

**McLennan**  
C O M M U N I T Y  
**C O L L E G E**

WACO, TEXAS

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**COURSE SYLLABUS**  
**AND**  
**INSTRUCTOR PLAN**

**LEAN SIX SIGMA**

**QCTC - 1391 - 87**

**DR. TOMMY “T-LOW” LOWRANCE**

**NOTE: This is a 16-week online course.**

**COVID 19 Notice:**

McLennan Community College is committed to providing you with every resource you need to reach your academic goals including your safety. We will continue to monitor the evolving situation with COVID 19 and adjust our safety guidelines to make sure we offer a safe environment for you and our faculty. Please make sure to consult your faculty and the MCC website on any changes to these guidelines.

## LEAN SIX SIGMA

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### **Course Description:**

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. The course is designed to be repeated multiple times to improve proficiency.

### **Prerequisites and/or Corequisites:**

Prerequisites: MATH 1342 and BMGT 1331. Semester Hours 3 (3 lecture). May be waived at the instructor's discretion. **This course MUST be taken in order to do the Internship in the next long semester immediately following this course!**

### **Course Notes and Instructor Recommendations:**

For Supply Chain and Manufacturing Management majors, this is a required course, so you don't have much choice! However, this is a very practical course which will help you in the future, as well as on your current job. You will have the opportunity to apply what you have learned on your present and past jobs and in your other courses. You will also be introduced to areas of management that you knew affected you on your job, but you may not have understood why. Even if you are not interested in working as an operations manager, you will be affected by every aspect of operations as an employee! And, we will have lots of fun!

### **Instructor Information:**

Instructor Name: Dr. Tommy "T-Low" Lowrance, CSSBB

MCC Email: [tlowrance@mcclennan.edu](mailto:tlowrance@mcclennan.edu)

Office Phone Number: 254-299-8059; Cell Phone Number: 254-744-1873

Office Location: BT 210

Office/Teacher Conference Hours:

Face-to-Face Hours    M/W 8:30 am – 9:30 am

Online Hours            M/W 11:00 am – 12:00 pm  
                                  T/TH 9:00 am – 11:00 am

Other Instruction Information:

Zoom by appointments only            Zoom ID: 254 299 8059            Password: leader

### **Required Text & Materials:**

Title: Certified Six Sigma Green Belt Primer (CSSGB)

Author: Wortman

Edition: 3rd

Publisher: Quality Council of Indiana

Copyright: ©2014

**MCC Bookstore Website:** <http://www.mclennan.edu/bookstore/>

**Methods of Teaching and Learning:**

1. This is an online course and will require a lot of self-discipline from students! You are expected to log into Brightspace **each day** to check the course, and to check your student email everyday as well. Since we do not have formal classroom meetings, I will act more as a facilitator for learning than a traditional professor. You will be expected to read the required chapters and complete the required assignments on time. I am here to make sure you understand and are learning the objectives set in this course. Students are expected to be self-disciplined, use time management skills effectively, and to be accountable for their actions in this course.
2. This course utilizes textbook reading, online assignments, and written exercises to teach toward the course objectives. This online course represents the same course content and rigor of a face-to-face class. As such, you should expect to devote a comparable amount of time each week on reading, self-study, research, and homework assignments. You should also understand that this is a tough course. Reading the textbook is not optional. You will likely need to read the text several times in order to gain an understanding of the material. This class requires that you think critically and in a far different way than you are likely used to. Be prepared to put in the necessary time and effort into this course!
3. Time is NOT your friend! For today's college student (and today's business professional), time is our most limited commodity. You must manage your time effectively to ensure that you complete all course requirements while maintaining your responsibilities at home, work, and in society.

**Course Objectives and/or Competencies:**

Course objectives are listed on the first page of each chapter in the required text. Additionally, the following course objectives will be met during the course:

- Learn the objective content of the chapters you read;
- Apply the content of the chapters to the assignments;
- Take part in objective assessments, practical assignments, and case study; and,
- Practice and improve your skills in thinking critically, mathematics, and writing.

Furthermore, if all goes as planned, you will leave the course with an increased awareness of what is involved in Lean Six Sigma methodology. Employees of large organizations, small organizations, non-profit organizations, manufacturing and service industries all face similar

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problems and different problems. We will examine the many facets of Six Sigma and how it fits into different organizations. Special attention is given to what is needed to establish and maintain Six Sigma approaches and controls as a function of operations management.

