Course: TECH 5390
Title: Adv. LSSBB Techniques
Section: 460
Class Time: Online
Prerequisite: TECH 5310 Six Sigma Quality

Instructor: Dr. Heshium Lawrence
Office: HPR 243
Office Hours: TBD
Other Availability: By appointment
Phone #: 903-566-7331
Email: hlawrence@uttyler.edu (best way to contact me)

Course Description:
An in depth analysis of lean and statistical tools used to reduce costs and improve process or transactional flow through an organization. The DMAIC approach will be discussed as well as most topics currently covered on lean six sigma certification exams.

Course Learning Objectives:
At the end of this course, participants will be able to:
1. Students will be able to utilize lean tools to reduce waste and correctly solve projects in organizations.
2. Students will be able to statistically analyze a lean six sigma black belt project by earning a 70% or higher on a project.
3. Students will be able to understand the fundamentals of lean six sigma by passing a national certification exam.

Course Competencies
1. Computer-Based Skills – the student will complete written assignments using the word processor.
2. Communication Skills – the student will exhibit a mastery of both written and oral skills in completion and presentation of the assigned projects.
3. Interpersonal Skills – the student will interact in class discussion to clarify the key lean and six sigma concepts.
4. Problem Solving (Critical Thinking) – the student will use conceptual thinking to analyze and make determinations regarding the implementation of lean.
5. Ethical Issues in Decision Making and Behavior- the student will gain an appreciation of the ethics when creating a lean environment.
6. Personal Accountability for Achievement – the student will complete the projects at the time designated by the instructor and will enter into class discussion.
7. Competence in Technology Principles
   a. the student will have a thorough understanding of lean concepts to improve efficiency.
   b. Exposure to and appreciation for industrial experiences such as industrial tours, work-study options and cooperative education, senior seminars – Students will discuss and review videos of companies implementing lean.
Grading Policy and Criteria to Determine Final Course Grade:

- Daily Quizzes: 200
- Assignments: 100
- Projects: 200
- Midterm exam: 200
- Class Participation/Attendance: 100
- Final Exam: 200

TOTAL POINTS = 1000

Grade Scale Breakdown:
- A = 90 - 100%
- B = 80 - 89%
- C = 70 - 79%
- D = 60 - 69%
- F = BELOW 60%

Note: 89.9999999999999999 is still a B.

Date of Final Exam: August 15, online

Course Content:

- History of lean and six sigma
- Integration of lean and six sigma
- Six sigma and lean applications
- Six sigma projects and classifications
- Organizational process management and measurement
- Team formation, facilitation, dynamics, management, performance, evaluation, rewards
- DMAIC
- Project charter and tracking
- Data collection techniques
- Measurement systems
- Statistics (ANOVA, non-parametric tests, etc…)
- Multivariate Tools
- Regression
- Hypothesis Testing
- Probability
- Process capability
- Hypothesis testing
- FMEA
- Design of experiments
- Waste elimination
- Cycle time reduction
- Kaizen
- TOC
- Risk analysis and mitigation
- SPC
- TPM and DFSS
- Final exam
Attendance and Make-Up Policy:
Attendance is mandatory and will be taken at every scheduled class and laboratory period. No make-ups unless:

1. Organized university trip.
2. Illness or death in immediate family (mother, father, brother and/or sister).
3. Illness of student.

Each one of these will require either a doctor's statement or a signed statement from the individual in charge of the trip.

A student will lose a letter grade in the course each time s/he is absent or late 3 times. Any student entering the classroom 1 second after the scheduled starting time will be considered late unless accompanied with a valid excuse. (Applies to face-to-face lectures)

Late Work:
Absolutely no make up course work or exams. Any make up course work or exams due to a student not submitting it on a case by case basis. Which means the professor reserves the right to decline make up course work or exams. Exceptions to this will be as per University Policy concerning absences from class. If you know an assignment will be late for a valid reason, inform your instructor in advance to avoid unnecessary penalty.

Required Textbooks, Materials, and Supplies:

Required Software:
Minitab may be purchased for $29.99 at (www.onthehub.com/minitab) or you can download a 30 trial version.

Required Activities Scheduled Outside of Regularly-Scheduled Class time (fees, tickets, procedures and/or forms required):
Read textbook, review notes, and prepare PowerPoint presentations.

