



Course Syllabus

Six Sigma Quality Management

MAN4520 / 84536 / Fall 2026

Credit Hours: 3

Pre-requisites/Co-requisites: MAN3303

Contact Information

Instructor

Name: Cara Pattinato
Title: Program Coordinator
Email: cpattinat@gulfcoast.edu
Phone Number: 850-769-1551 ext. 2845

Office Location: CHC 104
Office Hours: Office hours are flexible and are first come, first served. Please send an email or call to ensure a scheduled appointment time.
Response Time: 24-72 Hours

Division Chair

Name: Melanie Boyd
Title: Division Chair
Email: mboyd@gulfcoast.edu
Phone Number: 850-872-3839

Division Administrative Assistant

Name: Marissa Weiman
Title: Academic Program Specialist
Email: mweiman@gulfcoast.edu
Phone Number: 850-872-1551 ext. 3875

Course Information

Catalog Description:

Catalog Description: This course teaches students the significance of quality as a primary competitive strategy for tomorrow's successful business organizations using Six Sigma methodologies. The impact of quality focus on increasing customer satisfaction is changing the manner in which business organizations function. Students will recognize that quality focused business organizations are evolving into very different environments in which to work and manage. This quality imperative is relevant for both industrial and service sector organizations. Students will be exposed to the critical issues of total quality management through reading, case studies, class discussion, and outside speakers. The students are expected to gain insight and understanding regarding the meaning of quality, how organizations develop a quality focus, and the continuous nature of quality management. Credit hours: 3 Prerequisites: MAN3303 - Principles of Management and Leadership or permission of the Department Chair.

Student Learning Outcomes:

By the end of this course, you will:

1. Gain factual knowledge (terminology, classifications, methods, trends).
2. Learn fundamental principles, generalizations, and theories.
3. Develop specific skills, competencies, and points of view needed by professionals in the field most closely related to this course.

Upon completion of MAN4520, students will be able to:

1. Analyze the role of quality and the use of Six Sigma and the DMAIC process to explore quality assurance, the importance of critical to quality (CTQ) characteristics, and basic statistical metrics.
2. Design a Project Charter and develop a Process Map using critical to quality characteristics.
3. Given a scenario, analyze statistical process control methodologies using tools to identify and evaluate process variation through the creation and analysis of control charts and determine process capability.
4. Given a scenario, conduct a repeatability and reproducibility (R&R) study, using indices for variable data to determine if variations are in control, and examine process capability and its effects on quality.
5. Examine various control charts used in statistical process control to determine probability distributions, process variation, processes in control (or not), hypothesis testing techniques and statistical methods through graphical illustrations and analysis (such as histograms, Pareto charts, correlation, ANOVA, etc.).
6. Analyze the Deming cycle to structure improvement projects, further exploring process improvement methodologies including mistake-proofing techniques.
7. Utilize Design for Six Sigma (DFSS) tools and methodologies to design a Quality Function Deployment (QFD) investigating scientific approaches to determining control and specification limits.

Course Materials & Resources:

1. An Introduction to Six Sigma & Process Improvement, Second Edition
 - a. Authors: James R. Evans and William M. Lindsay
 - b. Publisher: Cengage
 - c. Copyright: 2015 ISBN-10: 1-133-60458-7
2. A Lean Six Sigma Journey
 - a. Author: Emilio Natalio
 - b. Will purchase through a classroom link.
3. Harvard CoursePack – link will be provided in Canvas
 - a. Title: Managing Quality Analytics with Process Control
 - i. Author: Roy D. Shapiro
 - ii. Copyright: 2013
 - b. Title: Operations Management Simulation - Quality Analytics
 - i. Author: Barbara B. Flynn
 - ii. Copyright: 2014

4. Access to Microsoft Word, PowerPoint and Excel.
5. Internet access to social media platforms and AI generators.
6. Ability to video record themselves for final presentation.
7. Respondus Lock Down Browser.

Delivery Method:

This is a web-based course. All online courses at GCSC utilize the Canvas Learning System. Students should read all information presented in the Canvas course site and should periodically check for updates--at least every 48 hours. **Remember:** This course is not one in which students may work at their own pace. Each week, there are learning modules, assignments, online lectures, online discussions, and/or online exams with due dates. Refer to the schedule within this syllabus for more information.

Student Expectations

In this course, communication and feedback will occur through various channels, including GCSC email, Canvas Inbox, Canvas Announcements, Canvas Discussions, Microsoft Teams or Zoom, assignment feedback, and instructor office hours. Review the statements below so that you understand the expectations for communication.

