TRAINING & CONSULTING

2003

QUALITY SYSTEMS

QUALITY TOOLS

HIGH PERFORMANCE METHODS

THE PIC GROUP

about PIC!

As leading trainers and consultants in quality, we understand the challenges facing organizations in the new millennium are more complex than ever before. Combining the right set of skills, knowledge and experience is mandatory for survival. Having dealt with thousands of organizations over the past 20 years, we offer organizations the ability to make the right changes utilizing the expertise of our highly trained consultants and trainers.

Imagine having the experts guide you through your quality issues in a timely and effective manner. Eliminate time wasted trying to get up to speed by having our consultants assist you with your quality issues quickly and easily.

Our training seminars and programs are designed to help develop practical quality skills. You will benefit by having the combined knowledge of what works and what doesn't at your fingertips. Our consultants and trainers are quality professionals with hands-on experience in multiple markets. Their training skills are used exclusively to train adult learners at all organizational levels. You have our commitment. We make it our business to help you excel and achieve your quality goals faster and more efficiently than ever!

We know that your business needs are constantly changing, therefore, PIC has developed services that are interchangeable and flexible. Our 3 key focus areas are outlined below.

QUALITY MANAGEMENT SYSTEMS

ISO 9001:2000
ISO/TS 16949:2002
ISO 14000
QS-9000
AS9100

AUTOMOTIVE TOOLS & TECHNIQUES

8D PROBLEM SOLVING
APQP OVERVIEW
PPAP, FMEA, MSA, SPC
LEAN MANUFACTURING
SIX SIGMA

HIGH PERFORMANCE METHODS

PROCESS MANAGEMENT
LOST OPPORTUNITY COSTS
(Cost of Quality)
CUSTOMER SATISFACTION MANAGEMENT
KEY PERFORMANCE INDICATORS

Whether you are an Automotive, Service, Government or General Manufacturing organization, PIC has the experience to assist you in achieving your quality goals.

WE CAN BE REACHED AT

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Email: sales@thePICgroup.com

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TRAINING AND CO

CUSTOMIZED SOLUTI

Our solutions improve the overall quality of your products and the effectiveness of your processes by combining customized training, implementation and consulting services. In addition to being a proven trainer, PIC can assist you in understanding and applying any of the concepts included in our seminars, at your facility.

Bring the training you require to your site and supplement it with a facilitated application by a consultant. By doing so, you invest in your employees with training but also ensure that your organization reaches its continuous improvement goals.

CUSTOMIZED ON-SITE TRAINING SEMINARS

Save time and money by hosting a seminar at your facility. All PIC seminars described in this brochure are available for on-site delivery. Reap the benefits of many years of experience transcribed into PIC's well-developed materials.

Our training does not focus on just explaining what the tools are but the "best-practice" of how to use and apply them.

Have PIC consultants customize the course by using examples from your facility and industry. Enhance your training by using the consultant's expertise to facilitate the application of newly learned concepts.

As an example, what better value for an 8D Problem Solving seminar than to extend the learning to the shop-floor, and actually apply the process to a current problem your organization is experiencing.

- Realize significant cost savings
- Train multiple people at one time
- Focus on your issues/concerns
- Use real examples from your organization

CONSULTING SERVICES

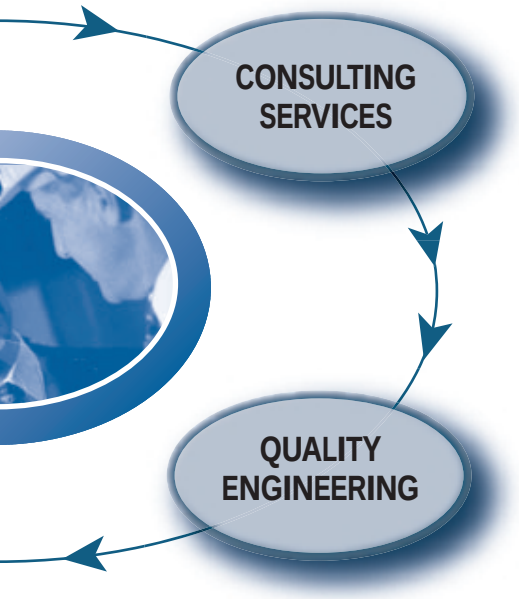
Let our industry experts provide you with innovative solutions for your business.

Our consultants are industry experts with diverse, hands-on experience to help you improve. By understanding your issues and goals, they can effectively design solutions that are right for you.

We will provide the knowledge required, as well as, the motivation and encouragement to ensure success with your continuous improvement goals.

NSULTING SERVICES

ONS FOR YOUR NEEDS



QUALITY ENGINEERING

Many companies today know what needs to be done in order to be effective in their business.

What they don't have is the "specialists" dedicated to getting things done, especially during peak times or for special projects.

PIC can provide resources and expertise to execute special projects or routine tasks – wherever resources are required.

Our resources can be assigned to work at your direction for pre-determined tasks as a means to supplement your workforce.

If you need assistance to determine the solution that's right for your company, PIC can perform an assessment and recommend what needs to be done and the programs to be used.

Some examples of how we have assisted our customers include:

- Quality System Audits
- Process Auditing
- Problem Solving
- PPAP Review
- Control Plan Auditing
- Quality Gates Systems
- Supplier Performance
- Process Mapping
- Procedure Writing

ation and Registration Programs, see page 4&5

IMPLEMENTATION PROGRAMS

PIC has designed several packages that combine our formal training seminars with real-life applications that will benefit your facility.

TRANSITIONING YOUR QUALITY SYSTEM

APQP IMPLEMENTATION – HOW TO BUILD QUALITY INTO YOUR PROCESS

SIX SIGMA

LEAN MANUFACTURING

Our Implementation Programs are made up of just the right combination of training and consulting to effectively implement new processes or quality tools in your organization. The key steps are established as a template, but a visit to your site will help us to assess just what amount of training and consulting your organization will need to be successful.

Our consultants know from experience what needs to be done, in what order and when, to be effective. Just training employees or implementing new techniques will not make lasting improvements to your organization. It must be a strategic combination of both.

We know that organizations are working with limited resources and that new initiatives can easily get side-tracked or de-railed altogether.

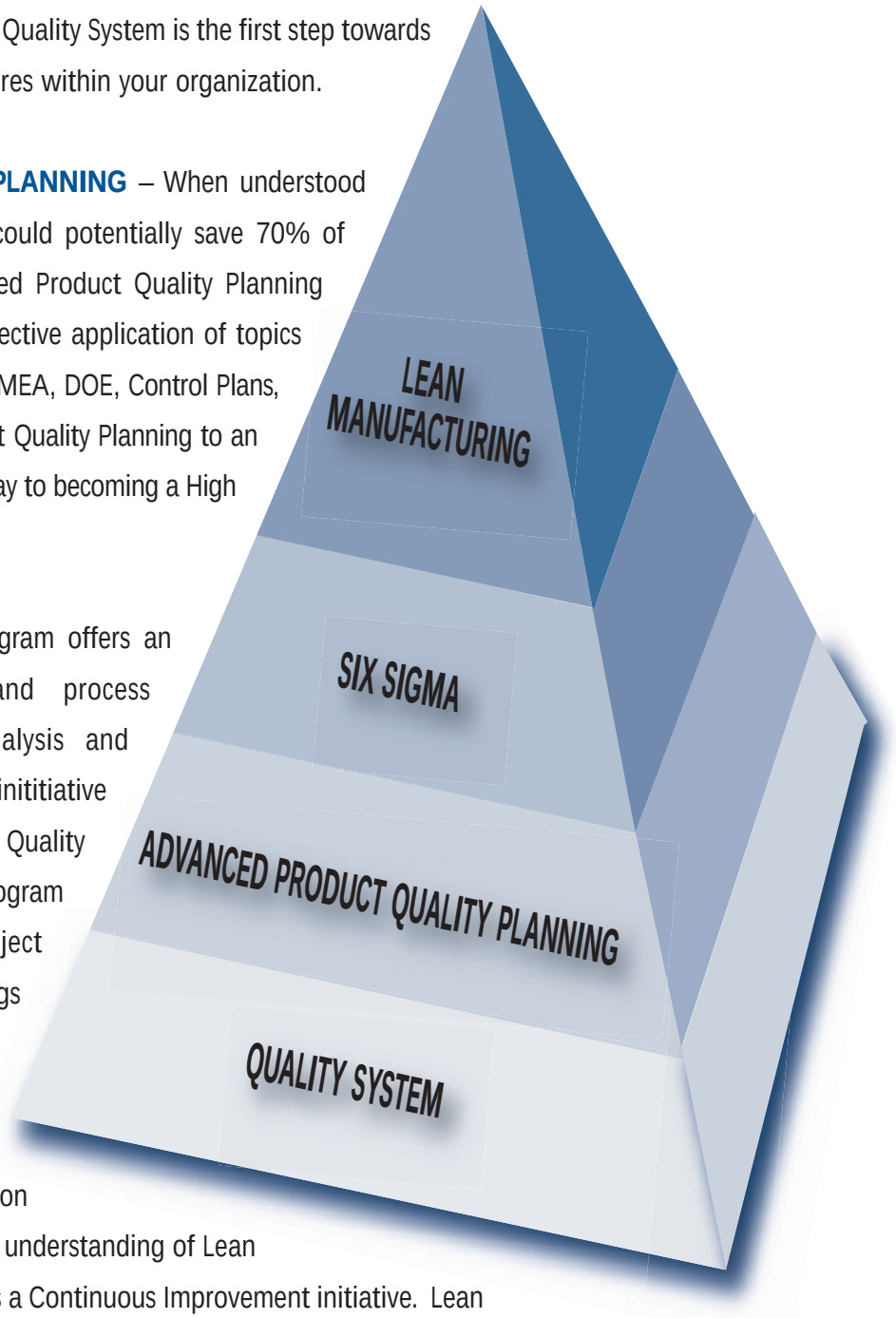
Our consultants will help keep you on track and facilitate your team to ensure consistent progress towards your goals.

