



QUALITY HERALD

ASQ Greater Detroit Section Upcoming Events *by Peter Vadhanasindhu*

Inside this issue:

ASQ Events	1
ASQ Calendar	1
From the Chair	1
Managing Programs	2
Macomb Classes	3
ASQ Refresher Courses	3
Managing Programs	4
Contact Information	5
ASQ Class Schedule	6

The ASQ Greater Detroit Section kicks off its fall schedule with **Dr. David Cole**, Chairman of the Center for Automotive Research (CAR), who will be speaking at the September General Membership Meeting. This meeting will be held at 6:00 PM on **Thursday, Sept. 17, 2009** at Lawrence Technological University in Room T329.


Dr. Cole's topic will be the *Auto Future: A New Beginning*, in which he will discuss the changes and challenges facing today's auto industry.

Dr. Cole, a highly acclaimed auto industry analyst, is the past director of the Office of the Study of Automotive Transportation (OSAT), part of the University of Michigan's Transportation Research Institute. Dr. Cole also serves on the board of many local and industry organizations.

Dr. Cole's recent research has focused on strategic issues and trends affecting the North American auto industry. He has also been involved in the startup of five local companies.

On **Saturday, Sept. 26, 2009** ASQ will also be offering an all day Quality Seminar on Quality Auditing. This seminar will focus on the practical aspects of auditing to ISO 9001:2008 and ISO/TS 16949:2009 standards. This event starts at 8:00 AM, at Macomb Community College, Room S100.

The ASQ Greater Detroit Section continues to offer refresher courses for ASQ certification exams, including **Six Sigma Black Belt**. A full schedule can be found on page 6.



Are you missing ASQ Greater Detroit Section announcements via e-mail?
 With all the changes happening recently, please make sure that your e-mail address is current. To notify us of a change, send updated e-mail address to Elizabeth Hanna, elizhy2k@hotmail.com
 Also, please add "asqdetroit@gmail.com" to your list of safe e-mail addresses in your e-mail program.
The ASQ Greater Detroit Section does not sell or share member e-mail addresses to any company or organization.

ASQ Calendar

Date	Time	Event, Location	RUs	Cost, Contact
9/17/09	6:00 PM (presentation)	General Membership Meeting The Auto Future - Dr. David Cole Lawrence Technological University, Southfield	0.3	Free. More details at www.asqdetroit.org
9/26/09	8:00 AM - 4:30 PM	Quality Seminar - Practical Approach to Auditing ISO 9001:2008 & ISO/TS 16949:2009 Macomb Community College, Warren	1.0	\$25. Contact Elizabeth Hanna, elizhy2k@hotmail.com
11/07/09	8:00 AM - 12:00 PM	Certified Quality Technician Refresher Course Macomb Community College, Warren (course starts 11/07/09, 10 sessions on Saturdays)	4.0	\$250. Contact Glinda Mantyk, gmantyk@comcast.net for information or to register.
11/07/09	8:00 AM - 12:00 PM	Certified Quality Inspector Refresher Course Macomb Community College, Warren (course starts 11/07/09, 10 sessions on Saturdays)	4.0	\$250. Contact Glinda Mantyk, gmantyk@comcast.net for information or to register.
11/07/09	8:00 AM - 1:00 PM	Certified Six Sigma Black Belt Refresher Course Macomb Community College, Warren (course starts 11/07/09, 10 sessions on Saturdays)	5.0	\$1000. Contact Rajinder Kapur, rajinderkapur@yahoo.com for information or to register.

From the Chair *by Kush Shah*

I want to thank the executive committee and our members for their support and contributions over the past two years that I have been ASQ Detroit Section Chair. Despite the tough economic environment in Michigan, we have achieved a lot. I have listed some of our key accomplishments over the past two years:

- Silver Award for SMP - I believe this was the first time for ASQ Detroit Section to achieve this level. The only reason we did not receive Gold Award was because of the number of members retained, which is hard for us to control due to the current economic conditions in Michigan.
- Refresher Classes - We continue to provide many refresher courses at a very reasonable cost.

- Recertifications - Our section has an excellent reputation with the efficiency and effectiveness of recertification of our members.
- Developed Six Sigma Master Black Belt Training followed by two very successful classes.
- Most number of seminars with excellent local speakers. This also provided opportunity for members to receive RUs at a very reasonable cost, which is valuable in tough economic conditions.
- *Going Beyond Six Sigma and Balanced Scorecard* by Forrest Breyfogle. This was the first time in a while that we have hosted seminar by internationally renowned quality guru.
- Quality Herald that is done very profes-

sionally and at a reasonable cost.