As a student at Gulf Coast State College, you are expected to:

- **Adhere to Course Guidelines:** Follow the guidelines detailed in the course syllabus, along with any additional instructions provided by the instructor. This includes understanding and complying with the course objectives, grading criteria, and academic policies.
- **Maintain Regular Contact:** Keep in touch with your instructor and classmates via your GCSC email or other designated communication channels. Regular contact helps clarify doubts, share ideas, and foster a collaborative learning environment.
- **Active Participation:** Engage actively in class discussions and submit assignments on time. Your active participation is crucial for your academic success and contributes to a vibrant learning community.
- **Professionalism:** Professionalism relates to the intellectual, ethical, behavioral and attitudinal attributes necessary to perform as an industry leader and interact in a collegial and professional manner with peers, faculty and the public. Students will be expected to display professional behavior on campus and/or external associated sites throughout the semester. Displays of unprofessional behavior will be addressed by the instructor and if deemed necessary, written notification will occur documenting the offense.
- **Note that if your assignment is due on the weekend and you have a question, it likely will not be answered if you do not contact me by 12pm on Friday. Please plan accordingly so you do not earn a 0 on the assignment.**
- Considerable time outside of class will be required in order to complete assignments, prepare for assessments and be successful in this course. You should allow an average of 2 hours for every 1 semester hour of the course to accomplish these goals (i.e. 3 credit hour course equates to 6 hours of preparation per week).

As your instructor, my commitment to you is to:

- **Provide Timely Feedback:** I will review and provide feedback on your assignments and submissions. My goal is to help you understand your strengths and areas for improvement, which is crucial for your academic growth.

- **Response:** Preferred method is email or Canvas messenger, versus telephone. Please send questions from your GCSC email so it does not go to my spam folder. I typically respond within 24 hours; however, responses may take up to 72 hours, especially over weekends. Please plan your assignments with this in mind. **Emails must include your full name, the course, and the specific assignment in the body of the message. Emails missing this information may not receive a response.** If you do not hear back from me within 72 hours, please email me again.
- **Post Regular Announcements:** To keep you updated and help you manage your time effectively, I will send out weekly reminders via announcements. These reminders will include important dates, upcoming assignments, and any changes to the course schedule.
 - *****Announcements will be used multiple times a week, please set your alerts!*****
- **Maintain Weekly Office Hours:** I will maintain regular weekly office hours, but I can also be available by appointment. This is to ensure I'm available for any questions or concerns that may come up during the week.

Course Schedule

Course Schedule is tentative and subject to change. See Canvas calendar for up to date information.

Activity/Assignment	Student Learning Outcome	Date Due
Module: Start Here <ul style="list-style-type: none"> • Introduce yourself • Textbook 	SLO #1 SLO #6	See Canvas Calendar
Module: Various <ul style="list-style-type: none"> • There are homework questions for each chapter. Some you complete individually, some in a group. 	SLO#1 SLO#2 SLO#3 SLO#4 SLO#5 SLO#6 SLO#7	See Canvas Calendar
Module: Final Assessment <ul style="list-style-type: none"> • Exam • Final Simulation – Both individual and as a group 	SLO#1 SLO#2 SLO#3 SLO#4 SLO#5 SLO#6 SLO#7	See Canvas Calendar

Grading

GCSC Grading Scale

- A: 100% - 90%
- B: 89% - 80%
- C: 79% - 70%
- D: 69% - 60%

F: 59% - 0%

Calculation of Grades

Course Requirements/Grading Scale:

Individual Assignments	20%
Group Assignments	50%
Final Project	30%

Instructional modes/methods may include:

- A. Group discussions/seminars
- B. Team Projects
- C. Projects/Homework
- D. Lecture
- E. Research
- F. Active Participation through Canvas
- G. Internship Project
- H. Literature Reviews

Late work will not be accepted. Students with emergent extenuating circumstances may be able to receive an exemption/extension at the discretion of the Professor as long as the student communicates with the Professor no later than the due date for the assignment and receives special permission.