PIC'S IMPLEMENTATION PROGRAMS

PIC has combined two key quality concepts into 4 sequential Implementation Programs. Many high performance manufacturing organizations know that these concepts form a solid business model when implemented effectively at all levels of the organization.

1. QUALITY SYSTEM – Implementing a Quality System is the first step towards standardizing the processes and procedures within your organization.

2. ADVANCED PRODUCT QUALITY PLANNING – When understood and executed as intended, businesses could potentially save 70% of overall production costs. PIC's Advanced Product Quality Planning program focuses on training and the effective application of topics such as GD&T, Process Management, PFMEA, DOE, Control Plans, PPAP, etc. If you apply Advanced Product Quality Planning to an effective Quality System, you are on the way to becoming a High Performance Organization!



3. SIX SIGMA – PIC's Six Sigma program offers an analytical approach to product and process improvements through statistical analysis and controls. This continuous improvement inititiative builds on the established foundation of a Quality System and APQP process. PIC's Program combines intensive training and project implementation to achieve cost savings and improvement results.

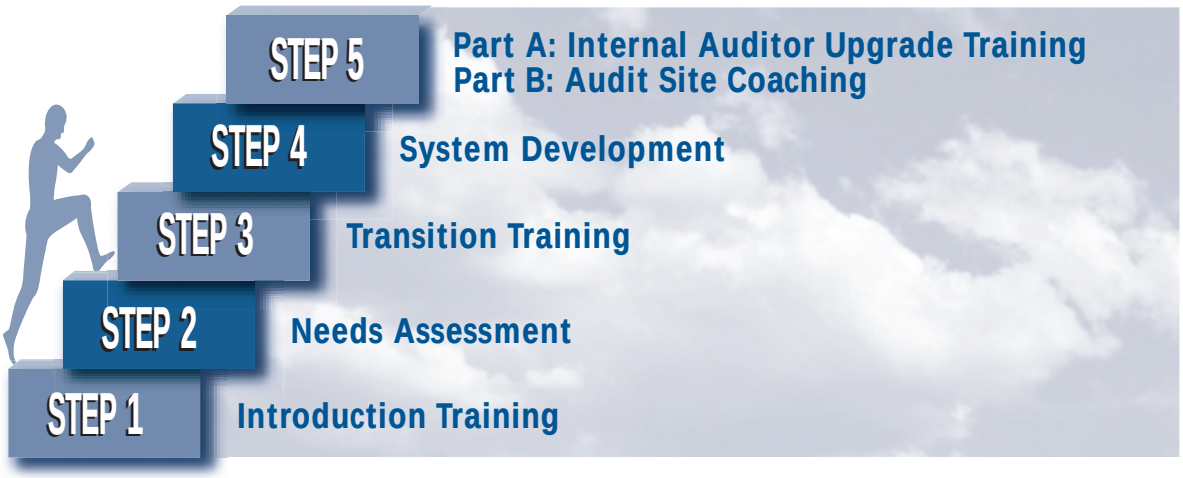
4. LEAN MANUFACTURING – PIC's Lean Manufacturing Implementation Program allows organizations to gain an understanding of Lean tools and implement relevant concepts as a Continuous Improvement initiative. Lean Manufacturing can assist in ensuring controls in both the planning and production phases. Applying Lean concepts improves cycle times, reduces invested capital and overall efficiencies throughout the production process.

8-STEP GUARANTEED REGISTRATION PLAN

PIC has designed a cost effective training and consulting package to help your organization achieve registration – Guaranteed. Our philosophy is to assist your company in developing and applying the skills necessary to plan, implement and achieve registration. Our 8-Step Guaranteed Registration Plan includes:

5-STEP TRANSITION PLAN

Whether you are transitioning to ISO 9001:2000 or ISO/TS 16949:2002, we have the program that's right for you! PIC has designed a cost effective training and consulting package to help your organization achieve registration to a revised Standard – Guaranteed! Our philosophy is to assist your company in developing and applying the skills necessary to plan, implement and achieve registration. Our 5-Step Transition Plan includes:



e-learning

Do you find it difficult to commit yourself to a specified day for training?

Is your schedule constantly changing, making it difficult to plan ahead?

You're not alone. Most individuals recognize the need for training, but require a flexible alternative. Take advantage of PIC's e-learning seminars, allowing you to work at your pace and set your own schedule.

Our courses can be accessed anytime and anywhere. Just log on and enter your password and you are ready to begin. Each course is packed with powerful and insightful information in an easy-to-use format. Because it is self-paced, you decide on your own schedule. Each course contains self-marking tests to reinforce your learning.

Our on-line courses include:

ISO 9001:2000 Essentials
ISO 9001:2000 Internal Auditor

For a detailed list of these on-line courses and their descriptions and benefits, please visit our website at: www.thePICgroup.com

Additional courses are offered throughout the year, please call to inquire or check our website.

If you would like to register on-line, please visit our website at:

www.thePICgroup.com

ISO 9001:2000 IMPLEMENTATION/DOCUMENTATION

3 DAYS | **FEE: $895.00** *(Canadian companies add GST)* | **CEUs = 2.4**

BRIEF DESCRIPTION

- This course is for manufacturing and service businesses. The content covered will instruct participants in the methods of preparing necessary documentation for an ISO 9001:2000 quality system. Workshops in this course allow participants to utilize documentation-writing techniques. Case Studies include both manufacturing and service examples.
- Many North American companies who have implemented ISO 9001:2000 have benefited by achieving greater efficiency in their quality control systems. They are able to meet customer demands, quality consistency of products and services, and realize greater market potential.

OUTLINE OF TOPICS COVERED

1. ISO 9001:2000 Review
   - Registration Process
   - Requirements of the 5 sections
   - Requirements for Documentation
2. Implementation
   - Approaches/Techniques
   - Establishing Teams
   - Documented Implementation Plan
   - Reviewing Progress
3. Quality Policy Manual
   - Contents
   - Principles
   - Writing Process
4. Quality Procedures
   - Procedure Format
   - Procedure for Writing a Procedure
5. Written Instructions
   - Applicability of Work Instructions
   - Who should the authors be?
   - Structure/Format

WHO SHOULD ATTEND

- Individuals from manufacturing or service organizations who are involved in quality management system development, procedure and work instruction writing.

BENEFITS

- Assess your current quality management system and identify gaps
- Assemble an effective implementation team
- Prepare an implementation plan
- Write a quality manual
- Write and implement quality system procedures
- Write and implement work instructions

PREREQUISITES

- None

CANADA

Oct	28 - 30	Toronto, ON

ISO 9001:2000 INTERNAL AUDITOR

3 DAYS | **FEE: $995.00** *(Canadian companies add GST)* | **CEU's = 2.4**

BRIEF DESCRIPTION

- This course is for manufacturing and service businesses. It teaches you how to audit and trouble shoot your own operation for compliance to ISO 9001:2000 standards. The audit phases of planning, execution, and follow-up are covered in detail.
- Case studies and workshops, simulating actual audit situations, are used to practice auditing skills. This course covers the guidelines published for audit planning, conducting and reporting.
- Participants will be shown how to tactfully utilize auditing techniques in their own full-time work environment.

OUTLINE OF TOPICS COVERED

1. An introduction to QMS auditing
2. ISO 9001 background
3. ISO 9001:2000 requirements section by section from an auditor's perspective
4. Roles and Responsibilities during an Audit
5. Audit Planning
6. Preparation and use of Checklists
7. Opening Meeting
8. Communications
9. Executing the Audit (Case Studies)
10. Recording Nonconformances
11. Corrective Action
12. Closing Meeting
13. The Audit Report
14. Follow-up

WHO SHOULD ATTEND

- Individuals with knowledge of the ISO 9001 Standard; Quality Managers and those professionals or employees who will be managing, conducting or participating in internal QMS audits.
- Those individuals responsible for supplier performance who may have occasion to audit supplier quality systems or review audit results for supplier QMS.

BENEFITS

- Test the effectiveness of a QMS
- Ensure conformance to ISO 9001 requirements
- Determine readiness for registration
- Identify areas to improve

PREREQUISITES

- ISO 9000 Introduction
- ISO 9000 Implementation/Documentation
- Those with previous auditing experience will find it a benefit taking this seminar

CANADA

Sep	9 - 11	Mississauga, ON
Nov	11 - 13	Toronto, ON

UNITED STATES

Sep	15 - 17	Nashville, TN
Nov	11 - 13	Madison Heights, MI

ISO 9001:2000 LEAD AUDITOR

5 DAYS | **FEE: $1,595.00** *(Canadian companies add GST)* | **CEU's = 4.0**

BRIEF DESCRIPTION

- This course is designed to discuss all types of audits, assessments and show participants how to be most effective in these activities. Case studies, interactive learning, teamwork, role-playing and lectures are all used to instruct in the techniques and methods that can be used to ensure a successful assessment.

OUTLINE OF TOPICS COVERED

1. The ISO 9000 Accreditation Process
   - Applicable Standards
   - Benefits of Certification
2. Principles of Auditing
   - Internal Auditing Techniques
   - Auditing Practices
3. The Managerial Role of the Lead Auditor
   - Selecting and preparing your Auditors
   - Directing the efforts of the Auditing Team
4. Quality Manuals, Systems and Documentation
   - What must be included
   - Acceptable formats
   - Monitoring Quality Management Systems
5. Planning, Performing and Audit
   - Pre-Audit Planning
   - Developing Checklists
   - Reporting your Findings
   - Corrective Action Requests
   - Noncompliance and Nonconformance
   - Taking Corrective Action
6. Auditing Design, Research, and Development Functions
7. Auditing Service Functions
8. Written Examination

WHO SHOULD ATTEND

- Individuals interested in pursuing Auditor, Lead Auditor certification.
- Those responsible for developing and managing supplier accreditation programs.
- Participants are assessed by the following two methods – Continuous Evaluation and Written Examination.

