Since 1991, MMTC has assisted Michigan’s small and medium-sized businesses compete and grow. Through personalized services fitted to meet the needs of clients, we develop more effective business leaders, drive product and process innovation, promote company-wide operational excellence and foster creative strategies for business growth and greater profitability.
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ABOUT MMTC

Michigan Manufacturing Technology Center (MMTC) understands what helps businesses grow and provides services to implement and track strategies which do so.

WHERE MANUFACTURERS GO FOR SOLUTIONS

Success doesn’t just happen. It takes driven, dedicated, experienced, full-time professionals - like the kind at MMTC - working together to keep Michigan manufacturing strong.

From the front office to the manufacturing floor, MMTC’s consulting, training and educational services have dramatically improved all aspects of many Michigan small and medium-sized businesses. With nearly 25 years of experience creating programs designed by manufacturers for manufacturers, MMTC has an easy to-understand, reliable process to help you identify areas for improvement and create a customized assistance plan that works for you. Supported by the Michigan Economic Development Corporation as Michigan’s National Institute of Standards and Technology Manufacturing Extension Partnership affiliate, we bring well-tested services to our clients.

LOCATIONS
OUR SUCCESS DEPENDS ON YOURS

After completing a project with MMTC, our clients are surveyed by an independent third party to gauge the impact of our training and consulting on operational performance over a period of one to three years. Focus is placed on jobs retained or created, investments made or avoided, sales generated or retained, and the calculation of cost savings.

MMTC SERVICES

OPERATIONAL EXCELLENCE
• On-Site Assessments
• Supply Chain Optimization
• Process Innovation
• Facility Layout
• Process Improvements
• Supplier Development
• Auditor Training
• Scrap Cost Reduction and Prevention
• Core Tools
• ISO 9001, TL 9000, AS 9100
• ISO 13485, ISO 14001, ISO 17025, ISO 50001
• OHSAS 18001 Internal Auditor
• ISO/Ts 16949
• Nadcap
• Six Sigma Green & Black Belt Training and Certification

LEADERSHIP
• Leadership in Action
• Vision and Planning
• Financial Understanding
• Executive Coaching
• Succession Planning
• Workforce Development

OPERATIONAL EXCELLENCE

GROWTH
• Performance Benchmarking
• Transformation Planner
• Customer Cultivation (New & Existing)
• International Opportunities (Exporting)
• Sales Training
• Website Improvement
• From Parts to Products
• Business Growth Strategies Four Ways
• Match Making

INNOVATION
• New Product Innovation
• Market Intelligence/Research

TECHNOLOGY
• Information Technology
• Lightweighting
• Food Processor Assistance
## SEMINARS & EVENTS AT A GLANCE

### 2016

#### MARCH

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
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</table>
| 4    | EXPLORE: LEAN Matters  
*(Location: Lake Michigan College-Benton Harbor)* |
| 7-23 | Lean Six Sigma Green Belt |
| 7-11 | Six Sigma Green Belt |
| 8    | Layered Process Audit |
| 10   | Core Tools: Measurement Systems Analysis |
| 14-30| Supervisory Skills  
*(Location: The Greater Brighton Area Chamber of Commerce-Brighton)* |
| 16   | EXPLORE: Filling The Supervisory Gap |
| 17   | EXPLORE: Business Growth Vision & Roadmap |
| 17-4/1| Supervisory Skills  
*(Location: Mott Community College-Flint)* |
| 22-25| ISO 13485 Internal Auditor |
| 22-24| ISO 9001:2008 Internal Auditor |
| 24   | EXPLORE: Trends & Applications For Lightweight Materials  
*(Location: Automation Alley-Troy)* |
| 25   | ISO 13485 Overview |
| 30-31| ISO 9001:2015 Internal Auditor Transition |

#### APRIL

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<thead>
<tr>
<th>Date</th>
<th>Event</th>
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<tbody>
<tr>
<td>5-6</td>
<td>ISO 14001:2004 Internal Auditor</td>
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<tr>
<td>5-5/18</td>
<td>Six Sigma Black Belt</td>
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<tr>
<td>12-15</td>
<td>ISO 13485 Internal Auditor</td>
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<tr>
<td>12-14</td>
<td>Lean Office Champion</td>
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<tr>
<td>12-14</td>
<td>ISO 9001:2008 Internal Auditor</td>
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<tr>
<td>13-5/9</td>
<td>Supervisory Skills</td>
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<td>15</td>
<td>ISO 13485 Overview</td>
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<td>20</td>
<td>Core Tools: Statistical Process Control</td>
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<td>21</td>
<td>EXPLORE: Competitive Intelligence</td>
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</table>
| 27  | EXPLORE: ISO 9001:2015  
*(Location: Velocity Collaboration Center-Sterling Heights)* |
| 27  | EXPLORE: Growth Vision & Roadmap  
*(Location: Kinexus-Benton Harbor)* |