- Membership meetings that are attended by more members than ever before.
- Establishment of a stronger relationship between Greater Detroit Section and Automotive Division.
- Plant Tours and Outings - It has been great to have companies welcome our members with open arms.
- Website - We have a website which is kept updated more than ever before.

We could not have accomplished so much without the winning team I had privilege to work with. I appreciate all of your hard work and countless hours of dedicated work by volunteers.

Managing Program Effectiveness Using a Hierarchical Weighted Criteria Approach

by Vikram Ganesan and James A. Gerlach, General Dynamics Land Systems

General Dynamics Land Systems (GDLS) uses a hierarchical, weighted criteria-based model to track and measure the effectiveness of its programs.

We designed and developed a dynamic, fully-automated, Excel spreadsheet-based application to provide a mechanism to elicit the varied, often subjective, performance criteria across all variants of a product or a process. These criteria are each measurable in terms of one or more numerically quantifiable metric, henceforth termed *measure*.

Not all measures may have the same importance for a given performance criteria, which is accounted for in the model by prescribing a Relative Importance Weight (RIW) for each measure. The value of each measure is quantified by assigning Design Points, based on pre-defined performance ratings for the program. Finally, a Design Score is computed for each measure as a weighted average of the Design Points. Figure 1 provides a schematic overview of this model.

The application is dynamic, allowing the user to add and remove variants to the program, and also to add and remove criteria and measures corresponding to each variant.

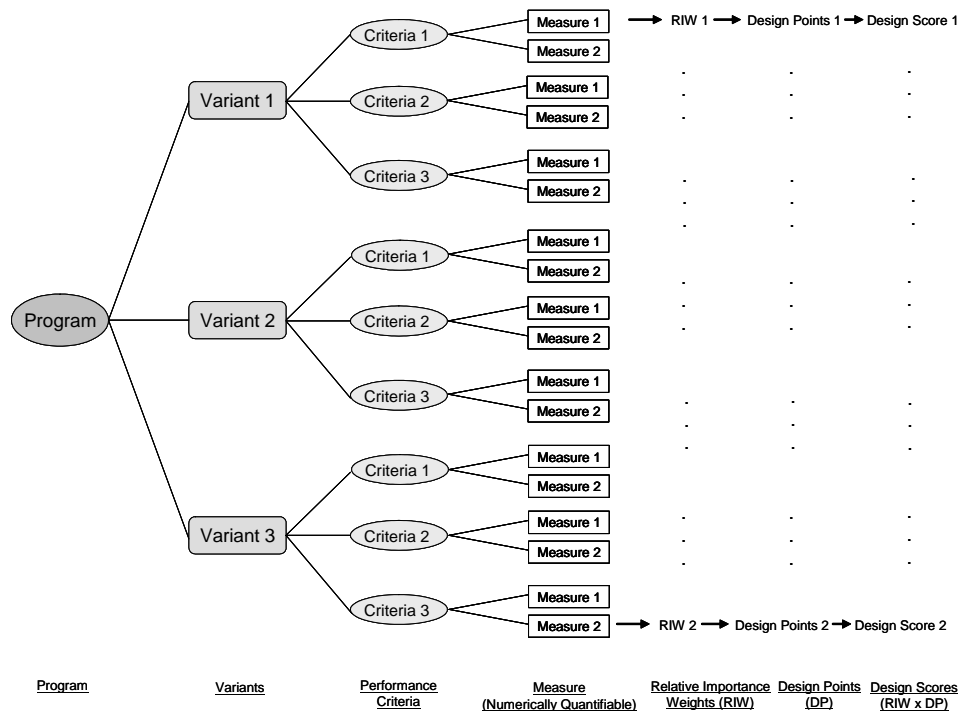


Figure 1: The hierarchical, weighted criteria-based model consists of variants of a program that have multiple Performance Criteria, each of which is numerically quantifiable in terms of a Measure. The relative importance of the measures for each criterion is specified via Relative Importance Weights (RIWs). The measure values are specified via Design Points. A Design Score is computed for each measure as a weighted average of the design points.

Continued on Page 4



Quality Systems Technology

WINTER 2010

Macomb Community College is pleased to announce the offering of the following quality related courses starting January 14, 2010.