This course is accredited by the ANSI-RAB National Accreditation Program, or ANSI-RAB NAP and fulfills the requirements for certification of all QMS auditor grades (including internal). RAB auditor certification grades now are titled as Quality Management Systems: QMS-PA, QMS-A, QMS-LA.

BENEFITS

- Manage audit programs within your organization, including the internal audit program, corporate audits and supplier quality system development.
- You will also learn the characteristics of a professional auditor which will enable you to better recruit and evaluate auditors under your direction.
- "Successful Completion" satisfies the training requirements for individual auditor certification by IATCA.

PREREQUISITES

- Internal Auditor - suggested
- A working knowledge of ISO 9001:2000 and past audit experience.
- Professional and Training requirements, as well as first, second or third party audits must be met before becoming a Lead Auditor.

CANADA

Sep	15 - 19	Oshawa, ON
Oct	20 - 24	Mississauga, ON

UNITED STATES

Sep	8 - 12	Louisville, KY
Oct	6 - 10	Madison Heights, MI

TRANSITION FROM '94 TO 2000 - Understanding the Key Differences

1 DAY | **FEE: $395.00** *(Canadian companies add GST)* | **CEU's = 0.8**

BRIEF DESCRIPTION

- With the introduction of the year 2000 revision, organizations registered to the 1994 version of ISO 9001/2 are required to transition to the new requirements. There are significant changes to the new standard. Handling these changes in the correct way can mean the difference between mediocre and significant improvements in organizational performance. Come learn what these changes are and very practical ways to take advantage of them to enhance your organization's performance.

OUTLINE OF TOPICS COVERED

1. Benefits of a Business Operating System
2. Timeline to transition
3. '94 to 2000 differences
4. Changes in requirements
5. How to define processes
6. Key Performance Indicators, analysis, and continual improvement
7. Customer satisfaction
8. Competency based training
9. Work environment evaluation
10. Top management's new role
11. A new approach to auditing
12. Transition plan steps

WHO SHOULD ATTEND

- Any individual who is responsible in transitioning their existing QMS system to ISO 9001:2000.

BENEFITS

- Communicate ISO transition needs to your organization.
- Lead your transition effort.
- Turn your '94 based system into one that supports and benefits the business.

PREREQUISITES

- Those with no previous ISO experience are strongly recommended to take the Introduction seminar as this seminar only deals with the differences.
- This seminar is designed for participants who have a firm grasp of the ISO 9001:1994 standard and experience with its implementation and maintenance.

CANADA

Aug	13	Toronto, ON

UNITED STATES

Sep	3	Madison Heights, MI

TRANSITION FROM '94 TO 2000 – Auditor Upgrade

(RAB/IATCA approved)

2 DAYS | **FEE: $795.00** *(Canadian companies add GST)* | **CEU's = 1.6**

BRIEF DESCRIPTION

- Successful completion of this course meets the requirements of the continuous professional development for RAB certified auditors.
- This course is designed for organizations registered to the 1994 standard that want to learn techniques on making the transition to the ISO 9001:2000 standard. Changes to the audit practices are identified.

OUTLINE OF TOPICS COVERED

1. Introduction
2. Transition from '94 to 2000
3. Timeline of ISO 9000 Standards
4. Continuous Improvement Theory
5. New Family of Standards
6. ISO 9004 Guidelines for Performance Improvements
7. ISO/TC 176 Transition Model
8. Registrar Transition Plans
9. Advantages of New 2000 Revision
10. ISO 9001:2000 Standards Comparison

WHO SHOULD ATTEND

- RAB Certified QMS auditors, first, second, or third party auditors, internal auditors and individuals responsible in transitioning their existing QMS system to ISO 9001:2000.

BENEFITS

- Assess the current quality management system to the new standard and identify gaps.

PREREQUISITES

- Must have taken and passed a RAB/IATCA approved Lead Auditor seminar.

CANADA

Aug	26 - 27	Mississauga, ON

UNITED STATES

Sep	15 - 16	Nashville, TN
Sep	15 - 16	Madison Heights, MI

ISO/TS 16949:2002 INTRODUCTION

1 DAY | **FEE: $395.00** *(Canadian companies add GST)* | **CEU's = 0.8**

BRIEF DESCRIPTION

- This course will provide an overview of ISO/TS 16949:2002 for worldwide automotive suppliers. It includes a review of the sections of the standard and the development of documentation and implementation of ISO/TS 16949:2002.

OUTLINE OF TOPICS COVERED

1. Introduction
   - International Automotive Task Force (IATF)
   - Purpose of ISO/TS 16949:2002
   - Goal and Scope of ISO/TS 16949:2002
2. Quality System Requirements
   - Key Definitions
   - The Requirements of the Sections
   - Differences between ISO/TS16949:2002 and QS-9000
3. The Quality System Assessment Process
   - Applications
   - Assessment Method Phases
4. The Registration Process

WHO SHOULD ATTEND

- All employees in the organization pursuing registration would benefit from this course. The preferred order of delivery would be as follows:
  1. Management
  2. Steering committee
  3. Salary personnel
  4. Hourly personnel

BENEFITS

- Helps to determine how much effort will be required to implement an ISO/TS16949:2002 system.
- You will understand which sections of the standard will affect various positions.
- Attendees will also learn that the standard is a full business system that will impact all departments within the company.

PREREQUISITES

- None

CANADA

Oct	3	Toronto, ON
Dec	4	Toronto, ON

UNITED STATES

Sep	29	Madison Heights, MI

ISO/TS 16949:2002 INTERNAL AUDITOR

3 DAYS	FEE: $995.00 *(Canadian companies add GST)*	CEU's = 2.4

BRIEF DESCRIPTION

- This course teaches participants how to survey and troubleshoot their own operation for compliance to ISO/TS16949:2002. The audit phases of planning, execution and follow-up are covered in detail. Every effort has been made to distinguish the role of an internal auditor versus a third party auditor. Participants will be shown how to tactfully utilize auditing techniques in their own full-time work environment.

OUTLINE OF TOPICS COVERED

1. Introduction and Objectives
   - What is auditing?
   - Purposes/Scope of an audit
   - Assessment types and roles
   - Audit types and categories
2. ISO/TS16949:2002 Technical Specification
   - International Automotive Task Force (IATF)
   - Purpose of ISO/TS16949:2002
   - Key Definitions
   - The 5 sections (from the auditor's perspective)
3. The Audit Cycle
4. Desk Study
   - Purpose
   - Documents
5. Checklists
   - Purpose
   - Content
   - Good versus bad questions
6. Audit Planning
   - Information required
   - Formats
7. Executing The Audit
   - Opening meeting
   - Collecting objective evidence
   - Obstacles
   - Recording observations
   - Categories of Nonconformance
8. Closing Meeting
   - Contents
   - Strategies
9. The Audit Report
   - Purpose
   - Content
10. Corrective Action/Follow-up
    - Responsibilities
    - CAR Completion
    - Follow-up reports

WHO SHOULD ATTEND

- Individuals who will manage, conduct or participate in internal audits.

BENEFITS

- It will assist organizations wishing to become registered to ISO/TS16949:2002 by identifying the elements that an external auditor will cover.
- This course will allow an organization to qualify their internal auditors to conduct both first party and second party audits of their own facility as well as sister facilities and suppliers. Auditors will not only learn how to ensure that the system is implemented as written, but also to determine if it is effective and to identify opportunities for continual improvement.

PREREQUISITES

- Participants will benefit from having exposure to ISO/TS16949:2002 prior to the training, however it is not mandatory.

CANADA

Aug	12 - 14	Cambridge, ON
Sep	23 - 25	Cambridge, ON
Oct	7 - 9	Toronto, ON

UNITED STATES

Aug	19 - 21	Nashville, TN
Oct	27 - 29	Madison Heights, MI
Nov	18 - 20	Nashville, TN

TRANSITION FROM QS-9000 TO ISO/TS 16949:2002 - Understanding the Key Differences

1 DAY	FEE: $395.00 *(Canadian companies add GST)*	CEU's = 0.8

BRIEF DESCRIPTION

- With the introduction of the ISO/TS 16949:2002 standard, automotive suppliers registered to QS-9000 are required to transition to the new requirements within the next few years. There are significant changes to the new standard. Handling these changes in the correct way can mean the difference between mediocre and significant improvements in organizational performance. Come learn what these changes are and very practical ways to take advantage of them to enhance your organizations performance.

OUTLINE OF TOPICS COVERED

1. Benefits of a Business Operating System
2. Timeline to transition
3. ISO/TS 16949:2002 differences
4. Changes in requirements
5. How to define processes
6. Key Performance Indicators, analysis, and continual improvement
7. Competency based training
8. Work environment evaluation
9. Top Management's new role
10. A new approach to auditing
11. Transition plan steps

WHO SHOULD ATTEND

- Any individual responsible for transitioning their existing QMS system to ISO/TS16949:2002.

BENEFITS

- Communicate ISO transition needs to your organization.
- Lead your transition effort.
- Turn your QS-9000 based system into one that supports and benefits your business.

PREREQUISITES

- Those with no previous ISO/TS 16949 experience are strongly recommended to take the Introduction seminar as this seminar only deals with the differences.
- This seminar is designed for participants who have a firm grasp of the ISO/TS 16949 standard and experience with its implementation and maintenance.