#### MAY

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<th>Date</th>
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<tbody>
<tr>
<td>2</td>
<td>ISO 9001:2015 Management Transition</td>
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<td>2-12</td>
<td>Lean Manufacturing Champion</td>
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<td>3</td>
<td>Standard Work</td>
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<tr>
<td>4-5</td>
<td>Core Tools: APQP, PPAP, &amp; FMEA</td>
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<tr>
<td>5</td>
<td>5S/Visual Management &amp; Pull Systems</td>
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<tr>
<td>5</td>
<td>EXPLORE: Costing</td>
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<td>9</td>
<td>Total Production Maintenance/Quick Changeover</td>
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<td>10</td>
<td>A3 Problem Solving</td>
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<tr>
<td>10</td>
<td>Error Proofing/Poka-Yoke</td>
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</tbody>
</table>
| 10-18| Supervisory Skills  
*(Location: Velocity Collaboration Center-Sterling Heights)* |
| 11   | Cellular Manufacturing & Plant Floor Layout |
| 11   | Risk Management for Supply Chain |
| 17-19| ISO/TS 16949 Internal Auditor |
| 25   | EXPLORE: Market Research Capabilities |

#### JUNE (CLASS SITE TO BE DETERMINED)

<table>
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<tr>
<th>Date</th>
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<tbody>
<tr>
<td>1</td>
<td>ISO 14001:2015 Management Transition</td>
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<tr>
<td>8-9</td>
<td>Sales Acceleration</td>
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<td>9</td>
<td>Problem Solving/Root Cause Analysis</td>
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<tr>
<td>13-30</td>
<td>Lean Six Sigma Green Belt</td>
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<td>ISO 13485 Overview</td>
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<tr>
<td>23</td>
<td>EXPLORE: Lean Product Launch</td>
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<tr>
<td>28-30</td>
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</tbody>
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Denotes a Special and/or Free MMTC Event

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### CAN’T FIND A CLASS YOU’RE LOOKING FOR?

For assistance or to discuss available training options at your facility, call 888.414.6682 and speak with a MMTC coordinator or email inquiry@mmtc.org.
REGISTRATION IS QUICK & CONVENIENT

Advance registration is required. Since many courses fill early, we recommend registering at least two weeks before the course begins.

Register Online
Registering online is quick and convenient with our secure registration system using your credit card. To search or register for upcoming events and classes, visit mmtc.org/mmtc-event, select the event you are interested in, and press ‘Register’.

Call Us
You can speak with a MMTC Coordinator or register for upcoming classes by calling 888.414.6682 during business hours. (Monday through Friday, 8AM - 5PM)

MMTC TRAINING SITE: 47911 Halyard Drive | Plymouth, MI 48170

PLEASE NOTE: MMTC IS MOVING! Effective June 1, our new training site will be located at 45501 Helm St., Plymouth MI, 48170.

CANCELATION POLICY

MMTC requires a five (5) business day written notification in the event that an individual must cancel or reschedule. There will be no charge for courses canceled or rescheduled by written notice more than five (5) business days prior to the start date of the class. Any course canceled less than five (5) business days prior to the start date of training will be subject to a cancellation fee of 50% of the total cost for that class. Any course rescheduled less than five (5) business days prior to the start date of training will be subject to a rescheduling fee equal to 10% of the total cost for that class.
JOIN THE PROUD TO MANUFACTURE IN MICHIGAN PROGRAM

YOU ARE IN GOOD COMPANY

Be a part of something big! MMTC’s goal of the Proud to Manufacture in Michigan program (PTMIM) is to further support our state’s manufacturers by raising awareness of Michigan’s manufacturing community and the products made in our state. With hundreds of Michigan manufacturers already participating in the PTMIM program, you can take advantage of all the benefits and join at no cost!

As a member you will receive:

• A free company profile page on our website, the Proud to Manufacture logo to display on your website, and an official PTMIM certificate and poster to display at your facility.
• Discounted registration to the Proud to Manufacture in Michigan Annual Conference and a free booth to showcase your products and plant capabilities.
• The chance to become the Featured Manufacturer of the Week, highlighted on our website & social media sites.
• A free subscription to the PTMIM monthly newsletter with tips, updates, and industry news.
• A preview of relevant matchmaking opportunities that fit your products and services
• Exclusive access to new MMTC products and services and introductory offers
• Access to annual assessment tools at no out of pocket expense

TO JOIN, SIMPLY VISIT PTMIM.ORG, COMPLETE THE FORM AND HIT SUBMIT.

ONSITE CONSULTING

As a project management consulting firm and training organization, MMTC advises on and executes manufacturing initiatives from the shop floor to the boardroom. No matter if it is Rapid Improvement Processes, Opportunity Assessments or Leadership Mentoring, MMTC is committed to continually improving the operations and efficiencies of our clients.

Professional project management is an invaluable tool in facilitating the delivery of your business initiatives. The MMTC experts blend project management skills with expertise in problem solving methodologies such as lean manufacturing and six sigma to resolve manufacturing issues, increase quality, and develop strategic growth opportunities. MMTC professionals have extensive experience in operations, leadership training, marketing and growth strategy, and supply chain.

