



GTCC

GREENSBORO | HIGH POINT | JAMESTOWN

Guilford Technical Community College

Where Futures Are Created!



Fall 2009

Six Sigma Blackbelt Certification Program

SIX SIGMA BLACKBELT CERTIFICATION PROGRAM (NEW)

What is Six Sigma Blackbelt?

The Blackbelt is commonly the highest color belt used in the martial arts and denotes a high degree of competence. When applied to quality sciences and with the addition of “Six Sigma” we are describing one who has proven by training, examination, and practice those skills required to improve a process performance of less than 3.4 defects per million opportunities.

What is required to become a Six Sigma Blackbelt?

Guilford Technical Community College and Quality Management Associates, Inc. will award a Six Sigma Blackbelt certification upon the completion of the following requirements:

- 100% attendance: 8 two-day modules (8:30-4:30)
- Obtain a passing score of 70% on each of 7 examinations
- Submit an acceptable Capstone project within 12 weeks of the last class meeting

What is the Capstone project?

The Capstone project is submitted as a written document and must be approved by the instructor. The objective of the capstone project is to demonstrate technical competency and application of the techniques presented in the lecture series. The capstone project will be associated with the participant’s work environment and will reflect the application of the Six Sigma techniques to the participant’s workplace. Participants who are unemployed must make arrangements with a manufacturing organization to allow the development of a capstone project. Failure to pass all 7 examinations or to submit an acceptable capstone project will forfeit the issuance of the Six Sigma Blackbelt certification. However, participants who only attend all eight modules will receive a certificate of attendance in “Statistical Quality Engineering.”

What materials are required?

Participants are required to purchase the text: “The Desk Reference of Statistical Quality Methods,” 2nd Edition by Mark L. Crossley. Text can be purchased at the GTCC Greensboro Campus bookstore. Each participant will receive a Texas Instruments statistical calculator model TI-30X and appropriate work forms as applicable.

SIX SIGMA BLACKBELT CERTIFICATION PROGRAM (CONT.)

What is the format for the instruction?

This course of instruction is dynamic, very “hands-on” and will generate student participation. Numerous examples and lab exercises will be used. Homework problems will be given at the end of each module. The solutions will be discussed at the next class meeting. An examination will be given at the start of each module after the first covering the material presented at the previous class meeting. The homework will not be graded but a score of 70% or more is required for each exam. Several very unique teaching tools will be utilized during the course.

What topics will be covered?

Specific topics covered will include but are not limited to the following:

- Measurement Error Analysis (variables and attributes)
- Correlation and Regression
- Design of Experiments
- Hypothesis testing
- Statistical Process Control (basic and advanced)
- Capability Indices
- Confidence Intervals and Limits
- Rolled Throughput Yield
- Reliability Engineering
- Weibull analysis
- Pre-Control
- Data Transformation
- Working with the normal distribution
- Poisson, Binomial and Hypergeometric
- Control Chart resolution
- Central Limit Theorem
- Process Mapping
- Failure Mode Effects Analysis
- Special Application SPC
- Cost of Quality Reporting
- Pareto analysis
- Demerit/unit control chart

*Note: The topics are not presented in the order listed

Who is the instructor?

Mark L. Crossley is the instructor. Mr. Crossley has his Bachelors degree in Chemistry/Mathematics and a Masters in Quality Assurances from California State University. He is the author of “The Desk Reference of Statistical Quality Methods” and has over 27 years experience in the Quality Sciences. He is certified by the American Society for Quality as a Certified Six Sigma Blackbelt (CSSBB) Certified Quality Engineer (CQE), Certified Reliability Engineer(CRE), Certified Quality Auditor(CQA), Certified Manager of Quality(CMQ/OE), and a Master Blackbelt. He is twice the recipient of the ASQ’s “Faculty Excellence Award” and is a frequently sought after speaker for national and international conferences on quality and manufacturing.

112 Hours

\$3500

Course Code: SEF-3001-616

Location: CEC Rm 233

Instructor: Mark Crossley

Times: 8:30 am to 4:30 pm

Mon. & Tues. Sept. 28, 29; Oct. 5, 6, 19, 20, 26, 27; Nov. 2,3,9,10,16,17,23,24
(No class on Oct. 12, 13)

REGISTRATION FORM

GTCC Registration Form For Continuing Education Courses Only (Non Credit)					CONTINUING EDUCATION OFFICE USE ONLY Date Entered: _____ By: _____	
Term of Registration: Fall Spring Summer						
Social Security Number			Name (print) Last		First	Middle Initial
Route, Street Name, or Box Number			City	State	Zip Code	County/Residence
Phone/Home		Phone/Business		Sex F M		Employment Status:
Are you 65 or older? Yes No			Birth Date		Full-Time	Part-Time
					Race: White	Black
					Asian/Pacific Islander	Hispanic
Circle highest grade completed: 1 2 3 4 5 6 7 8 9 10 11 12 GED 13 14 15 16 17						
PLEASE CHECK ONE: I certify that I am at least 18 years old and not enrolled in public school ____ or I am under 18 and have provided a Minor Release Form to the Continuing Education Registration Office. ____ Date _____ Signature (Required)						
For Defensive Driving Classes Only: Driver's License Number: _____ State: _____			You may also mail this form with your check or money order Payable to: GTCC, P.O. Box 309, Drawer C, Jamestown, NC 27282. If paying by credit card complete information below. GTCC does not notify students unless a class is cancelled. Please call phone number listed for additional information.			Finance Office Use Only
Master Card <input type="checkbox"/> Visa <input type="checkbox"/> Account # _____					Expiration Date: _____	
Signature: _____						
Course Code		Course Title		Day(s)	Time	Location
						Reg. Fee

REGISTERING FOR CLASSES

Fill out the registration form and mail it in with payment to:

GTCC
 CONED Registration
 PO Box 309, Drawer C
 Jamestown, NC 27282

or, If you'd prefer, you may take the registration to your nearest campus location.



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