CANADA

Aug	19	Toronto, ON
Sep	16	Cambridge, ON
Oct	1	Mississauga, ON
Oct	21	Cambridge, ON

UNITED STATES

Aug	12	Nashville, TN
Oct	1	Madison Heights, MI
Dec	3	Nashville, TN

TRANSITION FROM QS-9000 TO ISO/TS 16949:2002 – Auditor Upgrade

2 DAYS | **FEE: $795.00** *(Canadian companies add GST)* | **CEU's = 1.6**

BRIEF DESCRIPTION

- This course is designed for organizations registered to the QS-9000 standard that want to learn techniques on making the transition to the ISO/TS 16949:2002 standard

OUTLINE OF TOPICS COVERED

1. Introduction
2. Transition from QS to TS
3. The Process Approach
4. Continuous Improvement Theory
5. ISO/TS Transition Model
6. Registrar Transition Plans
7. Advantages of the ISO/TS Standard
8. Transition Strategies
9. Options for Organizing Documents
10. Creating a Cross Reference Table
11. Transition Planning

WHO SHOULD ATTEND

- Those individuals responsible for transitioning the current QS-9000 quality management system to the ISO/TS 16949:2002 standard
- Qualified internal auditors also require this training in order to upgrade their skills.

BENEFITS

- Assess the current quality management system to the new standard and identify gaps.
- Prepare a transition plan.
- Map current system process.
- Effectively implement new ISO/TS 16949:2002 requirements.
- Achieve successful registration to the new TS standard.

PREREQUISITES

- A previous Internal Auditor course would be beneficial.

CANADA

Sep	10 - 11	Toronto, ON
Sep	17 - 18	Cambridge, ON
Oct	22 - 23	Cambridge, ON
Nov	25 - 26	Toronto, ON

UNITED STATES

Aug	26 - 27	Nashville, TN
Oct	15 - 16	Madison Heights, MI
Dec	4 - 5	Nashville, TN

LEAD AUDITOR FOR ISO 9001:2000

(with emphasis on ISO/TS 16949:2002)

5 DAYS | **FEE: $1,595.00** *(Canadian companies add GST)* | **CEU's = 4.0**

BRIEF DESCRIPTION

- This course will discuss all types of audits, assessments and show participants how to be most effective in these activities. Case studies, interactive learning, teamwork, role-playing and lectures are all used to instruct in the techniques and methods that can be used to ensure a successful assessment.

OUTLINE OF TOPICS COVERED

1. Principle Objectives of ISO
2. The ISO Family of Standards
3. The ISO/TS 16949 Standard
   - Section by section analysis (from the auditor's perspective)
4. Effective Implementation
5. ISO/TS 16949 Documentation System
6. Audit Types
7. Audit Responsibilities
8. Documentation Review
9. Preparation of Checklists
10. Audit Planning
11. Opening Meetings
12. Gathering Objective Evidence
13. Reporting Nonconformances
14. Closing Meetings
15. Audit Reports
16. Registration Process

WHO SHOULD ATTEND

- Individuals interested in pursuing Auditor and/or Lead Auditor certification.
- Those responsible for developing and managing supplier accreditation programs.
- Participants are assessed by the following two methods – Continuous Evaluation and Written Examination.

BENEFITS

- Manage audit programs within your organization, including the internal audit program, corporate audits and supplier quality system development. Since participants will learn the characteristics of a professional auditor, it will enable them to better recruit and evaluate auditors under their direction.
- "Successful Completion" satisfies the training requirements for individual auditor certification by IATCA.

This course is accredited by the ANSI-RAB National Accreditation Program, or ANSI-RAB NAP and fulfills the requirements for certification of all QMS auditor grades (including internal). RAB auditor certification grades now are titled as Quality Management Systems: QMS-PA, QMS-A, QMS-LA.

PREREQUISITES

- A working knowledge of ISO/TS 16949 and past audit experience would be an asset.
- Professional and Training requirements, as well as first, second or third party audits must be met before becoming a Lead Auditor.

CANADA

Aug	18 - 22	Toronto, ON
Oct	27 - 31	Toronto, ON

UNITED STATES

Sep	22 - 26	Nashville, TN
Nov	17 - 21	Madison Heights, MI

QS-9000 INTERNAL AUDITOR

3 DAYS | **FEE: $995.00** *(Canadian companies add GST)* | **CEU's = 2.4**

BRIEF DESCRIPTION

- This course teaches you how to audit and trouble shoot your own operation for compliance to the QS-9000 standard. The audit phases of planning, execution and follow-up are covered in detail. Every effort has been made to distinguish the role of a third party auditor versus an internal auditor. Participants will be shown how to tactfully utilize auditing techniques in their own full-time work environment.

OUTLINE OF TOPICS COVERED

1. Review: Quality System Standards
2. Architecture of QS-9000 Standards Documentation
3. TE 9000 Update
4. Method of conformance to QS-9000
5. The QS-9000 Process
6. QS-9000 Section by Section (Auditor's Perspective)
7. Nature of Quality Audits
8. Code of Practice for Quality System Registrars
9. Auditors and Lead Auditors
10. Audit Planning
11. Preparation and Use of Checklists
12. Opening Meeting
13. Communications
14. Executing the Audit (Case Studies)
15. Nonconformances
    - Recording Nonconformances
16. The Audit Report
17. Corrective Action/Follow-up

WHO SHOULD ATTEND

- Employees who will manage, conduct or participate in internal audits. Specifically the course will be of interest to employees of DaimlerChrysler, Ford, General Motors and supplier companies with QS-9000 registration.

BENEFITS

- This course will assist organizations wishing to become registered to QS-9000 by identifying the elements that an external auditor will cover.
- Also, this course will allow an organization to qualify their internal auditors to conduct both first party and second party audits of their own facility, as well as, sister facilities and suppliers. Auditors will not only learn how to ensure that the system is implemented as written, but also to determine if it is effective and to identify opportunities for continual improvement.

PREREQUISITES

- Participants will benefit from having exposure to QS-9000 prior to the training, however it is not mandatory.

CANADA

UNITED STATES

Sep	8 - 10	Madison Heights, MI

IMPLEMENTING ISO 14001 IN A QS/TS ENVIRONMENT

2 DAYS | **FEE: $695.00** *(Canadian companies add GST)* | **CEU's = 1.6**

BRIEF DESCRIPTION

- The ISO 14001 Environment Management System is a requirement in today's automotive industry.
- Learn how to efficiently and effectively implement this standard in your QS/TS environment.
- See first hand how ISO 14001 and the QS/TS standards relate and how business benefits can be gained.

OUTLINE OF TOPICS COVERED

1. Introduction
   - Why implement an Environment Management System
   - Customer requirement
   - Environmental risk management
   - Concerns
   - Combining ISO 14001 and QS/TS
   - Implementation strategies
   - ISO 14001 and QS-9000/ISO/TS 16949 similarities
2. What is ISO 14001 background and history?
3. ISO 14001 Requirements
   - Interpretation of ISO 14001 standard in a QS-9000/ISO/TS 16949 environment
   - Links to QS-9000 requirements
4. ISO 14001 Implementation
   - Setting up the ISO 14001 project
   - Identifying the environment risks
   - Identification of significant environmental risks
   - Environment policy, objectives and targets
   - Setting up and deploying environmental programs
   - Controlling operations and training

WHO SHOULD ATTEND

- Quality specialists or others tasked with the implementation of an ISO 14001 Environmental Management System in an existing QS-9000 and/or ISO/TS 16949 environment.

BENEFITS

- Implement ISO 14001 in a QS/TS Environment in the most efficient manner.
- Avoid duplication and problems in the QS/TS System.

PREREQUISITES

- Familiarity with the QS-9000 3rd edition and/or ISO/TS 16949 standard is an asset.

CANADA

UNITED STATES

Oct	23 - 24	Madison Heights, MI

ISO 14000 IMPLEMENTATION/DOCUMENTATION

AVAILABLE ON-SITE ONLY

BRIEF DESCRIPTION

- This course will provide an understanding of the Environmental Management System requirements. The content instructs participants in the methods of preparing necessary documentation for an ISO 14000 system.
- Workshops in this course allow participants to use document writing techniques. Case studies include both manufacturing and service examples.
- Many North American companies who have implemented ISO 14000 have benefited by achieving greater efficiency and cost savings.

OUTLINE OF TOPICS COVERED

1. What is ISO 14000
   - Background of 14000 Standards
   - ISO 9001 vs. ISO 14001
   - Registration Process
   - Benefits
2. ISO 14001 Requirements
3. Implementation
   - Approaches/Techniques
   - Establishing Teams
   - Documented Implementation Plan
   - Reviewing Progress
   - Registration
4. Environmental Policy Manual
   - Contents
   - Principles
   - Writing Process
5. Environmental Procedures
   - Procedure Format
   - Procedure for Writing a Procedure
6. Written Instructions
   - Applicability of Work Instructions
   - Who should the authors be?
   - Structure/format

WHO SHOULD ATTEND

- Individuals from manufacturing or service organizations who are involved in Environmental Management System development, procedure and work instruction writing.

BENEFITS

- Develop an effective EMS.
- Ensure conformance to ISO 14001 requirements.
- Plan and implement an EMS project.
- Identify areas to improve existing environmental practices.

PREREQUISITES

- ISO 14000 Introduction.
- Experience with environmental activities would benefit the participant.

ISO 14000 INTERNAL AUDITOR

2 DAYS | **FEE: $795.00** *(Canadian companies add GST)* | **CEU's = 1.6**

BRIEF DESCRIPTION

- Audit knowledge skills and methods required for ISO 14001 environmental management system audits are covered in this course. Case studies and workshops, simulating actual audit situations, are used to practice auditing skills. This course covers guidelines for audit planning and reporting. The qualifications specified in ISO 14012 are covered.