To learn more about MMTC consulting services, call 888.414.6682 or visit mmtc.org.
ENVIRONMENTAL

BUILDING A SUCCESSFUL ISO 14001 PROGRAM
With a heightened interest in environmental impact, many small to medium sized manufacturers are wondering what they can do. MMTC offers a practical course to identify and address key environmental concerns dominating business discussions today. The class will utilize the ISO 14001 standard as the foundation of the discussion.

3 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• June 28-30, 2016 (Class Site TBD) Register
COST ............................................................................ $795/Person

ISO 14001:2004 INTERNAL AUDITOR
A key element in an ISO 14001 program, internal auditing helps companies assess and maintain conformance to the standard. Internal Auditor training helps you understand how to better prepare for certification by providing an overview of: ISO 14001 clauses and standards, what an auditor needs to determine, how to diagnose conformance and non-conformance, audit process details, measurements for implementing corrective action, and structured steps for conducting audits.

2 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• April 5-6, 2016 Register
COST ............................................................................ $795/Person

ISO 14001:2015 MANAGEMENT TRANSITION
This course will inform organizational management, including but not limited to: Top Management, Management Representative, Environmental Compliance Officer, Environment Health and Safety Officer and Process Owners, about how ISO 14001:2015 will impact their current Environmental Management System. It will stress the requirements of ISO 14001:2015 and what changes may need to be made as a result of the transition. Risk-Based Thinking and Organizational Knowledge and how they apply to your current environmental performance will be addressed in order to develop an effective transition plan.

SESSION(S) AVAILABLE (8:00 AM - 12:00 PM)
• June 1, 2016 (Class Site TBD) Register
COST ............................................................................$495/Person

WE’RE MOVING RIGHT AROUND THE CORNER!

MMTC HEADQUARTERS IS MOVING IN MAY 2016. However, we will still be centrally located in beautiful Plymouth, Michigan. Our new location is not far from where we currently are, and will allow us to better serve all of your training needs. Keep an eye out for additional materials detailing the exact timing of when we are in our new facility!
SALES ACCELERATION WORKSHOP

This course is tailored specifically for salespeople in the manufacturing industry and offers a hands on, interactive approach to tackle the most common obstacles faced among sellers and buyers, from initial contact through close of sales and implementation. Whether you have low closing rates, difficulty reaching the decision makers, or trouble communicating how your company beats the competition, we can help you get results by focusing on time and project management, hitting sales goals by prioritizing customers, and lead generation.

2 days of classes

SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
- June 8-9, 2016 (Class Site TBD)  Register

COST ................................................................. $750/Person

LEADERSHIP

SUPERVISORY SKILLS (CEU Credits: 3.2)

Do you have an employee with leadership potential or a newly promoted supervisor/foreman and want to give them practical management training? This is the class for you! Broken up into Supervisor I, Supervisor II and Supervisor III training, each section will contain key aspects of effective leadership, equipping participants with the knowledge and skills to thrive in today's manufacturing management environment. Among others, participants will learn how to:

- Identify different leadership styles.
- Identify different behavioral characteristics and determine the best method of relating to each type.
- Identify communication barriers and techniques to enhance communication in all directions.
- Identify how to manage and maximize available time and decrease non-productive activities.
- Apply different factors in delegation in a manner that will provide an environment for compliance.
- Identify components of effective meetings and apply them, resulting in meetings that are more productive.
- Identify what causes conflict and how to mitigate and prevent escalation of conflict.

SESSION(S) AVAILABLE

- March 14-30, 2016  Register
  Location: The Greater Brighton Area Chamber of Commerce (218 E Grand River Ave. | Brighton, MI 48116)
- March 17-April 1, 2016  Register
  Location: Mott Community College (1401 E Court St. | Flint, MI 48503)
- April 13-May 9, 2016  Register
- May 10-18, 2016  Register
  Location: Velocity Collaboration Center (6633 18 Mile Rd. | Sterling Heights, MI 48314)

COST ................................................................. $975/Person
LEADERSHIP
MICHIGAN MANUFACTURING TECHNOLOGY CENTER
MAR - JUNE SEMINARS 2016
888.414.6682    |   mmtc.org

5S/VISUAL MANAGEMENT & PULL SYSTEMS
Over time, most workplaces have become cluttered with outdated information and materials kept “just in case it’s needed”. This course will provide the tools needed to clear the clutter and create a world class visual workplace where there is a place for everything and everything in its place. Learn how to successfully transform a factory into a well-organized operation where many messages concerning product quality, productivity, schedule, and safety are accurately delivered every day.
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
•  May 5, 2016 Register
COST .................................................................................$495/Person

