monitoring, measuring, and improving performance with customers/suppliers
- Champion process-improvement initiatives—everywhere
- Building alliances – strengthening relationships
- Understanding company cultures and personalities,
- Contributing to the strategic planning and deployment initiatives
- Analyzing financial situations,
- Determining and evaluating risk
- Integrating quality systems and tools into the fiber of assorted management systems

## CLASS DETAILS

Be part of a facilitated, small, study group of local professionals. Your instructor is experienced in CMQ/OE group study and has tact in mind to repeat. Don't study by yourself. Join us!

This course is presented in a way that reinforces current knowledge, re-introduces applications that may not be used every day, explains the rationale for use and highlights sample questions. As facilitator, the instructor will allow time at each session to practice multiple choice questions, and practice constructed response questions.

As facilitator, the instructor will enable the group to see the fully body of knowledge and zero in on areas in need of self-study or brush up on your own before the exam. The instructor will pre plan and encourage stopping points to discuss rational for and/or likelihood of examination questions.

**Value from your local section talent. Our instructors are certified with vast experience in the instructional area.**

**The certified Manager of Quality/Organizational Excellence (CMQ/OE) leads and champions process improvement initiatives – that can have regional or global focus – in various service and industry settings. A CMQ/OE facilitates and leads team efforts to establish and monitor customer/supplier relations, supports strategic planning and deployment initiatives, and helps develop measurement systems to determine organizational improvement.**

**Classroom Schedule: 27 hours of instruction, 9 sessions of 3 hours each**

**ASQ RU 2.7**

# Certified Six Sigma Green Belt (CSSGB) Preparation / Refresher

*CP350*

**Also available Live Online**

## PREREQUISITES

None required. However, attendees preparing to take the ASQ Certified Six Sigma Green Belt (CSSGB) examination must have the requisite experience and education to qualify for the examination.

## PROPOSED BENEFITS

Six Sigma techniques help all persons participating in process improvements in diverse businesses such as manufacturing, construction, healthcare, finance, operations, customer service, engineering, electronics, communications, logistics, sales, quality, and purchasing. Six Sigma projects are team based and some examples include cycle time reduction, reducing error (or mistake) rate, customer complaints and solving quality problems.

Taking this class will develop a comradeship and collaborations that one gets by attending the evening classes with professionals. This course will help you learn Six Sigma methodologies for process improvement and help you take the ASQ test, the passing of which certifies you as CSSGB. This is a lifetime certification that does not require recertification.

## CLASS DETAILS

This is an adult centered course for busy professionals. This course provides a thorough overview of the quantitative methods likely to be present on the Certified Six Sigma Green Belt exam. Through discussion, review, and practice attendees will become thoroughly familiar with the complete body of knowledge for the CSSGB examination. This is accomplished by lecture, discussion, and practice of those quantitative methods and tools during class time and through take-home problems.

## TOPICS TO BE COVERED

- Overview – Six Sigma and the Organization
  - Six sigma and organizational goals
  - Lean principles in the organization
  - Design for Six Sigma (DFSS) in the organization
- Six Sigma – Define
  - Process Management for Projects
  - Project management basics
  - Management and planning tools
  - Business results for projects
  - Team dynamics and performance
- Six Sigma – Measure
  - Process analysis and documentation
  - Probability and statistics
  - Collecting and summarizing data
  - Probability distributions
  - Measurement system analysis
  - Process capability and performance
- Six Sigma – Analyze
  - Exploratory data analysis
  - Hypothesis testing
- Six Sigma – Improve & Control
  - Design of experiments (DOE)
  - Statistical process control (SPC)
  - Implement and validate solutions
  - Control plan

**Classroom Schedule: 30 hours of instruction, 10 sessions of 3 hours each**

**ASQ RU 3.0**

**Earning ASQ Certification**

Students earn an ASQ certification through meeting the requisite experience requirements specified by ASQ and by passing the ASQ certification exam. Completion of an ASQ Certification / Preparation course helps prepare students to successfully take the ASQ certification exam. Applications to sit for an ASQ certification exam are completed separately by the student through asq.org.