OUTLINE OF TOPICS COVERED

1. Environmental Audit Basics
   - What is ISO 14001
2. Review of ISO 14001 Section by Section from the auditor's perspective
3. Auditor Responsibilities
4. Audit Planning, preparation and use of checklists
5. Executing the audit
6. Nonconformities; recording nonconformities
7. Audit Reports, Corrective Action; Follow-up

WHO SHOULD ATTEND

- Individuals with knowledge of the ISO 14001 Standard; those professionals who will be managing, conducting or participating in internal EMS audit; environmental and quality management.

BENEFITS

- Test the effectiveness of an EMS
- Ensure conformance to ISO 14001 requirements
- Determine readiness for registration
- Identify areas to improve

PREREQUISITES

- ISO 14000 Introduction
- ISO 9000 QS/TS Internal Auditor
- Those with previous auditing experience will find it a benefit in taking this seminar

CANADA

Sep	16 - 17	Mississauga, ON
Nov	18 - 19	Toronto, ON

UNITED STATES

Sep	18 - 19	Nashville, TN
Oct	13 - 14	Madison Heights, MI

AS9100 INTRODUCTION

1 DAY | **CEU's = 0.8**

BRIEF DESCRIPTION

- This course is designed for individuals who have little or no knowledge of the AS9100 standard. You will learn the purpose and benefits of implementing this system.

OUTLINE OF TOPICS COVERED

1. Introduction
2. Background
3. The ISO 9000 Family of Standards
4. AS9100 Quality System Standard
5. Section by Section Analysis
6. Purpose
7. Benefits
8. The Registration Process

WHO SHOULD ATTEND

- All employees in the organization pursuing registration would benefit from this course. The preferred order of delivery would be as follows:
  - Management
  - Steering committee
  - Salary personnel
  - Hourly personnel

BENEFITS

- This course will help you to determine how much effort is required to implement an AS9100 system.
- You will understand which sections of the standard will affect which positions.
- Attendees will also learn that the standard is a full business system that will impact all departments within your company.

PREREQUISITES

- None

AS9100 INTERNAL AUDITOR

3 DAYS | **CEU's = 2.4**

BRIEF DESCRIPTION

- This course is designed to teach you how to troubleshoot your own operation for the compliance to the AS9100 Aerospace Standard. Participants will be shown how to utilize auditing techniques in their own full-time work environment.
- Customers may add a fourth day to this course when held at their facility in order for auditors to conduct an actual audit under the direction of their instructor. This activity will allow for a critique of each auditor's performance.

OUTLINE OF TOPICS COVERED

1. Review of the AS9100 Standard (An Auditor's Perspective)
2. Quality System Requirements AS9100 (Section by Section)
3. Purposes and Forms of Quality Documentation
4. Nature of Quality Audits
5. Auditors and Lead Auditors
6. Audit Planning
7. Preparation and Use of Checklists
8. Opening Meeting
9. Communications
10. Executing the Audit
11. Nonconformances
    - Objective evidence
    - Recording nonconformances
    - Classifying nonconformances
12. Closing Meeting
13. The Audit Report
14. Corrective Action
15. Follow-up

WHO SHOULD ATTEND

- Individuals who manage, conduct or participate in internal audits.

BENEFITS

- This course will enable an organization to qualify their internal auditors to conduct both first party and second party audits of their own facility, as well as, sister facilities and suppliers.
- Auditors will not only learn how to ensure that the quality management system is implemented as written, but also to determine its effectiveness and identify opportunities for continual improvement.

PREREQUISITES

- Delegates will benefit from having exposure to the AS9100 standard prior to the training, however, it is not mandatory.

Available as on-site only • On-site pricing applies

APQP OVERVIEW

2 DAYS | **FEE: $695.00** *(Canadian companies add GST)* | **CEU's = 1.6**

BRIEF DESCRIPTION

- This course will familiarize the participant with the normally occurring activities within the APQP process.
- The APQP process includes activities in the early planning/concept stage, design phase, process analysis, production launch and continuous improvement.
- Through activities and scenarios, participants will experience how the APQP process impacts product realization.
- APQP is one of the requirements by automotive companies to comply with the requirements of a quality management system.

OUTLINE OF TOPICS COVERED

1. Introduction to APQP
2. Purpose of APQP
3. Identify the APQP phases, processes and corresponding milestones
4. Identify the appropriate activities for each phase
5. Examine the relationship among the APQP deliverables and QS-9000 elements
6. Examine the linkage between process flow charts, FMEAs, control plans and PPAP
7. Workshop exercises/application

WHO SHOULD ATTEND

- APQP cross-functional team members (anyone in a QS-9000 environment). Each department must have an individual capable of participating in the process.
- Beginner and Intermediate level course (Experts will already be familiar with the course content, the linkages and benefits of APQP).

BENEFITS

- Save time (organized program development).
- Promote effective communication between departments (avoid misunderstandings).
- Provide a framework for continuous improvement through feedback assessment and corrective action (save money and time).

PREREQUISITES

- This course will give participants an overview of all the APQP requirements and where organizations may have gaps in their application. Subsequent courses are offered to enhance specific areas of the APQP process.
- An understanding of QS-9000 is beneficial but not required.

CANADA

Aug	28 - 29	Cambridge, ON
Sep	16 - 17	Mississauga, ON
Oct	28 - 29	Cambridge, ON
Nov	18 - 19	Toronto, ON

UNITED STATES

Aug	21 - 22	Madison Heights, MI
Oct	7 - 8	Nashville, TN

FAILURE MODE AND EFFECTS ANALYSIS (FMEA)

1 DAY | **FEE: $395.00** *(Canadian companies add GST)* | **CEU's = 0.8**

BRIEF DESCRIPTION

- Failure Mode and Effects Analysis (FMEA) workshop is an important design and manufacturing tool intended to help prevent failures and defects from occurring and reaching the customer.
- The workshop will include working with team members to learn how to methodically study the cause and effect of failures before they occur. The FMEA workshop will focus on potential product and process failures. Each participant will examine and identify potential failures. An analysis is made of its effect on the total system, the causes and current design/process controls. A risk analysis is derived through evaluating the severity, frequency of occurrence, and likelihood of detection/prevention of each failure mode. Once completed, participants will analyze the resulting data and develop a plan to address potential high-risk issues.

OUTLINE OF TOPICS COVERED

1. Introduction
2. Team Requirements
3. Key Elements of a FMEA (Design/Process)
4. FMEA Worksheet Completion
5. Application

WHO SHOULD ATTEND

- APQP cross-functional team members (anyone in a QS-9000 environment). Each department must have an individual capable of participating in the process.
- Program managers, engineers (design, product, manufacturing), manufacturing team leaders and supervisors, quality and materials personnel.
- Beginner and Intermediate level course (Experts will already be familiar with the course content).

BENEFITS

- Save time (organized systematic approach to completing FMEA's).
- Save money (prevent failures in upfront planning, incorporate prevention and detection methods into the manufacturing process and design).
- Promote effective communication between departments (avoid misunderstandings, establish a common language of terms).
- Provide a framework for continuous improvement through feedback assessment and corrective action (save money and time).

PREREQUISITES

- APQP Overview would be a benefit but not a prerequisite (depends on the position of the person taking the course).
- An understanding of QS-9000 and APQP is beneficial but not required.

CANADA

Aug	14	Toronto, ON
Sep	18	Mississauga, ON
Oct	3	Toronto, ON

UNITED STATES

Aug	25	Madison Heights, MI
Oct	9	Nashville, TN

PRODUCTION PART APPROVAL PROCESS (PPAP) & CONTROL PLANS

1 DAY | **FEE: $395.00** *(Canadian companies add GST)* | **CEU's = 0.8**

BRIEF DESCRIPTION

- PPAP section: This section will familiarize the participant with the generic requirements for production part approval for all production and service commodities. The procedures, reporting requirements and activities for Ford, General Motors and DaimlerChrysler are discussed. Through activities, participants will assemble and critique a PPAP package for submission to a potential customer. PPAP is one of the requirements by automotive companies to comply with the Advanced Product Quality Planning (APQP) requirements of QS-9000.
- Control Plan section: This section will examine the Control Plan methodology. Control Plans are a central component of the APQP process, which aids in the manufacture of quality products. This is a methodology that will help ensure product design requirements are understood, deployed, and controlled in the manufacturing and assembly processes. The approach to control plans provides a tool for production and assembly operations at product launch or during the life cycle of production. Design Failure Mode Effects Analysis (DFMEA) and Process Failure Mode Effects Analysis (PFMEA) are important sources of information flowing into the Control Plans.

OUTLINE OF TOPICS COVERED

1. PPAP section
   - Introduction to PPAP
   - Scope, definition and purpose
   - When submission is required
   - Submission levels and requirements
   - Process requirement
   - Customer specific requirements (Ford, DaimlerChrysler, General Motors)
   - Workshop exercises/application
2. Control Plan section
   - Introduction
   - Key elements of a Control Plan
   - Process Analysis
   - Application

WHO SHOULD ATTEND

- Internal auditors; anyone involved in the development and submission of PPAP packages; Anyone involved in the implementation of QS-9000 or ISO/TS16949.
- APQP cross-functional team members (anyone in a QS-9000 environment). Each department must have an individual capable of participating in the process.
- Project Managers, Engineers and Quality Department Personnel.
- Beginner and Intermediate level course (Experts will already be familiar with the course content.

BENEFITS

- Efficiently and effectively develop and submit packages.
- Ensure compliance to QS-9000 and ISO/TS 16949.
- Provides feedback for future related projects.
- Reduce waste and improve the quality of products.
- Clearly communicate changes in product/process characteristics.

PREREQUISITES

- APQP Overview would be a benefit.
- An understanding of QS-9000 is beneficial but not required.
- Failure Mode and Effects Analysis (FMEA).