A3 PROBLEM SOLVING
Participants will use problem solving tools (5-Whys and Fishbone Diagram) to assist in the continual improvement process with special emphasis on creating and implementing a Lean Business Strategy. Students gain further knowledge to confidently measure and improve their processes through data driven decision making. An exercise in understanding and creating an A3 report is included.
SESSION(S) AVAILABLE (8:00 AM - 12:00 PM)
•  May 10, 2016 Register
COST ............................................................................$295/Person

CELLULAR MANUFACTURING & PLANT FLOOR LAYOUT
This class is designed to provide information and methodologies to promote a lean plant layout and cellular manufacturing. Attendees will learn the Eight Principles of Lean Facility Layout Design, as well as the 12 Facility Layout Criteria to provide them with the knowledge to create a layout that improves throughput while reducing the wastes of transportation and motion. Participants will work with a company’s current plant layout in class and it can be used as the baseline for creating a future state that will improve space utilization and align the facility with actual work flow.
In addition, attendees will learn the Six Step Cell Design Process, Work Cell Design, Variations, Material and Tool Presentation, and the Guidelines for Material Presentation. Participants will be given a cellular exercise where they will utilize the skills taught to them to create a future state lean cell.
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
•  May 11, 2016 Register
COST .................................................................................$495/Person

ERROR PROOFING/POKA-YOKE
Understand the benefits of building in quality at the source by implementing methods or devices into the manufacturing process instead of inspection only at the end of the process. Best practice examples are introduced how companies prevent errors or defects. A hands-on exercise in MMTC’s REAL FACTORY is included.
SESSION(S) AVAILABLE (1:00 PM - 5:00 PM)
•  May 10, 2016 Register
COST ............................................................................$295/Person

LEAN MANUFACTURING CHAMPION
(CEU Credits: 5.6)
Developing internal Lean Manufacturing Champions helps organizations successfully implement proven techniques for eliminating waste. Using competency-based and hands-on approaches, MMTC’s Lean Manufacturing Champion provides team leaders the knowledge and skills to apply Lean Business Solutions within their own operations, resulting in reductions in the time and cost to execute business processes.

MMTC’s REAL FACTORY is a unique feature of our Lean implementation program. Enhancing the classroom instruction, methods are reinforced by participants transforming a traditional batch-process into a Lean cellular manufacturing process. MMTC’s REAL FACTORY is utilized to demonstrate a student’s ability to apply the newly acquired Lean tools.

8 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
•  May 2-12, 2016 Register
COST .................................................................................$2,800/Person
LEARN OFFICE CHAMPION
(CEU Credits: 2.1)

Apply Lean principles, beyond the manufacturing floor, right to your front door. Typically 70% of labor costs are attributed to above-the-shop-floor activities including your service, support operations that include; quoting, accounting, sales and engineering. MMTC’s Lean Office Champion training offers a comprehensive hands-on approach to teach team leaders how to identify opportunities for improvement through reduction in TIME conducting transactional activities.

Learn to apply all these Lean System elements with MMTC’s creative learning environments via process mapping, “real world” simulations, classroom discussion, interactive exercises and visual presentations.

3 days of classes

SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• April 12-14, 2016 Register

COST .......................................................... $1,500/Person

LEAN SIX SIGMA GREEN BELT
(CEU Credits: 5.6)

Lean Six Sigma Green Belt Certification develops the skills of the internal change agent by implementing the proven methods of both Lean and Six Sigma. The training covers the application of established techniques to remove wastes, improve operational speed, lower costs and deliver ultimate customer satisfaction. Lean Six Sigma Green Belt Certification focuses on improved quality and accuracy, minimized cost and variation, on-time delivery and optimized operational speed; all which enable organizations to become more efficient, profitable and flexible producers.

This certification provides the learner with a coordinated approach to rapidly reduce errors, streamline activities in difficult or complex operational transactions and foster company-wide innovation. Lean Six Sigma Green Belt Certification blends the best of lean thinking with the statistical logic of Six Sigma. Deploying Lean Six Sigma Green Belt initiatives can dramatically reduce operational constraints by utilizing proven Lean and Six Sigma methods to optimize critical processes.

Participants receive a MMTC Lean Six Sigma Green Belt Certification upon submission and approval of a Lean Six Sigma project report.

8 days of classes

SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• March 7-23, 2016 Register
• June 13-30, 2016 (Class Site TBD) Register

COST ................................................................................. $3,450/Person

RISK MANAGEMENT FOR SUPPLY CHAIN

Risk is everywhere and it impacts companies large and small. It doesn’t sleep and it often shows up uninvited. This training session helps you to identify the triggers of risk events, the importance of developing a plan to mitigate them when they do occur, and how to establish monitoring metrics and activities so you may be prepared for the inevitable. Participants will also learn how the financial impact of risk is determined and why a Risk Management Plan is an essential element to operational efficiency.

SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• May 11, 2016 Register

COST .......................................................... $395/Person

STANDARD WORK

A key ingredient in the creation of a LEAN enterprise, Standard Work is a set of procedures for each operational process that documents the most effective, balanced combination of people, machines, materials, and space to meet customer demand. Standard Work begins as an improvement baseline, but as it is used to improve, it further evolves into a reliable method. Without Standard Work, processes will change for operational convenience, which are often not in the best interest of the organization or customer.

SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• May 3, 2016 Register

COST ................................................................................. $495/Person

TOTAL PRODUCTION MAINTENANCE/ QUICK CHANGEOVER (TPM/QCO)

Total Productive Maintenance (TPM) is a company-wide effort to improve equipment performance, which then leads to higher productivity, better quality and increased profits. Participants learn how to calculate and use Overall Equipment Effectiveness, the key metric for measuring equipment performance. Emphasis is placed on the importance of teamwork and integration between production and maintenance departments. Two hours of this day long session are focused on reducing setup times for manufacturers to increase their flexibility, because frequent setups are necessary to produce a variety of goods in small lots (low volume-high mix). Inexpensive but highly effective techniques are shown to achieve quick changeovers.

SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• May 9, 2016 Register

COST ................................................................................. $495/Person
QUALITY MANAGEMENT SYSTEMS

CORE TOOLS: APQP, PPAP & FMEA
(CEU Credits: 1.4)
This combination class trains manufacturers in the planning, launch and validation of new products or processes. The course blends the three core tools of APQP, PPAP and FMEA and guides participants through important steps of the launch process. Utilized correctly, the deployment of these core tools leads to continuous improvement, defect prevention and the reduction of variation and waste.

2 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• May 4-5, 2016 Register
COST ............................................................................ $795/Person

CORE TOOLS: MEASUREMENT SYSTEMS ANALYSIS (MSA)
(CEU Credits: .7)
We’ve all heard the expression “garbage in, garbage out”. The same can be applied when process control decisions or product acceptance are based on invalid data. MSA examines the sources of variation in the measurement process as well as information about measurement characteristics based on accuracy, precision, and stability.

SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• March 10, 2016 Register
COST ............................................................................ $395/Person

CORE TOOLS: STATISTICAL PROCESS CONTROL (SPC)
(CEU Credits: .7)
Participants run a group of sequentially produced parts and then measure them to determine average, range and sigma. Control limits are calculated using these same parts and additional samples are measured and plotted to determine where the process is going and why. Interpretations of results are part of this course as well as capability study exercises.

SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• April 20, 2016 Register
COST ............................................................................ $395/Person

ISO 13485 INTERNAL AUDITOR
(CEU Credits: 2.8)
This four-day seminar helps attendees understand the basics of a process-based Quality Management System and the specifics of the ISO 13485 Medical Device system, and how to audit it. Learn how the various requirements may, or may not apply, to your type of organization and be better prepared to implement, understand, and audit your system. Auditor tips and techniques are studied as well as scheduling, planning, and performing audits. You will conduct several mock audits and end with a practical understanding of both the ISO 9001 and added ISO 13485 system audit programs.

4 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• March 22-25, 2016 Register
• April 12-15, 2016 Register
• June 14-17, 2016 (Class Site TBD) Register
COST ............................................................................ $1,195/Person

ISO 9001:2008 INTERNAL AUDITOR
(CEU Credits: 2.1)
Learn the information necessary for conducting internal quality audits. Emphasis is placed on effective auditing processes, skills and techniques. Participants will be instructed in developing an audit plan and the audit report required for management review. Corrective and preventive action will be reviewed. This includes an overview of the standards and requirements, as well as hands-on practice exercises for ISO 9001.

3 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• March 22-24, 2016 Register
• April 12-14, 2016 Register
• June 14-16, 2016 (Class Site TBD) Register
COST ............................................................................ $995/Person

ISO 9001:2015 INTERNAL AUDITOR TRANSITION
This interactive course will equip participants with the knowledge and skills needed to assess and report on the organization’s ISO 9001:2015 conformance, thoroughly evaluating the quality system with objective reviews, and contribute to the continual improvement of the quality management system utilizing ISO 19011 auditing principles.

2 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• March 30-31, 2016 Register
COST ............................................................................ $795/Person

CORE TOOLS: STATISTICAL PROCESS CONTROL (SPC)
(CEU Credits: .7)
Participants run a group of sequentially produced parts and then measure them to determine average, range and sigma. Control limits are calculated using these same parts and additional samples are measured and plotted to determine where the process is going and why. Interpretations of results are part of this course as well as capability study exercises.

SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• April 20, 2016 Register
COST ............................................................................ $395/Person

ISO 13485 INTERNAL AUDITOR TRANSITION
This interactive course will equip participants with the knowledge and skills needed to assess and report on the organization’s ISO 13485 Medical Device system, and how to audit it. Learn how the various requirements may, or may not apply, to your type of organization and be better prepared to implement, understand, and audit your system. Auditor tips and techniques are studied as well as scheduling, planning, and performing audits. You will conduct several mock audits and end with a practical understanding of both the ISO 9001 and added ISO 13485 system audit programs.