Research and Evidence Based Practice:

- Research all assignments: Use internet sites that reflect substantiated evidence by more than one source. National standards, peer-reviewed professional journals, national guidelines and recommended practices can provide a basis for forming practice guidelines.
- Current management practices are based on replicated evidence that has been substantiated and validated by peer-evaluated research.
 - Scholarly research is research that is accepted by your peers across the nation and even the world.
 - The conclusions are based on research, the paper or book has been peer reviewed, and is accepted by members of your peer profession.
 - Examples: Recognized professional organizations .org (American Management Association, American Marketing Association, SHRM, Research in a peer reviewed journal, etc.)
 - Examples of other sites include those that end in .edu (educational institutions), .gov (government agencies), or recognized commercial authorities for particular equipment or procedures.
 - Library Accessed Resources and Search engines are also included found at <https://guides.gulfcoast.edu/business>.
 - I highly recommend Ibis World through the Library Database. The site has specific industry, company and market data available for all students. [IBIS World through GCSC Library](#)

To cite your reference use APA format: See the Resources.

<http://www.apastyle.org/learn/tutorials/basics-tutorial.aspx>

Incomplete Grades (optional)

Grades of Incomplete in any course can only be assigned to students who have an emergency arise during the last two weeks of the course. To receive an Incomplete, students must:

- Submit a written request to the instructor prior to the last face-to-face class meeting. For online courses, a written Incomplete request must be received no later than the week before the Final Exam period begins.
- Have completed no less than 60 percent of the course requirements and be passing the course at the time the request for an Incomplete is submitted.

Important Note: The Incomplete option provides 30 days from the date grades are due to make up any missing work; if work is not submitted during this period, the grade will automatically change to an "F" in Lighthouse.

Course Policies

Accessibility Statement

Gulf Coast State College supports an inclusive learning environment for all students. If there are aspects of the instruction or design of this course that hinder your full participation, reasonable accommodations can be arranged. Prior to receiving accommodations, you must register with Student Accessibility Resources. Appropriate academic accommodations will be determined based on the documented needs of the student. Please visit [GCSC's Student Accessibility Resource \(SAR\) webpage](#) to learn more. For information regarding the registration process, email sar@gulfcoast.edu or call 850-747-3243.

Attendance Policy

Regular class attendance and participation are significant factors that help to promote success in college. Students are expected to attend all class meetings of all courses for which they are registered. Attendance is part of your grade.

You are expected to know the instructor's specific attendance policy, as stated in the syllabus for each course. In the event of absence, you should contact your instructor as soon as possible to indicate the reason and to inquire whether make-up work is possible. (Make-up work is offered solely at the discretion of your professor.)

If your absences in a class become excessive, as stated in the course syllabus, your professor may contact you, indicating that further absence may result in your withdrawal from the course. Your professor can withdraw you from a course for excessive absences without your permission.

Instructors will monitor attendance at the beginning of each semester. If you are not in attendance during this period, you may be withdrawn from the course. You will be financially responsible for the course and a "W or NS" will appear on your transcript. Withdrawal from a course may also have implications for financial aid.

Withdrawal Policy

Two withdrawals are permitted per credit course. After that, a grade will be assigned. Please be concerned about withdrawals. When admitting students into certain programs, universities may calculate withdrawals as grades. It is your responsibility to verify the effects of enrollment and/or withdrawal upon your financial assistance (financial aid, scholarships, grants, etc.). There are two kinds of withdrawals---student and administrative.

- *Student Withdrawal (W1)* - Students wishing to withdraw must complete the online Student Withdrawal Form before the scheduled withdrawal deadline as published in the College catalog. Student withdrawals initiated prior to the scheduled withdrawal deadline will be recorded as a grade of "W." The withdrawal deadline for an off-term or condensed term is one week after midterm.
- *Administrative Withdrawal (W2)* – A faculty member may withdraw a student up to the published withdrawal deadline for violation of the class attendance policy in which case the student will receive a grade of "W." The withdrawal deadline for an off-term or condensed term is one week after midterm.

Students cannot withdraw from developmental studies courses (college-preparatory classes) after the drop/add period without written permission from their instructor and/or their academic advisor.

Academic Integrity

Honest participation in academic endeavors fosters an environment in which optimal learning can take place and is consistent with the college's mission. Academic misconduct, including cheating or plagiarism, is destructive to the spirit of an educational environment. GCSC professors report every instance of student academic misconduct to the college for inclusion on the student's records. Most course syllabi include an academic honesty policy and the consequences for violating this policy. Familiarize yourself with course policies regarding authorized or unauthorized use of AI to avoid the pitfalls of academic dishonesty.

The following definitions will apply:

"Cheating"

includes but is not limited to use of any unauthorized assistance in taking quizzes, tests, or examinations; dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; the acquisition without permission of tests or other academic materials belonging to a member of the College's faculty.