CANADA

Aug	19	Oshawa, ON
Sep	30	Cambridge, ON
Oct	7	Toronto, ON
Dec	11	Toronto, ON

UNITED STATES

Aug	26	Madison Heights, MI
Oct	10	Nashville, TN

MEASUREMENT SYSTEM ANALYSIS (MSA)

2 DAYS	FEE: $695.00 *(Canadian companies add GST)*	CEU's = 1.6

BRIEF DESCRIPTION

- This course will enhance the knowledge of participants in the application of Measurement System Analysis (MSA).
- MSA is a methodology that examines the repeatability and reproducibility of measurement equipment (variable and attribute gauges).
- In addition, gauge study preparation, methods of calculations, and acceptance criteria are topics for discussion and application during the workshop portion of the course.

OUTLINE OF TOPICS COVERED

1. Introduction
2. Measurement Issues
3. Types of Measurement System Variation
4. Analysis of a Measurement System
5. Preparation for a Measurement System Study
6. Application for a Measurement System Study
7. Workshop analysis of Measurement System Study

WHO SHOULD ATTEND

- Tool Designers, Design Manufacturing, Process and Quality Engineers, Layout Technicians and Tool & Gauge Makers.
- Intermediate and Expert level course.

BENEFITS

- Increase gauge accuracy.
- Improve gauge repeatability and reproducibility.
- Define measuring devices for a given application.

PREREQUISITES

- APQP Overview would be a benefit.
- An understanding of statistics is beneficial.

CANADA

Sep	24 - 25	Mississauga, ON
Nov	26 - 27	Toronto, ON

UNITED STATES

Aug	27 - 28	Madison Heights, MI
Oct	13 - 14	Nashville, TN

8D PROBLEM SOLVING/ROOT CAUSE ANALYSIS

2 DAYS | **FEE: $695.00** *(Canadian companies add GST)* | **CEU's = 1.6**

BRIEF DESCRIPTION

- Eight Steps to disciplined problem solving (Root Cause Analysis) is a step-by-step process to help reduce waste, scrap and rework in a quality system.
- This workshop focuses on issues and events that affect the process and/or product. The workshop spends time examining nonconformances while working with teams to understand and define problems. A case study will address a cultural approach to process variation reduction, systems thinking, communication, mapping the process, rapid feedback, problem solving through mistake/error proofing opportunities, and other elements required to meet customer conformance.
- This systematic approach to problem solving helps people and teams get to root causes, keeping issues and solutions simple. This methodology allows the issue to be easily understood, analyzed, contained, solutions identified, decisions made, implemented and results monitored.
- Experience has shown that resolution to complex problems sometimes requires simple changes to the system, process, procedures or work instructions. Equally important, the eight step problem solving methodology must be compatible with the organization's quality system for continual improvement.

OUTLINE OF TOPICS COVERED

1. Introduction
2. Use Team Approach
3. Define the Problem
4. Implement and Verify Interim (containment) Actions
5. Define/Verify Root Causes
6. Choose and Verify Corrective Actions
7. Implement Permanent Corrective Actions
8. Prevent recurrence
9. Monitor Results
10. Analyze Case Studies
11. Team problem solving presentation

WHO SHOULD ATTEND

- Individuals involved in Design, Process, Quality Assurance, Executive Management and all levels of Production/Manufacturing.
- Beginner and Intermediate level course.

BENEFITS

- Increase profitability through reduction of scrap, waste and rework.
- Improve problem solving skills and efficiencies.
- Become a proactive member in the continual improvement effort of your organization.

PREREQUISITES

- None

CANADA

Sep	3 - 4	Cambridge, ON
Oct	1 - 2	Toronto, ON

UNITED STATES

Sep	11 - 12	Madison Heights, MI
Oct	23 - 24	Nashville, TN
Dec	10 - 11	Nashville, TN

ERROR PROOFING

1 DAY | **FEE: $395.00** *(Canadian companies add GST)* | **CEU's = 0.8**

BRIEF DESCRIPTION

- The application of Error Proofing techniques will help organizations prevent defects during manufacturing and assembly operations. As well, organizations will be able to implement corrective actions that more effectively prevent non-conforming product from reaching internal or external customers.
- This workshop applies to employees directly involved with manufacturing and assembly operations. For customized on-site training, the classroom session is enhanced by an additional day-long workshop in the customer's plant. The workshop phase of the training is tailored for the application of Error Proofing methods directly in the customer's plant.
- Participants are invited to bring the following to the workshop:

- Process maps	- Gauge/inspection plans	- Work Instructions	- Control plans
- Product drawings	- Good/bad product sample	- Process FMEA's	- Gauge instructions

OUTLINE OF TOPICS COVERED

1. What is an Error Proofing approach and what are the benefits?
2. Error Proofing requirements to prevent errors.
3. Sequence of conditions leading to errors and defects.
4. Error Proofing Systems/Devices and types of inspection (i.e. source, judgment and successive inspection).
5. Error Proofing Applications, principles and examples.
6. Error Proofing Detection Methods including devices and sensors.
7. Getting to the source of errors through root cause analysis.

WHO SHOULD ATTEND

- Manufacturing, Process Engineers, Quality Assurance personnel, and all levels of Production personnel.
- People who are already participating in Error Proofing activities but are not achieving desired results preventing internal and external spills of non-conforming product.

BENEFITS

- Learn how to effectively implement error proofing
- Reduced defects, scrap, rework, spills and associated losses such as containment and warranty costs
- Prevent errors permanently
- Error Proofing is an integral part of an effective FMEA process, Lean Manufacturing and Six

PREREQUISITES (Suggested but not required)

- FMEA overview
- MSA overview

CANADA

Sep	10	Toronto, ON
Nov	6	Toronto, ON

UNITED STATES

Oct	31	Madison Heights, MI
Oct	23	Nashville, TN

GEOMETRIC DIMENSIONING & TOLERANCING

3 DAYS | **FEE: $895.00** *(Canadian companies add GST)* | **CEU's = 2.4**

BRIEF DESCRIPTION

- This seminar is designed to be a practical, hands-on and interactive session that allows participants to gain knowledge to ensure that design dimensional and tolerance requirements, as they relate to actual function, are specifically stated and carried out.

OUTLINE OF TOPICS COVERED

1. Introduction
2. GD&T System
3. Feature and Feature Control Frames
4. Tolerance Zones
5. Material Modifiers and General Rules
6. Tolerance of Form, Orientation, Profile and Runout
7. Location
8. Datums
9. Practical Application Activity

WHO SHOULD ATTEND

- Individuals responsible for design, manufacturing and quality who are using GD&T in their work environment.
- Beginner and Intermediate level course.

BENEFITS

- Save money on gauges, fixtures and tooling.

PREREQUISITES

- Basic math and blueprint reading skills are a benefit.

CANADA

Sep	23 - 25	Toronto, ON
Oct	1 - 3	Cambridge, ON
Nov	11 - 13	Toronto, ON

UNITED STATES

Sep	29 - Oct1	Nashville, TN
Oct	20 - 22	Madison Heights, MI

STATISTICAL PROCESS CONTROL (SPC)

3 DAYS | **FEE: $895.00** *(Canadian companies add GST)* | **CEU's = 2.4**

BRIEF DESCRIPTION

- This workshop will focus on the application of Statistical Process Control in a manufacturing environment. It will cover the identification, control and reduction of process variation.

OUTLINE OF TOPICS COVERED

1. Evolution of SPC
2. Introduction of Control Charts to a Process
3. Pareto Analysis
4. Team Applications - Cause and Effect Analysis
5. Maintenance and calculation of control limits on various charts
6. Prevention vs Detection
7. Histograms
8. Patterns of Variation, Normal Distribution
9. Process Capability, Capability Studies
10. Variable Control Charts
11. Attribute Data Control Charts
12. Interpretation of Control Charts
13. Measurement System Analysis
14. Workshops

WHO SHOULD ATTEND

- Individuals from manufacturing, engineering and quality assurance who are involved in the identification, development and application of statistical techniques.

BENEFITS

- Select beneficial applications for SPC
- Construct and analyze histograms
- Determine statistical properties of process variation
- Calculate capability indices
- Construct variable and attribute control charts
- Analyze control charts for abnormal patterns
- Verify the acceptability of measurement systems

PREREQUISITES

- A fundamentally sound knowledge of mathematics is required.

CANADA

Aug	25 - 27	Cambridge, ON
Oct	7 - 9	Cambridge, ON
Oct	21 - 23	Toronto, ON
Dec	2 - 4	Mississauga, ON

UNITED STATES

Sep	30 - Oct 2	Madison Heights, MI
Oct	15 - 17	Nashville, TN

APPLYING SPC IN AN AUTOMOTIVE QUALITY MANAGEMENT SYSTEM

1 DAY	FEE: $395.00 *(Canadian companies add GST)*	CEU's = 0.8

BRIEF DESCRIPTION

- This one day seminar is designed to demonstrate to participants a logical approach to applying statistical process control in an automotive quality management system such as QS-9000 or ISO/TS16949. Instead of focusing on how to construct charts and calculate indices, this course will deal with where, when, how and why the various tools should be used.

OUTLINE OF TOPICS COVERED

1. Selecting an appropriate characteristic
2. Conducting initial process studies
3. Selecting the most effective tools
4. Analyzing initial data
5. Troubleshooting incapable/unstable processes
6. Quantifying sources of variation
7. Process input control

WHO SHOULD ATTEND

- Quality and Production Managers
- Quality, Manufacturing and Project Engineers
- Internal Quality Auditors
- Personnel responsible for APQP, PPAP and SPC coordinators

BENEFITS

- Effective application of statistical tools.
- Add consistency and control to processes.
- Improve appropriate reaction times to variation to prevent defects.
- Employees "buy-in" to the intended use of tools to improve benefits.
- Changes focus from quality control to quality assurance.

PREREQUISITES

- Basic SPC.