4 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• March 22-25, 2016 Register
• April 12-15, 2016 Register
• June 14-17, 2016 (Class Site TBD) Register
COST ............................................................................ $1,195/Person

ISO 9001:2008 INTERNAL AUDITOR
(CEU Credits: 2.1)
Learn the information necessary for conducting internal quality audits. Emphasis is placed on effective auditing processes, skills and techniques. Participants will be instructed in developing an audit plan and the audit report required for management review. Corrective and preventive action will be reviewed. This includes an overview of the standards and requirements, as well as hands-on practice exercises for ISO 9001.

3 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• March 22-24, 2016 Register
• April 12-14, 2016 Register
• June 14-16, 2016 (Class Site TBD) Register
COST ............................................................................ $995/Person

888.414.6682 | mmtc.org
QUALITY MANAGEMENT SYSTEMS

ISO 9001:2015 MANAGEMENT TRANSITION
This course will inform organizational management, including: Top Management, Management Representative and Process Owners, about how ISO 9001:2015 will impact their current Quality Management System. It will stress the requirements of ISO 9001:2015 and what changes may need to be made as a result of the transition. Risk Based Thinking and Organizational Knowledge will be discussed in order to develop an effective transition plan.

SESSION(S) AVAILABLE (8:00 AM - 12:00 PM)
• May 2, 2016  Register
COST ..........................................................$495/Person

ISO/TS 16949 INTERNAL AUDITOR
(CEU Credits: 2.1)
During the three days of instruction, emphasis is placed on effective auditing processes, skills and techniques. Participants will learn how to develop an audit plan and report required for management review. Corrective and preventive actions will be reviewed. Clear definitions of the five clauses of the ISO/TS 16949 requirements are covered. Participants will also be introduced to techniques for interfacing with the third party registrars, as well as non-intrusive auditing practices.

3 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• May 17-19, 2016  Register
COST .......................................................... $795/Person

LAYERED PROCESS AUDIT
This program is designed to teach organizational management the philosophy, process and management of Layered Process Audits, based on the AIAG publication: Layered Process Audits Guideline CQI-8. Topics covered include: Planning, development and maintenance of Layered Process Audits; Types; Levels; Frequency; Scope; Check sheets; Review; Non-conformance; and Compliance.

SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• March 8, 2016  Register
COST .......................................................... $395/Person

PROBLEM SOLVING/ROOT CAUSE ANALYSIS
(CEU Credits: .7)
Root cause analysis and problem-solving tools are presented and demonstrated in this session. Both internal (yield issues) and external (warranty, field failure, customer complaint) problems are introduced. Teams use these tools to identify, analyze and determine root cause and ultimately solve the issues. Understanding is gained through practical, hands-on exercises using common measurement gauges. Problems are introduced to demonstrate the typical formats for reporting the findings, applying solutions and corrections.

SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• June 9, 2016 (Class Site TBD)  Register
COST ..........................................................$395/Person
SIX SIGMA

SIX SIGMA BLACK BELT
(CEU Credits: 7)
Training employees as Six Sigma Black Belts will provide the valuable skills needed to tackle the toughest problems confronting your organization by coupling the proven Define, Measure, Analyze, Improve, and Control (DMAIC) problem-solving methodology with robust statistical tools. Six Sigma offers a carefully defined road map for achieving business process improvements. Black belt trainees obtain a solid understanding of the tools and methods associated with the Six Sigma approach.

The pace of the classroom instruction is set to allow trainees to absorb and quickly deploy Six Sigma skills. As each classroom session is presented, trainees can immediately apply the newly acquired skill set to their certification project. This approach dramatically improves the retention of key Six Sigma principles, reinforces contextual learning and builds trainee confidence. On-site mentoring by the Six Sigma instructor allows for any fine-tuning with the trainee and his/her sponsor in their own work environment.

Our years of Six Sigma training experience have taught us that Black Belts who do not receive the support and resources needed to complete projects are simply unable to create genuine bottom-line impact. Because positive impact is our primary goal, MMTC has made the participation of a project sponsor (usually the candidate’s manager or other company leader) a requirement for Black Belt certification. A sponsor is expected to attend the first training session with the Black Belt candidate, and to be involved in the project review sessions occurring throughout the certification process. This demonstration of commitment ensures that the Black Belt’s efforts are aligned with your organizational objectives and that the Black Belt is supported throughout their certification experience.

Certification Timeline:
The Black Belt candidate is expected to certify within 12 months of the first day of class. This requirement facilitates an ROI for your company while providing confidence to the Black Belt to succeed. Timeliness of certification also provides MMTC with valuable information for continuing education grants for manufacturing for the State of Michigan. If the time line is not met there will be a late fee for certification. The penalty for late certification increases with time.

10 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• April 5 - May 18, 2016
COST ................................................................. $7,350/Person

SIX SIGMA GREEN BELT
(CEU Credits: 3.5)
Almost every process within an organization has at least some problems. As a leader, trying to address every problem is impossible. Providing employees with Six Sigma Green Belt training equips them with a logical and objective way to identify, measure, and eliminate those problems. Suddenly, employees don’t have to just cope with the problems – they begin to recognize and implement solutions to them.