"Plagiarism"

includes, but is not limited to, the use by paraphrase or direct quotation of the published or unpublished work of another person without full and clear acknowledgment as well as the purchase of papers or projects. It can also include overuse of an editing program like Grammarly or submitting work written by an Artificial Intelligence (AI) generator like ChatGPT. Make certain to consult your course syllabi for your instructor's guidelines of AI material.

"Self-plagiarism"

occurs when a student submits the same or considerably similar document to fulfill requirements in different classes. For example, if a student submits a term paper in Religion they originally wrote for an

English class, this is self-plagiarism. Once a paper receives a grade in one class, it cannot be submitted again for another class.

"Generative Artificial Intelligence (AI)"

is technology that uses machine learning to create new content, such as text, images or code, based on user input. These systems are trained on vast amounts of data, including large language models and image or code generators. Common examples include ChatGPT, GitHub, Copilot, Google Gemini, Perplexity, and the Grammarly AI function.

Sanctions for incidences of academic misconduct, depending on the severity of the incidence and/or its repetition, may range from receiving an F grade (or 0) for the test, assignment, or activity, to failure of the course, to suspension or dismissal from the program or college.

Classroom Recording

In accordance with federal and state privacy laws, students may record class lectures for their own personal educational use, in connection with a complaint to the college, or as evidence in internal or external legal proceedings. Students may not publish or upload the recordings or any components thereof without the knowledge and written permission of the faculty member. Failure to obtain permission to publish could lead to the students' having to pay damages, attorney fees, and court costs. For more information about what can be recorded, please see the guidelines in the GCSC Student Handbook.

Generative Artificial Intelligence (AI) Policy

The use of generative AI tools in academic work requires clear guidelines to maintain academic integrity. Please review the policy selected for this course regarding the use of AI tools such as ChatGPT, Copilot, Grammarly's AI features, and similar platforms for assignments, research, and other coursework.

See the student handbook for further information. Students with questions about acceptable use should consult their instructor.

Limited Assistive Use Only

Students may use basic assistive technologies for spelling, grammar, and formatting (e.g., PaperRater or SpellCheckPLUS); however, the use of AI tools (e.g., ChatGPT, Copilot, Grammarly's AI function, etc.) for generating, rewriting, or enhancing content is not permitted. All work must reflect the student's original ideas and writing. Representing work created by AI as one's own is a violation of academic integrity and may result in penalties, including a zero on the assignment and additional disciplinary actions as outlined in the college's academic integrity policy.

- Think of AI as pre-search, not research. I want you to become the Subject Matter Expert.
 - Professor Note Pertaining to AI Usage: I allow you to use AI as a search engine, but nothing should be copied and pasted from it, instead you should use that high level information to go find reliable, valid, accurate sources and create your assignments based on those sources you found.
 - Student submissions with AI created work could cause you to be removed from the program.

Anti-Discrimination Policy

Gulf Coast State College does not discriminate against any person in its programs, activities, policies or procedures on the basis of race, ethnicity, color, national origin, marital status, religion, age, gender, sex, pregnancy, sexual orientation, gender identity, genetic information, disability, or veteran status. All questions or inquiries regarding compliance with laws relating to non-discrimination and all complaints regarding sexual misconduct or discrimination may be directed to Amanda Reed, Executive Director of Human Resources/Title II/504/Title IX Coordinator and Employment Equity Officer, Gulf Coast State College, 5230 W. US Highway 98, Panama City, FL 32401; 850-769-1551, ext. 3516. Rules, policies, fees, and courses described in this catalog are subject to change without notice.

Syllabus Policy

For any syllabus posted prior to the beginning of the term, the instructor reserves the right to make minor changes prior to or during the term. The instructor will notify students via e-mail or Canvas announcement when changes are made in the requirements and/or grading of the course.

Student Support Resources

Gulf Coast State College is committed to providing you with the resources you need for success as a student and beyond. View all the academic and student support resources provided at GCSC on the [Student Services web page](#).

Course Technology & Support

To successfully participate in this online course, students must have basic computer and digital information literacy skills and meet the following technology requirements:

- **Computer:** Up-to-date web browser that supports the Canvas learning management system; please refer to the system requirements for compatibility and information on using the Canvas app on mobile devices.
- **Internet Speed:** Minimum bandwidth of 8 Mbps upload/download speed to effectively engage in online activities and access multimedia.
- **Office 365 software:** Available for free download through GCSC Information Technology Services (ITS).
- **Webcam:** Available to rent through the Library.

If you need technical support, contact the ITS Help Desk, available 24/7 at (850) 913-3303.