CANADA

UNITED STATES

Oct	21	Nashville, TN
Nov	7	Madison Heights, MI

LEAN MANUFACTURING OVERVIEW

1 DAY	FEE: $395.00 (Canadian companies add GST)	CEU's = 0.8

BRIEF DESCRIPTION

- A Lean approach shortens the lead-time between a customer order and the delivery of the parts or service, using the least amount of resources (people, equipment, money, materials, time, facilities, etc.) by eliminating all forms of waste.
- Becoming Lean helps organizations reduce costs, inventory, defects and scrap, cycle times and non-value-added activities, resulting in a more competitive, profitable, agile and market-responsive organization.

OUTLINE OF TOPICS COVERED

1. Principles and concepts of Lean Manufacturing
2. Benefits of a Lean approach
3. The 8 wastes of Lean
4. Key Components of a Lean approach:
5. VSM -Value Stream Mapping
    - 5S / Visual Controls
    - Work Standardization / Cell Design for Flow Production
    - Quick set-up techniques
    - Quality at Source / Error Proofing
    - Load leveling / Batch size reduction
    - Pull / Kanban production
    - Autonomous maintenance and TPM (Total Productive Maintenance)
    - Lean Metrics
    - Kaizen and Kaizen events (blitz)
6. Strategy for implementing Lean

WHO SHOULD ATTEND

- Project managers, production coordinators, material handlers, manufacturing and process engineers, quality engineers, plant team leaders and managers.
- Beginner and intermediate level course.

BENEFITS

- Reduce costs (increase throughput).
- Save time (Gain understanding of sequential approaches and linkages to lean manufacturing).
- Increase throughput (identify key bottlenecks in your pull system).

PREREQUISITES

- None

CANADA

UNITED STATES

Sep	17	Madison Heights, MI
Nov	12	Nashville, TN

KAIZEN OVERVIEW

1 DAY	FEE: $395.00 *(Canadian companies add GST)*	CEU's = 0.8

BRIEF DESCRIPTION

- Kaizen simply means "Continuous Improvement". In Japanese "Kai" means "to take apart" and "zen" means "to make good". In Kaizen we "take apart" or analyze the elements of a system or process to understand how it works, and then discover how to "make it better" or improve it.
- The Kaizen approach incrementally improves processes by utilizing the ideas and talents of those who are directly involved in the processes.
- Using Kaizen tools, techniques and methodologies, all types of waste are identified and reduced usually through "Kaizen events" or "blitzes". Kaizen is an integral part of any "L

OUTLINE OF TOPICS COVERED

1. What is Kaizen and why is a Kaizen approach beneficial?
2. Identifying and eliminating waste as an overall focus
3. Guidelines on selecting areas to focus on
4. What are Kaizen events and what are the key elements of their success?
5. Planning and preparation for a Kaizen event
6. Kaizen tools and techniques
7. The Kaizen event and implementation
8. Presenting improvements, celebrating success and follow up
9. Critical success factors

WHO SHOULD ATTEND

- All levels of personnel, particularly those currently involved or planning to be involved in continuous improvement activities.

BENEFITS

- Reduced: waste, defects, scrap, rework, cycle time, cost
- Improved: processes, quality, participation, morale, profitability, understanding of processes, responsiveness

PREREQUISITES

- None

CANADA

UNITED STATES

Sep	11	Nashville, TN
Oct	30	Madison Heights, MI

PROCESS MANAGEMENT

1 DAY	FEE: $395.00 *(Canadian companies add GST)*	CEU's = 0.8

BRIEF DESCRIPTION

- Clear identification of organizational processes forms a critical launching pad for any improvement effort (ISO, Six Sigma, Canada Awards for Excellence criteria, Baldrige, Self Directed Work Teams, Lean Manufacturing and Lean Service). In this one day workshop participants will learn the basic concepts of process management and how to apply them for improvements in organizational productivity, product or service quality and customer satisfaction.

OUTLINE OF TOPICS COVERED

1. The benefits of process management
2. Organizational silos
3. Basic concepts of process management
4. Mapping processes
5. Defining process components
6. Measuring process performance
7. Improving processes

WHO SHOULD ATTEND

- Anyone involved in or leading improvement efforts either in manufacturing or service organizations.

BENEFITS

- Clearly identify the best opportunities for improvement.
- Gain practical knowledge they can share with others.
- Reduce errors and costs.
- Improve quality, customer satisfaction, productivity, communications, morale.

PREREQUISITES

- None

CANADA

UNITED STATES

Nov	14	Madison Heights, MI

EFFECTIVE PROBLEM SOLVING

AVAILABLE AS ON-SITE ONLY

BRIEF DESCRIPTION

- This seminar is designed to introduce the participant to the basic concepts and approaches to effective root cause analysis and problem solving. The seminar will introduce a model for problem solving and, by guiding participants through it, show what tools to use and how they are used.
- In this one day seminar, participants will be given selected exercises to practice skills.
- This seminar can be turned into a two day on-site workshop where participants will work real problems through the problem solving steps to root cause identification and identification of actions.

OUTLINE OF TOPICS COVERED

1. Introduction to problem solving
2. The use of a team approach
3. Describing the problem
4. Taking immediate actions
5. Identifying root cause(s)
6. Choosing and taking corrective actions
7. Verifying corrective action effectiveness
8. Preventing recurrence

WHO SHOULD ATTEND

- People involved in problem solving efforts and those who lead any team that needs to solve problems and make improvements.
- Both non-automotive manufacturing and service delivery organizations.
- Beginner and Intermediate level course.

BENEFITS

- Increase productivity and quality through reduction of scrap, wasted time and money.
- Improve problem solving skills and efficiencies.
- Become a proactive member in the continual improvement effort of your organization.

PREREQUISITES

- None

LOST OPPORTUNITY COSTS (Cost of Quality)

AVAILABLE AS ON-SITE ONLY

BRIEF DESCRIPTION

- For most organizations, the cost of process inefficiency is typically 30% of sales. This seminar will introduce participants to the basic concepts of identifying the lost opportunity costs of poor productivity, quality and waste. As well, how to set-up a routine reporting system to measure improvement opportunities will be covered.

OUTLINE OF TOPICS COVERED

1. Introduction to process lost opportunity costs
2. Process and productivity improvement
3. Basic lost opportunity cost categories
4. Lost opportunity cost calculations
5. Data collection
6. Initial lost opportunity cost assessment
7. Implementing a routine reporting system

WHO SHOULD ATTEND

- Managers, controllers, engineers, quality professionals and those involved in or leading continual or productivity improvement efforts.

BENEFITS

- Identify the best improvement opportunities.
- Measure the effect of improvement activities.
- Lead your organization in making substantial improvements in productivity, quality and customer satisfaction.

PREREQUISITES

- Previous involvement in improvement opportunities is helpful.

KEY PERFORMANCE INDICATORS

AVAILABLE AS ON-SITE ONLY

BRIEF DESCRIPTION

- Peter Drucker the management guru is attributed with having said, "You can't manage what you can't measure". As organizations continually strive to improve performance, the reliance on good measures becomes ever greater. In this seminar participants will learn the basics of how to identify key performance indicators, deploy them throughout the organization, communicate results and act on the results.

OUTLINE OF TOPICS COVERED

1. The benefits of measurement
2. The measurement process relationship
3. Choosing what and where to measure
4. Organizational Key Performance Indicators
5. Cascading performance measures down into the organization
6. How to measure: The Measurement Tool Kit
7. Communicating the numbers
8. Managing by the measures

WHO SHOULD ATTEND

- Anyone interested in managing by fact and improving organizational performance. Whether you are just thinking about this subject or already have started implementation, this seminar will provide valuable information and how-to skills.

BENEFITS

- Taking this seminar will allow organizations to align divisional and departmental objectives with organizational objectives.
- Develop key performance indicators that really show how things are going and where to improve.
- Be able to communicate performance to everyone in a way that is understood and can be acted on at every level of the organization.

PREREQUISITES

Recommended:

- Process Management
- Effective Problem Solving
- Lost Opportunity Costs (Cost of Quality)
- Experience with process and organizational improvement activities would be an asset.

CUSTOMER SATISFACTION MANAGEMENT

AVAILABLE AS ON-SITE ONLY

BRIEF DESCRIPTION

- This workshop introduces the participants to the basic concepts of customer satisfaction management and resulting actions.

OUTLINE OF TOPICS COVERED

1. An overview of customer satisfaction management
2. What the customer wants - requirements for products or services
3. The perception gap - different perspectives on what is desired and how well it is delivered.
4. Customer satisfaction measurement tool kit
5. Improving customer satisfaction - acting on the results

WHO SHOULD ATTEND

- Those who are responsible for customer satisfaction & loyalty, monitoring the results of improvement efforts.

BENEFITS

- By clearly knowing what your customers want vs. what you deliver, your organization can improve the right things and gain a competitive advantage.
- Do you know the answers to the following questions:
  - What do you do that your customers like?
  - What do you do that your customers don't like?
  - What don't you do that your customers would like you to do?
  - How do you compare to your competition in your customer's view?

PREREQUISITES

Recommended:

- Process Management
- Key Performance Indicators
- Lost Opportunity Costs (Cost of Quality)
- Effective Problem Solving

SIX SIGMA - EXECUTIVE OVERVIEW

1 DAY	FEE: $395.00 *(Canadian companies add GST)*	CEU's = 0.8

BRIEF DESCRIPTION

- This session will give participants a good understanding of the basic concepts of Six Sigma and what it can do for their organization.

OUTLINE OF TOPICS COVERED

1. What is Six Sigma and why do it?
2. Reducing variation - the key to success
3. Six Sigma fundamentals
4. Six Sigma measures and statistics
5. The eight step breakthrough strategy
6. Customer focus - the Ct tree
7. The importance of supplier quality
8. Sigma level and cost of quality
9. Statistical distributions
10. Process metrics: Cp, Cpk, Ppk, Yields, Ppm, Dpmo, Short and Long term Sigma level
11. Overview of process diagnostic and improvement tools
12. Building quality into the process
13. Control techniques
14. Six Sigma (Master Black, Black Belt, and Green Belt)
15. Six Sigma Rules and Responsibilities
16. Strategy for Six Sigma Implementation

WHO SHOULD ATTEND

- Individuals who are interested in understanding what a Six Sigma approach is; how it can dramatically improve processes and what is involved in its implementation.
- Executives, directors, managers or decision makers in your company who are interested in understanding Six Sigma and how to implement an effective program to achieve greater ROI through process improvements, waste elimination and increasing product throughput.