Course No	Description	Day	Time	Dates	Cost*
QUAL-1011	Quality Fundamentals	Thursday	6:00 pm - 10:00 pm	1/14/10 - 5/13/10	\$ 316.00
QUAL-1021	Inspection Techniques	Tuesday	6:00 pm - 10:00 pm	1/19/10 - 5/11/10	\$ 316.00
QUAL-1030	Statistical Quality Control	Wednesday	6:00 pm - 10:00 pm	1/20/10 - 5/12/10	\$ 300.00
QUAL-1051	Standards-AIAG, ANSI/ASQC, ASME, ISO	Tuesday	6:00 pm - 9:00 pm	1/19/10 - 5/11/10	\$ 228.00
QUAL-1201	Geometric Dimensioning & Tolerancing with Applications Lab	Mon & Wed	4:00 pm - 6:00 pm	1/18/10 - 5/12/10	\$ 316.00
QUAL-1801	Quality Auditing for ISO TS16949	Friday	6:00 pm - 10:00 pm	3/12/10 - 5/14/10	\$ 156.00
QUAL-2111	Advanced Metrology Laboratory	Thursday	6:00 pm - 10:00 pm	1/14/10 - 5/13/10	\$ 316.00
QUAL-2211	Calibration, ISO 17025 and Uncertainty	Saturday	9:00 am - 5:00 pm	1/30/10 - 3/27/10	\$ 316.00
QUAL-2301	Quality Management Systems (QMS), Leadership & Teams	Monday	6:00 pm - 10:00 pm	1/18/09 - 5/11/09	\$ 228.00
QUAL -2330	Quality Costs, Process Mapping & The Supply Chain	Wednesday	6:00 pm - 9:00 pm	1/20/10 - 5/12/10	\$ 228.00
QUAL-2400	Project Management	Monday	5:00 pm - 8:00 pm	1/18/10 - 5/10/10	\$ 228.00
QUAL-2400	Project Management	Virtual/Online	TBA	1/14/10 - 3/10/10	\$ 264.00
QUAL-2451	Applied Problem Solving and Design of Experiments	Friday	6:00 pm - 10:00 pm	1/15/10 - 3/05/10	\$ 156.00

*Costs shown include tuition and course fees for Macomb County residents. Costs for non-Macomb County residents are slightly higher.

*Does not include books or registration fees. Rates subject to change.

All Quality classes are held at Macomb Community College, South Campus (located between 12 Mile Road and Martin Road, west of Hayes Road) in R, S, or T building, conveniently located near the Martin Road entrance.

Whether you are pursuing a degree, one of our certificate options or updating your skills, Macomb Community College offers a superior education at an affordable price.

To register, go to [macomb.edu](http://www.macomb.edu) and click on the Winter 2010 Registration Information or call 586-445-7435.

Check out Macomb's Quality website at

<http://www.macomb.edu/Current+Students/Educational+Offerings/Areas+of+Study/Quality+Systems+Technology/>

ASQ Refresher Courses & Seminars

Register Early and Save

Classes held at Macomb Community College,
South Campus, Building "T", Warren, Michigan

Certified Quality Technician Refresher Course starts Saturday, November 7, 2009
For more information, contact Glinda Mantyk, gmantyk@comcast.net

Certified Six Sigma Black Belt Refresher Course starts Saturday, November 7, 2009
For more information, contact Rajinder Kapur, rajinderkapur@yahoo.com

More Courses Available on Page 6

Managing Program Effectiveness *Continued from Page 2*

Once the program definition is completed, the user has the option of entering comments at the measure level. A design score is computed at the variant level, and scaled to fall in the range of the above-mentioned performance ratings. Design scores are also computed across all measures and criteria, and scaled similarly.

Finally, a Design Release Score is computed for the entire program based on a weighted average of the performance criteria, where the RIWs of the criteria are user-defined. All Design Scores at the variant and at the program levels, and the design

release score are color coded based on a pre-defined program risk assessment matrix.

This serves as a quick risk assessment of the program and the variants that contribute to it. For comparative purposes, the Design points are also color coded following the same format, in order to identify possible high-risk performance measures.

A summary sheet, based on data defined and computed in the spreadsheet, is generated to provide an overview of the program effectiveness for management. Sample screenshots of the spreadsheet and the

executive summary sheet are provided in Figures 2 and 3 respectively.

This application has been in use at GDLS for the past several months. Review meetings are scheduled regularly, where data is elicited from engineers and subject matter experts. Training sessions are conducted to train employees in application usage.

Regular management reviews are also conducted to review data pertaining to various programs. In the future, we plan to bolster this application with a database to store historic data. We also plan to add data mining and graphical analysis capabilities.