### **Course Outline or Schedule:**

<b>Week</b>	<b>Due Date</b>	<b>Assigned Reading</b>	<b>Assignments Due</b>
<b>1</b>	8-29	Syllabus & Orientation	Orientation Quiz
<b>2</b>	9-5	Chapter 2	Ch. 2 Homework Practice Ch. 2 Quiz
<b>3</b>	9-12	Chapter 3	Ch. 3 Homework Practice Special Topics Summary Ch. 3 Quiz
<b>4</b>	9-19	Chapter 4	Ch. 4 Homework Practice Special Topics Summary Ch. 4 Quiz
<b>5</b>	9-26	Chapter 5	Ch. 5 Homework Practice Special Topics Summary Ch. 5 Quiz Exam 1 (Chpts 2-5)
<b>6</b>	10-3	Chapter 6	Ch. 6 Homework Practice Check Sheet, Histogram, & Mode Assign. Ch. 6 Quiz
<b>7</b>	10-10	Chapter 7	Ch. 7 Homework Practice Normal Distribution Assignment
<b>8</b>	10-17	Chapter 7	Scatter Diagram Assignment Ch. 7 Quiz
<b>9</b>	10-24	Chapter 8	Ch. 8 Homework Practice Cpk Assignment
<b>10</b>	10-31	Chapter 8	Ch. 8 Quiz Exam 2 (Chpts 6-8)
<b>11</b>	11-7	Chapter 9	Ch. 9 Homework Practice Hypothesis Testing Assignment
<b>12</b>	11-14	Chapter 9	Special Topics Summary Ch. 9 Quiz
<b>13</b>	11-21	Chapter 10	Ch. Homework Practice Special Topics Summary

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<b>14</b>	11-28	Chapter 10	Ch. 10 Quiz
<b>15</b>	12-5	Chapter 11	Ch. 11 Homework Practice p-Chart Assignment Ch. 11 Quiz Exam 3 (Chpts 9-11)
<b>16</b>	12-7	Final Exam	Comprehensive Final (Chpts 1-11)

### **Course Grading Information:**

#### Orientation Quiz—5%

Students will be required to complete an Orientation Quiz under the Content tab. They will select Orientation Start Here—Week 1. Then they will be allowed to take the Orientation Quiz after reviewing the material located there. Students **MUST** successfully complete the Orientation Quiz with a score of 100 before the remaining Learning Modules will open for them to complete.

#### Homework Assignments—25%

Students will be given a number of homework assignments, many of which will require students to demonstrate a thorough understanding of the material they have learned and apply that understanding. Most of these will require the use of attached documents and statistical calculations.

#### Special Topics—10%

Students will be assigned a topic which they will be expected to research further. It is expected that they will find at least 2 sources for each topic and write a brief, 2-page double-spaced summary of their topic. Proper spelling, grammar, and punctuation will be graded. Additionally, APA documentation should be used. The professor has provided a Sample APA paper and does require both a coversheet and a references page—obviously neither count toward the 2 pages of research.

#### Chapter Quizzes—20%

Short quizzes are expected for each chapter covered. These quizzes will typically be about 20 questions and are mostly multiple choice. Students will be given 30 minutes for each quiz and 3 attempts will be allowed. I will take the highest of the 3 attempts. You may not start and then stop a quiz. Once you begin any quiz, then you must complete it. You will need a calculator. See Chapter 1 of your CSSGB Primer for calculator specifics; however, a good scientific calculator should work. It cannot do graphing...

#### Unit Exams—20%

There will be 3 Unit Exams taken during the semester. These exams will be approximately 50 questions and students are given 60 minutes to complete the exam. Time is a factor on these exams as they prepare you to sit for the timed Six Sigma Green Belt certification exam. Students are only able to take Unit Exams 1 time (once). You may not start and then stop an exam. Once

you begin any exam, then you must complete it. You will need a calculator. See Chapter 1 of your CSSGB Primer for calculator specifics; however, a good scientific calculator should work. It cannot do graphing...

#### Comprehensive Final Exam—10%

Students are required to complete a 100-question final exam. You will be given 120 minutes to complete the exam and time is a factor. You will only be able to take this exam by the Final Exam due date or earlier. You will also only be given 1 attempt to take this exam. You will need a calculator. See Chapter 1 of your CSSGB Primer for calculator specifics; however, a good scientific calculator should work. It cannot do graphing...

#### Homework Practice—10%

In each CSSGB Primer there are homework problems in the back of each chapter—usually on a colored paper (green typically). These problems also come with the answers in the text. However, they provide excellent practice and preparation for quizzes and exams. Each week students will be assigned 10 problems that they are expected to complete and submit. For full credit, students **MUST SHOW THEIR WORK!**

#### **Late Work, Attendance, and Make Up Work Policies:**

Assignment due dates can be found on your schedule, within this syllabus, and associated with each assignment in Brightspace. **All work is due on or before the assigned DUE DATE!** If you miss the assigned Due Date for assignments, there will be a 50% deduction for any assignments turned in **NO LATER** than 1 week after the Due Date. No quizzes or exams can be taken late because everything can be taken early... This course is open to the student from the beginning and assignments can be submitted as early as you like—just **NOT** later than the **DUE DATE** for **ANY** reason.