BENEFITS

- You will be able to successfully understand and plan for the resources required to utilize Six Sigma methodologies for controlling variation and problem solving.

PREREQUISITES

- Familiarity/Knowledge of Basic Statistics would be an asset.

CANADA

Aug	19	Mississauga, ON
Nov	5	Oshawa, ON

UNITED STATES

Oct	22	Nashville, TN
Nov	3	Madison Heights, MI

SIX SIGMA GREEN BELT

5 DAYS | **FEE: $1995.00** *(Canadian companies add GST)* | **CEU's = 4.0**

BRIEF DESCRIPTION

- Six Sigma Green Belts are responsible for participating in and taking a leadership role in Six Sigma projects.
- They follow a very disciplined and structured approach to process improvement using the Six Sigma eight step breakthrough strategy aimed at drastically reducing the defect level of processes. This leads to lower costs, shorter cycle times and an increase in quality, competitiveness and customer satisfaction.
- Optional Green Belt certification is available for an additional cost. To achieve Green Belt certification, each candidate must demonstrate a sound understanding of Six Sigma concepts and show that they can apply Six Sigma tools and techniques practically and effectively to achieve the intended project outcomes. In addition to successfully completing a management approved Six Sigma project, candidates must also obtain at least 70% in a three-hour final exam (to be administered online after the course has ended).

OUTLINE OF TOPICS COVERED

1. Overview
   - Six Sigma fundamentals and methodology
   - Six Sigma measures and statistics
   - The eight step breakthrough strategy
   - Managing Six Sigma projects using the DMAIC (Define, Measure, Analyze, Improve and Control) approach
   - Opportunities for defects
   - Customer focus -The CT tree and Quality Function Deployment
   - Sigma level and Cost of Quality
   - Using statistical software (Minitab will be used for examples and analysis)

2. Define
   - Forming the team, validating the business case and developing a project charter
   - QFD and the voice of the customer
   - Key roles and responsibilities
   - SIPOC analysis
   - Identifying key customer requirements and defining CTQ's Outputs
   - Preparing the project action plan

3. Measure
   - Measurement systems analysis (Variable and Attribute data)
   - Six Sigma statistics
   - Statistical distributions
   - Static and dynamic statistics
   - Process mapping
   - Process metrics: Cp, Cpk, Pp, Ppk, Yields, ppm, dpmo, Short and Long term Sigma level
   - Data collection planning
   - Establishing sample size

4. Analyze
   - Root cause, Process diagnostic and improvement tools: Sub-process mapping and analysis; Pareto analysis; FMEA; Cause and effect matrix; Multi-vari analysis; Box plots; Correlation, Value added analysis, Lean Concepts
   - Hypothesis testing using Minitab (Anova, F, T and Chi square tests, Non parametric tests, Proportion tests, Stratification, Capability, Trends, Stability, Normality
   - Selection and validation of key root causes

5. Improve
   - Experimental design overview / Design for Six Sigma
   - Identifying and selecting the best solutions using / Decision matrix analysis
   - Mistake proofing
   - Implementation planning for solutions

6. Control
   - Pre-control tools / Short run controls
   - Continuous and discrete SPC tools
   - Process and quality audits
   - Control plans and project close out

7. Implementation
   - Six Sigma project management
   - Six Sigma deployment
   - The people side of Six Sigma projects and implementation

continued...

SIX SIGMA GREEN BELT

5 DAYS | **FEE: $1995.00** *(Canadian companies add GST)* | **CEU's = 4.0**

WHO SHOULD ATTEND

- Individuals who have a direct responsibility for managing Six Sigma projects or are expected to play a leadership role within the project team and want to learn how to practically apply the Six Sigma 'DMAIC' methodology.

BENEFITS

- Provides thorough knowledge of the Six Sigma approach and methodology for those not able to make the time or cost commitment of a full black-belt certification.
- Gives a practical, formalized, specific, understanding of Six Sigma tools and concepts to maximize the probability of successfully managing projects.

PREREQUISITES

- Good working knowledge of statistical methods and practical problem solving tools.
- A laptop is preferred, but not necessary.
- For participants choosing the certification option, a Management approved project with minimum expected savings of $20K and a minimum expected defect reduction of 70% is required.

CANADA

Oct	20 - 24	Mississauga, ON

SIX SIGMA BLACK BELT

20 DAYS | **FEE: $12,000** *(Canadian companies add GST)* | **CEU's = TBD**

BRIEF DESCRIPTION

- Within the Six Sigma strategy, organizational improvements are executed by Six Sigma project managers (Black Belts) who are able to complete 4 to 5 projects per year with typical savings of $50,000 to $100,000+ per project. They follow a very disciplined and structured approach to process improvement using the Six Sigma 'DMAIC' (Define, Measure, Analyze, Improve and Control) breakthrough strategy aimed at drastically reducing the defect levels of processes. This leads to lower costs, shorter cycle times and an increase in quality, competitiveness, profitability and customer satisfaction. The approach can be applied equally well with technical / manufacturing processes or with transactional service and administrative processes.

- Over a 4 to 5 month period Black Belt (BB) candidates will undergo an intensive program of four training sessions followed by 'hands on' application of Six Sigma tools, techniques and principles applied to a project approved by their organization and the program instructor. Application of training topics immediately follows each training session in the 3-4 weeks between sessions.

- To achieve Black Belt certification, each candidate must demonstrate a sound understanding of Six Sigma concepts and show that they can apply Six Sigma tools and techniques practically and effectively to achieve the intended project outcomes. In addition to successful project completion, candidates must also obtain at least 70% in a three-hour final exam.

DURATION

- Twenty (20) days (4 times 5 day sessions), with an additional one half (1/2) day exam to be completed on-line.

TIMEFRAME

- Approximately 16 weeks consisting of four 5 day training sessions each followed by 3 to 4 weeks of real-life application on an approved Six Sigma project in between sessions.

TRAINING

ACTIVITY	DURATION
Define and Measure session	5 days
DEFINE AND MEASURE PHASE ACTIVITY	3 - 4 weeks
Analyze session	5 days
ANALYZE PHASE ACTIVITY	3 - 4 weeks
Improve session	5 days
IMPROVE PHASE ACTIVITY	3 - 4 weeks
Control session	5 days
CONTROL PHASE ACTIVITY	3 - 4 weeks
Exam	0.5 days
N.B. Shaded activity is time spent working on Six Sigma project in between training sessions	

continued...

SIX SIGMA BLACK BELT

20 DAYS | **FEE: $12,000** *(Canadian companies add GST)* | **CEU's = TBD**

OUTLINE OF TOPICS COVERED

- **Define** – Understanding the basic concepts and techniques of Six Sigma. Forming the team, validating the business case and developing a project charter; QFD and the voice of the customer; Key roles and responsibilities; SIPOC analysis; Identifying key customer requirements and defining CTQ's; Outputs; Preparing the project action plan; Facilitating meetings; Influencing, motivating and communicating effectively; Managing change.

- **Measure** – Measurement systems analysis (Variable and Attribute data); Six Sigma statistics and Statistical distributions; Process mapping; Process metrics: Cp, Cpk, Pp, Ppk, Yields, ppm, dpmo, Short and Long term Sigma level; Cycle time; Benchmarking; Data planning and collection; Establishing sample size.

- **Analyze** – Root cause, Process diagnostic and improvement tools: Sub-process mapping and analysis; Pareto analysis; FMEA; Cause and effect matrix; Multi-variable analysis; Box plots; Correlation; Value added analysis; Lean Concepts; Introduction to Minitab software; Hypothesis testing and data analysis using Minitab (Anova, F, T and Chi square tests, Non parametric tests, Proportion tests, Stratification, Sample size, Power of tests, Capability, Trends, Stability, Normality, Dealing with non-normality, Distribution identification); Identification and validation of key root causes.

- **Improve** – Experimental design overview / Design for Six Sigma, Mistake Proofing; Lean Manufacturing, Error Proofing, FMEA, DOE (Design of Experiments), Identifying and selecting the best solutions using / Decision matrix analysis, Implementation planning for solutions.

- **Control** – Pre-control tools / Short run controls; Continuous and discrete SPC tools; Interpretation of control charts; Calculating and verifying gains; Process and quality audits; Control plans and project close out.

WHO SHOULD ATTEND

- Designated Black Belt candidates.

BENEFITS

- Provides thorough knowledge and 'hands on' application of the Six Sigma process and methodology.
- Develops Six Sigma project managers who have an eclectic knowledge of process improvement methodology and techniques as well as the ability to effectively apply what they have learned to dramatically improve profitability and customer satisfaction.

PREREQUISITES

- Management approved project, with minimum expected savings of $20K and a minimum expected defect reduction of 70%.
- Laptop with Minitab statistical software.
- Good understanding of Windows.
- Good numerical ability.
- Previous exposure to SPC desirable, but not necessary.

UNITED STATES

Oct	13 - 17	Nashville, TN

SEMINAR REGISTRATION FORM

Register to any seminar by:

1. Phone - Canada, Michigan, Ohio, Indiana – call **1 800 263 3735**
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* Internal Auditor courses
** Six Sigma Green Belt

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- All cancellations must be received by PIC in **writing**, a minimum of 5 business days prior to the start date of the seminar.
- If cancellations are not received within 5 business days, a processing fee of $150.00 will be charged.
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