Design Release Score						Summary 3/26/2007 01:17 PM					
Design Release Score	Design Release Score	Criteria	Design Score	Weight	Design Score	Measure	Design Points	Weight	Design Score	Design Score	
	18700	Timeliness		40%		On Time Release				2,000	
		Quality		60%		Technical Compliance				2,000	
						Defect Rate				1,500	
						Hanging Paper Intensity				1,600	

Details											
Variant	Criteria	Design Score	Weight	Design Score	Measure	Design Points	Weight	Design Score	Add/Remove	Comments	
Variant 1	Timeliness				On Time Release	2	25.0%	0.500	<input type="checkbox"/>	Variant 1 Redesign Release On Schedule	
	Quality				Technical Compliance	2	25.0%	0.500	<input checked="" type="checkbox"/>	30 out of 31 requirements have been defined.	
					Defect Rate	1	25.0%	0.250	<input checked="" type="checkbox"/>	Monthly Defect Rate is 0.5%.	
					Hanging Paper Intensity	2	25.0%	0.500	<input checked="" type="checkbox"/>	Significant effort reduced hanging paper. 98% reduction in backlog.	
Variant 2	Timeliness				On Time Release	2	25.0%	0.500	<input checked="" type="checkbox"/>	All Drawings Released To Meet the Manufacturing and Material Need Date	
	Quality				Technical Compliance	2	25.0%	0.500	<input checked="" type="checkbox"/>	Exceeds Weight Requirement -- Spec Change In Process To Resolve Issue	
					Defect Rate	2	25.0%	0.500	<input checked="" type="checkbox"/>	Monthly Defect Rate is 0.1%.	
					Hanging Paper Intensity	1	25.0%	0.250	<input checked="" type="checkbox"/>	Proposal estimate being prepared to reduce hanging paper.	
Variant 3	Timeliness				On Time Release	2	25.0%	0.500	<input checked="" type="checkbox"/>	Release Is Complete	
	Quality				Technical Compliance	2	25.0%	0.500	<input checked="" type="checkbox"/>	Release Is Complete	
					Defect Rate	2	25.0%	0.500	<input checked="" type="checkbox"/>	Monthly Defect Rate is 0.2%.	
					Hanging Paper Intensity	1	25.0%	0.250	<input checked="" type="checkbox"/>	Proposal estimate being prepared to reduce hanging paper on the hull	
Variant 4	Timeliness				On Time Release	2	25.0%	0.500	<input checked="" type="checkbox"/>	Release Is Complete	
	Quality				Technical Compliance	2	25.0%	0.500	<input checked="" type="checkbox"/>	No deviations/waivers submitted with respect to requirements.	
					Defect Rate	2	25.0%	0.500	<input checked="" type="checkbox"/>	Monthly Defect Rate is 0.2%.	
					Hanging Paper Intensity	2	25.0%	0.500	<input checked="" type="checkbox"/>	Significant effort reduced hanging paper. All Change Requests hanging paper complete.	
Variant 5	Timeliness				On Time Release	2	25.0%	0.500	<input checked="" type="checkbox"/>	Release Is Complete	
	Quality				Technical Compliance	2	25.0%	0.500	<input checked="" type="checkbox"/>	Release Is Complete	
					Defect Rate	2	25.0%	0.500	<input checked="" type="checkbox"/>	Release Is Complete	
					Hanging Paper Intensity	2	25.0%	0.500	<input checked="" type="checkbox"/>	Not Affecting Current Production or Fielding. Paced By Manpower Shift to Vehicle 2.	
Variant 6	Timeliness				On Time Release	2	25.0%	0.500	<input checked="" type="checkbox"/>	PMR Requirements release on time. Increment zero release data starts next month.	
	Quality				Technical Compliance	2	25.0%	0.500	<input checked="" type="checkbox"/>	Release Is Complete	
					Defect Rate	2	25.0%	0.500	<input checked="" type="checkbox"/>	Release Is Complete	
					Hanging Paper Intensity	2	25.0%	0.500	<input checked="" type="checkbox"/>	Release Is Complete	

Figure 2: The Excel spreadsheet application showing the Design Scores computed for each variant, measure and criterion. A Design Release Score is computed for the program as a weighted average of the Performance Criteria, where the weights are user-specified. All Design Scores are color-coded, based on a pre-determined risk assessment matrix. Data shown is fictitious to protect proprietary data.