During the semester, students think they have plenty of time to work on their assignments, and you do, but do not procrastinate. This is not a self-paced course where everything is due at the end of the semester. I do, however, allow you to work ahead if you desire.

#### **Attendance**

It is MCC's policy that all students must be present for 75% or more of the course. For online courses, attendance is measured by your online participation. **In this class, I take attendance through your Chapter Quizzes and/or Exams.** However, if you fail to:

- (1) Complete the online orientation by the due date; or
- (2) Fail to complete an entire Unit's worth of assignments and assessments, then...

I reserve the right to drop you from the course or submit a failing grade for the course at my discretion. If you do not complete the online orientation by the due date, you will be dropped from the course as "never attended." You may withdraw from the course and request a grade of

“W” by the student-initiated drop date. If you fail to uphold the requirements of this policy, you will receive the grade earned at the end of the semester.

**Student Behavioral Expectations or Conduct Policy:**

Students are expected to maintain classroom decorum that includes respect for other students and the professor, prompt and regular attendance—even virtual, and an attitude that seeks to take full advantage of the educational opportunity. That means please demonstrate respect to all who participate in this learning environment at all times and in each interaction.

Please know that I read my email several times during the day; however, if you send me an email at 11 PM with a question you need answered before the class tomorrow I might not see it. I do not always read email on the weekends. Do not expect instantaneous responses from me via email. Additionally, although I provide you with my personal cell phone number, I am not always immediately able to respond. Please be kind and patient.

Lastly, integrity is critical in the business world and in academia. Cheating of any kind will not be tolerated. A zero will be given for the first instance of cheating; failure in the course will result from any additional instance. I will also escalate the matter on the second instance of cheating. This is particularly true with plagiarism. Plagiarism.org (2017) defined plagiarism this way:

1. turning in someone else’s work as your own
2. copying words or ideas from someone else without giving credit
3. failing to put a quotation in quotation marks
4. giving incorrect information about the source of a quotation
5. changing words but copying the sentence structure of a source without giving credit
6. copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not

**[Click Here for the MCC Attendance/Absences Policy](https://www.mclennan.edu/highlander-guide/policies.html)**

**(<https://www.mclennan.edu/highlander-guide/policies.html>)**

Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.

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## ACADEMIC RESOURCES/POLICIES

### **Student Support/Resources:**

MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at <http://www.mclennan.edu/campus-resource-guide/>

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources or want to explore strategies for balancing life and school, we encourage you to contact a Success Coach by calling (254) 299-8226 or emailing [SuccessCoach@mclennan.edu](mailto:SuccessCoach@mclennan.edu). Students may visit the Completion Center Monday-Friday from 8 a.m.-5 p.m. to schedule a meeting with a Success Coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff based on household size. Text (254) 870-7573 to schedule a pantry appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

### **MCC Foundation Emergency Grant Fund:**

Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to <https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html> to find out more about the emergency grant. The application can be found at [https://www.mclennan.edu/foundation/docs/Emergency\\_Grant\\_Application.pdf](https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf).

### **Minimum Technical Skills:**

Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

### **Backup Plan for Technology:**

In the event MCC's technology systems are down, you will be notified via your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

### **Minimum System Requirements to Utilize MCC's D2L|Brightspace:**

Go to <https://www.mclennan.edu/center-for-teaching-and-learning/Faculty%20and%20Staff%20Commons/requirements.html> for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.



**Email Policy:**

McLennan Community College would like to remind you of the policy (<http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf>) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are expected to read and, if needed, respond in a timely manner to college emails.

**Instructional Uses of Email:**

Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

**Email on Mobile Devices:**

The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email [Helpdesk@mclennan.edu](mailto:Helpdesk@mclennan.edu) for help.

**Forwarding Emails:**

You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

**MCC Academic Integrity Statement:**

Go to [www.mclennan.edu/academic-integrity](http://www.mclennan.edu/academic-integrity) for information about academic integrity, dishonesty, and cheating.

**Accommodations/ADA Statement:**

Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. For additional information, please visit [www.mclennan.edu/disability](http://www.mclennan.edu/disability).

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

[disabilities@mclennan.edu](mailto:disabilities@mclennan.edu)

254-299-8122

Room 319, Student Services Center

**Title IX:**

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinator at [titleix@mclennan.edu](mailto:titleix@mclennan.edu) or by calling Dr. Drew Canham (Chief of Staff for Diversity, Equity & Inclusion/Title IX) at (254) 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC at (254) 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting <http://www.lighthouse-services.com/mclennan/>.

Go to McLennan's Title IX webpage at [www.mclennan.edu/titleix/](http://www.mclennan.edu/titleix/). It contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence, or domestic violence.

**Disclaimer:**

The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.