A down-to-earth blend of DMAIC project management methods and practical data analysis techniques provide employees, at any level of the organization, with new ways to contribute to the bottom line. From executive leaders to front-line employees, Six Sigma Green Belt training enhances the way employees approach their day-to-day work. And when Six Sigma Black and Green Belts are strategically positioned to support each other in the workplace, the improvement potential expands.

A project sponsor is strongly recommended. Participation in sponsorship facilitates certification process. This participation insures that project efforts are consistent with the organization’s overall strategy. By better understanding the characteristics and requirements of a successful project, the sponsor can more effectively provide required resources and participate in their candidate’s success. A sponsor is expected to attend the first training session with the Six Sigma Green Belt candidate, and to be involved in the project review sessions occurring throughout the certification process.

At the end of the course, each participant will receive a certificate of completion for attending. Six Sigma Green Belt Certification has three elements: participant has attended all session days, has passed the final exam and provided evidence of involvement in a Six Sigma project to the course instructor in the form of a project report that clearly describes the Green Belt candidates’ involvement.

5 days of classes
SESSION(S) AVAILABLE (8:00 AM - 5:00 PM)
• March 7-11, 2016
COST ................................................................. $2,800/Person

Lean Six Sigma Green Belt Certification is also available. See page 10 for class information.
DEVELOPING STRONG MARKET INTELLIGENCE
UNDERSTANDING CUSTOMERS, COMPETITORS AND MARKET OPPORTUNITIES IS ESSENTIAL IN TODAY’S ECONOMIC CLIMATE. LET OUR TEAM OF EXPERTS HELP GUIDE YOUR SUCCESS.

AMTC’s research services staff subscribes to a wide variety of proprietary databases and knows how to use them to help you target new customers and better understand your competitors.

In the past decade, the volume of information available has burgeoned to the point of being overwhelming. Our team finds and extracts only the information you need most, using the approach that gets you the most useful information at the lowest cost.

AMTC has the ability to analyze multiple sources to help you identify promising markets and customers, as well as qualify and develop lists of priority customer leads. We also customize surveys to help you understand how your customers perceive your performance.

AMTC has a variety of solutions designed to fit every need and budget. For more information or to schedule a consultation, call us today at 888.414.6682.
COMPLETE MMTC CLASS LISTING

Don’t see a topic you are looking for, need more information, or want to schedule customized training at your company? Call 888.414.6682.

COSTING (ABQ)
- Application & Implementation for Activity-Based Costing
- Cost Identification and Management
- Value Stream Costing

ENVIRONMENTAL
- Building a Successful ISO 14001 Program
- ISO 14001 Employee Overview
- ISO 14001 EMS Internal Audit
- ISO 14001 Internal Auditor
- ISO 14001 Prepare & Implement

FOOD
- Food Producer Website
- Food Tools of the Trade Program
- GMP’s/HACCP/CC Points
- Improvement Planning & Process Mapping
- Mentoring
- Problem Solving
- Process Improvement
- Total Productive Maintenance/Quick Changeover
- 5S/Visual Management

GROWTH SERVICES
- Business Development Mentoring
- Customer Cultivation
- Growth: Assessment & Strategic Growth Roadmap
- Growth: CRM Lead Follow-Up Process
- Growth: Lead Generation Campaign Implementation
- Growth: Lead Generation Toolset
- Growth: More Effective Messaging
- Growth: Website Revisions & Analytics
- Innovation Engineering
- Lead Generation
- Logo Creation/Refresh
- Market Diversification
- Sales Acceleration Workshop
- Social Media Workshop
- Website Development/Design
- Website Hosting
- Website Inspection Report
- Website Maintenance/Support
- Website Plugin: Secure Customer Log-Ins/File Control
- Website Plugin: Shopping Cart/Store
- Website Search Engine Optimization (SEO)

LEADERSHIP
- Business Succession Planning
- Leadership in Action: LEAN Executive
- Leadership Mentoring
- Building Better Teams
- Business Metrics & SMART Goals
- Communicating & Making Meetings Work
- Effective Delegation & Time Management
- Leading People Through Change
- Successfully Handling Conflict & Problem People
- Supervisory Skills
- Workforce Engagement “Deep Dive”
- Workforce Engagement Survey

LEAN MANUFACTURING
- 5S Training & Application
- 5S/Visual Management & Pull System
- A3 Problem Solving
- Cellular Manufacturing & Plant Floor Layout
- Lean Champion Training
- Lean Manufacturing Kaizen Event
- Lean Mentoring
- Lean Office Champion
- Lean Office Focus Kaizen
- Lean Office Kaizen
- Lean Overview
- Lean Six Sigma Green Belt Training & Certification
- Error Proofing/Poka-Yoke
- Production Preparation Process
- Setup Time Reduction/Quick Changeover/Single Minute Exchange of Dies
- Standard Work
- TimeWise 102: Lean for a Low Volume/Mixed Model Job Shop
- Total Productive Maintenance Kaizen
- Total Productive Maintenance Workshop
- Total Productive Maintenance/Quick Changeover
- Transactional Lean Office
- Understanding Lean Principles & Techniques (Buzz)
- Value Stream Mapping & Deployment Plan