Scoring Results & Comments - 3/26/2007 01:17 PM

Vehicle	Indicator	Element	Element Score	Comments
Variant 1	On Time Release	Timeliness		Variant 1 Redesign Release: On Schedule
	Technical Compliance	Quality		30 out of 31 requirements have been defined.
	Defect Rate			Monthly Defect Rate is 0.5%.
	Hanging Paper Intensity			Significant effort reduced hanging paper. 98% reduction in backlog.
Variant 2	On Time Release	Timeliness		All Drawings Released To Meet the Manufacturing and Material Need Date
	Technical Compliance	Quality		Exceeds Weight Requirement -- Spec Change In Process To Resolve Issue
	Defect Rate			Monthly Defect Rate is 0.1%.
	Hanging Paper Intensity			Proposal estimate being prepared to reduce hanging paper.
Variant 3	On Time Release	Timeliness		Release Is Complete
	Technical Compliance	Quality		Release Is Complete
	Defect Rate			Monthly Defect Rate is 0.2%.
	Hanging Paper Intensity			Proposal estimate being prepared to reduce hanging paper on the hull
Variant 4	On Time Release	Timeliness		Release Is Complete
	Technical Compliance	Quality		No deviations/waivers submitted with respect to requirements.
	Defect Rate			Monthly Defect Rate is 0.2%.
	Hanging Paper Intensity			Significant effort reduced hanging paper. All Change Requests hanging paper complete.
Variant 5	On Time Release	Timeliness		Release Is Complete
	Technical Compliance	Quality		Release Is Complete
	Defect Rate			Release Is Complete
	Hanging Paper Intensity			Not Affecting Current Production or Fielding. Paced By Manpower Shift to Vehicle 2.
Variant 6	On Time Release	Timeliness		PMR Requirements release on time. Increment zero release data starts next month.
	Technical Compliance	Quality		Release Is Complete
	Defect Rate			Release Is Complete
	Hanging Paper Intensity			Release Is Complete

Figure 3: The program summary sheet provides an overview of the program effectiveness to management. Data shown is fictitious to protect proprietary data.

References

Cohon, J.L. 2004. *Multiobjective Programming and Planning*. Dover Publications, Mineola, New York.

Hammond, J.S., Keeney, R.L., Raiffa, H. 2002. *Smart Choices: A Practical Guide to Making Better Decisions*. Broadway Books, Portland, Oregon.

Keeney, R.L., Raiffa, H. 1999. *Decisions with Multiple Objectives: Preferences and Value Tradeoffs*. Cambridge University Press, New York, New York.

2009 - 2010 Executive Committee ASQ Greater Detroit Section 1000



ELECTED OFFICERS

CHAIR

Elizabeth Hanna, CQE, CSSBB
(248) 616-2651
elizhy2k@hotmail.com

CHAIR ELECT

Larry D'Agostino
CQE, CMQ/OE, CQA
(586) 294-6176
ladmalta@aol.com

VICE CHAIR

Steve Leggett
(586) 354-5256
steve-leggett@sbcglobal.net

SECRETARY

Mary Hones-Burr, CQA, CMQ/OE
(810) 623-3553
burr.m@sbcglobal.net

TREASURER

Janet MacDonald
CQE, CMQ/OE, CQA, CQIA, CQT
(248) 354-7373 ext. 1119
janraemac@yahoo.com

COMMITTEES

EDUCATION CHAIR

Rajinder Kapur, PhD, ASQ Fellow,
CMQ/OE, CSSBB, CQE, CRE, CQA
(248) 703-7148
rajinderkapur@yahoo.com

SMP Chair

Rita Ita, CQE, CQA, CSSBB
(248) 324-1824
ir522@aol.com

Membership Chair and Past Chair

Kush Shah, SS Master Black Belt
CQE, CMQ/OE, CSSBB, Red-X Master
(248) 857-6418
asq.1000@gmail.com

VoC Chair

Elizabeth Hanna, CQE, CSSBB
(248) 616-2651
elizhy2k@hotmail.com

Marketing Chair

Steve Leggett
(586) 354-5256
steve-leggett@sbcglobal.net

Web Applications

John W. Hall, CQE
(248) 624-6212
jhall@datalyzer.com

Student Membership

Carol Malone, CQT
(586) 445-7472
malonec@macomb.edu

Professional Development Co-Chair

Clem Goebel
(810) 599-6188
cjgoebel@cac.net

Speaker Coordinator

William Luka
CQE, CQA, CMQ/OE, ASQ Fellow
(248) 650-1065
williamluka@msn.com

Professional Development Chair

Steve Sibrel
(248) 592-3154
ssibrel@harmanbecker.com

Section Affairs Chair and

Angleri Quality Institute Liaison
Tom Schoenfeldt, ASQ Fellow
(734) 522-0587
tschoenfeldt@juno.com