MARKET INTELLIGENCE
- Assess Market(s) for New Product
- What the Market Thinks of Me, My Competition or Issues
- List, Prioritize & Pre-Qualify Prospects
- Market Intelligence Mentoring
- Narrow 10 Markets to 3 Based on Criteria

QUALITY MANAGEMENT SYSTEMS (QMS)
- Application of Internal Audits
- AS 9100 Internal Auditor
- AS 9100 Overview
- AS 9100 Prepare & Implement
- Building a Successful OHSAS 18001 Program
- Core Tools: APQP, FMEA, PPAP
- Core Tools: Measurement Systems Analysis (MSA)
- Core Tools: Statistical Process Control (SPC)
- Incorporating OHSAS 18001 into your QMS or EMS
- ISO 13485 Internal Auditor
- ISO 13485 Overview
- ISO 9001 Internal Auditor
- ISO 9001 OR ISO/TS 16949 Employee Overview
- ISO 9001 Prepare & Implement
- ISO/TS 16949 Internal Auditor
- ISO/TS 16949 Prepare & Implement
- Layered Process Audit
- NADCAP Assistance Program
- Problem Solving, Root Cause Analysis & Reporting
- QMS Internal Audit (ISO 18001, ISO 9001, AS9100, SO/TS 16949, or ISO 13485)
- Risk Management
- SCRAP Reduction Program
- Understanding ISO 9001 for Service Organizations

SIX SIGMA
- Design of Experiment
- MINITAB Training
- Six Sigma Black Belt/Six Sigma Green Belt
- Six Sigma Mentoring
Whether your concern is material selection, metals processing, welding and secondary operations, trouble shooting or problem solving, MMTC’s Tech Team can help increase efficiency and quality in your operations.

As governmental and consumer demand for decreased emissions, higher sustainability, lower carbon footprint and greater fuel economy increases, the growing trend for original equipment manufacturers (OEM) to adopt new materials is impacting manufacturing at all tier levels. As OEM’s change materials, small and medium-sized manufacturers will face timely shifts toward aluminum, advanced high strength steel, and composites.

GET AHEAD OF THE LEARNING CURVE
Great organizations continuously strive to improve profitability, boost quality, manage risks, expand process understanding, solve problems, and add new high value product offerings. MMTC can help. MMTC’s Tech Team, of Senior Materials Advisors includes process experts, engineers and metallurgists who consult with manufacturers on:

- Forming & Fabrication of Advanced High Strength Steel & Aluminum
- Welding, Joining and Heat Treating
- Casting – Aluminum, Iron & Magnesium
- Powder Metal Molding
- Metallurgy of Traditional & New Material

MMTC IS DRIVING RESULTS
Changing to new materials means developing new processes, modifying supply chains, investing in new equipment, and adapting manufacturing practices to new requirements within your organization. MMTC’s Materials, Process and Product Consulting program will assist clients in better understanding the risks, upgrading processes, equipment and systems, and provide in depth technical know-how to assess clients capabilities and establish programs to significantly improve manufacturing efficiency and quality while preparing for new materials and products.

IMPROVE UPTIME IN WELDING OPERATIONS
Increase welding uptime, boost sales with gained capacity, improve quality and enhance customer satisfaction with the experts at MMTC. MMTC’s highly trained welding engineer has extensive experience in robotic MIG welding operations, problem solving, and analyzing equipment utilization through software tools to identify the root cause of “faults” in the system.

Contact MMTC today at 888.414.6682 to set up a no cost appointment.
Connect With MMTC

Social media is an essential part of professional development and staying on top of industry trends. Connect with MMTC to find opportunities for networking, knowledge sharing with peers, upcoming events and the latest in manufacturing news. Find ‘Michigan Manufacturing Technology Center’ on:

**BLOG**
From Lean Manufacturing to Six Sigma, MMTC’s Solutions Blog delivers the latest manufacturing topics and trends from industry experts. Subscribe to our Blog at blog.mmtc.org.

**LINKEDIN**
Join the network of experienced professionals and organizations from around the state and nation. Follow MMTC and connect in a professional setting, gaining access to up-to-date industry news, training, and job opportunities. Don’t wait.

**FACEBOOK**
Get the inside scoop on everything MMTC. From manufacturing tips and news to upcoming courses, events and discounts, the official MMTC Facebook page has it all. ‘Like Us’ and join the conversation!

**GOOGLE+**
As one of the newest members on the Social Media scene, Google+ is making a big splash and MMTC is front and center. Add us to your circle!