Newsletter Editor & Web Applications

Glinda Mantyk
CQE, CRE, CQA, CQT
(810) 335-2193
gmantyk@comcast.net

Newsletter Editor

Peter Vadhanasindhu, CQE
(586) 532-1058
cocoavad@earthlink.net

Auto Division Liaison & ESD Liaison

Kush Shah, SS Master Black Belt
CQE, CMQ/OE, CSSBB, Red-X Master
(248) 857-6418
asq.1000@gmail.com

Historian & Examining Chair

Rod Munro, PhD, ASQ Fellow
CMQ/OE, CQE, CQA
(231) 386-5071
roderickmunro@att.net

Audit Chair

Chris Paprocki
CMQ/OE, CQE, CQT, CQA, CSSBB
(586) 294-4600 ext. 143
chris.paprocki@gm.com

Scholarship Chair

Janet MacDonald
CQE, CMQ/OE, CQA, CQIA, CQT
(248) 354-7373 ext. 1119
janraemac@yahoo.com

Healthcare Chair

Ruan Varney, CQE, CSSBB
(313) 916-2595
(248) 420-2419
rvarney1@hfhs.org

Recertification Chair

Elizabeth Hanna, CQE, CSSBB
(248) 616-2651
elizhy2k@hotmail.com

Nominating Chair

Larry D'Agostino
CQE, CMQ/OE, CQA
(586) 294-6176
ladmalta@aol.com

Database Chair

Jens Kuehne
CQE, CRE, CQA
(313) 592-7864
jens.kuehne@mac.com

Newsletter Assistant Editor &

Ann Arbor Section Liaison,
Job Connection
Mary Hones-Burr, CQA, CMQ/OE
(810) 623-3553
burr.m@sbcglobal.net

ASQ Greater Detroit Section, 2009-2010 Schedule of Refresher Courses

All classes are held on Saturday at Macomb Community College South Campus, T Building (located between 12 Mile Rd & Martin Rd, west of Hayes Rd). Refresher course starting dates are subject to change, students should verify.

<u>Certification</u> Contact: Rajinder Kapur 248-703-7148	Refresher Course #	Refresher Course Start Date	Examination Application (Last) Date	Examination Date	Pre-Registration FEE*	On-Site Registration FEE*
Certified (CQE) Quality Engineer 12 Sessions Saturday 8 a.m. - Noon	CQE0210 CQE0810	02-06-2010 08-07-2010	04-02-2010 10-01-2010	06-05-2010 12-04-2010	\$450	\$500
Certified (CQT) Quality Technician 10 Sessions Saturday 8 a.m. - Noon	CQT1109 CQT0710	11-07-2009 07-17-2010	01-08-2010 08-14-2010	03-06-2010 10-16-2010	\$250	\$250
Certified (CQI) Quality Inspector 10 Sessions Saturday 8 a.m. - Noon	CQI1109 CQI0710	11-07-2009 07-17-2010	01-08-2010 08-14-2010	03-06-2010 10-16-2010	\$250	\$250
Certified (CSSBB) Six Sigma Black Belt 10 Sessions Saturday 8 a.m. - 1 p.m.	CSSBB1109 CSSBB0710	11-07-2009 07-17-2010	01-08-2010 08-14-2010	03-06-2010 10-16-2010	\$1000	\$1100
Certified (CSSGB) Six Sigma Green Belt 10 Sessions Saturday 1 p.m. - 5 p.m.	CSSGB0310 CSSGB0910	03-20-2010 09-18-2010	04-02-2010 10-01-2010	06-05-2010 10-01-2010	\$500	\$550

For more information on Body of Knowledge and Registration forms, follow: www.asqdetroit.org/courses.php

*NOTE: This fee for the refresher course includes course materials. The fee does **not** include membership fees and/or Exam Application fees. You will be considered pre-registered if your application and full fee are received 1 week before the course start.

For address, phone number or e-mail changes, contact ASQ Headquarters at 1-800-248-1946

Non-Profit Org.
US Postage
PAID
Warren, MI
Permit No. 201

Greater Detroit Section 1000
American Society for Quality
27350 Southfield Rd., Suite 102
Lathrup Village, MI 48076
(248) 443-9666