Department Website: http://www.utttyler.edu/cbt/hrd/tech/ms.php

Students Rights and Responsibilities
To know and understand the policies that affect your rights and responsibilities as a student at UT Tyler, please follow this link: http://www2.utttyler.edu/wellness/rightsresponsibilities.php

Grade Replacement/Forgiveness and Census Date Policies
Students repeating a course for grade forgiveness (grade replacement) must file a Grade Replacement Contract with the Enrollment Services Center (ADM 230) on or before the Census Date of the semester in which the course will be repeated. Grade Replacement Contracts are available in the Enrollment Services Center or at http://www.utttyler.edu/registrar. Each semester’s Census Date can be found on the Contract itself, on the Academic Calendar, or in the information pamphlets published each semester by the Office of the Registrar. Failure to file a Grade Replacement Contract will result in both the original and repeated grade being used to calculate your overall grade point average. Undergraduates are eligible to exercise grade replacement for only three course repeats during their career at UT Tyler; graduates are eligible for two grade replacements. Full policy details are printed on each Grade Replacement Contract. The Census Date is the deadline for many forms and enrollment actions that students need to be aware of. These include:
Submitting Grade Replacement Contracts, Transient Forms, requests to withhold directory information, approvals for taking courses as Audit, Pass/Fail or Credit/No Credit.

Receiving 100% refunds for partial withdrawals. (There is no refund for these after the Census Date)

Schedule adjustments (section changes, adding a new class, dropping without a “W” grade)

Being reinstated or re-enrolled in classes after being dropped for non-payment

Completing the process for tuition exemptions or waivers through Financial Aid

State-Mandated Course Drop Policy
Texas law prohibits a student who began college for the first time in Fall 2007 or thereafter from dropping more than six courses during their entire undergraduate career. This includes courses dropped at another 2-year or 4-year Texas public college or university. For purposes of this rule, a dropped course is any course that is dropped after the census date (See Academic Calendar for the specific date).

Exceptions to the 6-drop rule may be found in the catalog. Petitions for exemptions must be submitted to the Enrollment Services Center and must be accompanied by documentation of the extenuating circumstance. Please contact the Enrollment Services Center if you have any questions.

Disability Services
In accordance with Section 504 of the Rehabilitation Act, Americans with Disabilities Act (ADA) and the ADA Amendments Act (ADAAA) the University offers accommodations to students with learning, physical and/or psychiatric disabilities. If you have a disability, including non-visible disabilities such as chronic diseases, learning disabilities, head injury, PTSD or ADHD, or you have a history of modifications or accommodations in a previous educational environment you are encouraged to contact the Student Accessibility and Resources office and schedule an interview with the Accessibility Case Manager/ADA Coordinator, Cynthia Lowery Staples. If you are unsure if the above criteria applies to you, but have questions or concerns please contact the SAR office. For more information or to set up an appointment please visit the SAR office located in the University Center, Room 3150 or call 903.566.7079. You may also send an email to cstaples@uttyler.edu.

Student Absence due to Religious Observance
Students who anticipate being absent from class due to a religious observance are requested to inform the instructor of such absences by the second class meeting of the semester.

Student Absence for University-Sponsored Events and Activities
If you intend to be absent for a university-sponsored event or activity, you (or the event sponsor) must notify the instructor at least two weeks prior to the date of the planned absence. At that time the instructor will set a date and time when make-up assignments will be completed.

Social Security and FERPA Statement:
It is the policy of The University of Texas at Tyler to protect the confidential nature of social security numbers. The University has changed its computer programming so that all students have an identification number. The electronic transmission of grades (e.g., via e-mail) risks violation of the Family Educational Rights and Privacy Act; grades will not be transmitted electronically.

Emergency Exits and Evacuation:
Everyone is required to exit the building when a fire alarm goes off. Follow your instructor’s directions regarding the appropriate exit. If you require assistance during an evacuation, inform your instructor in the first week of class. Do not re-enter the building unless given permission by University Police, Fire department, or Fire Prevention Services

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EXPECTED CLASSROOM ETIQUETTE

The University of Texas at Tyler is committed to promoting a level of classroom etiquette that is conducive to maximum teaching and learning. Therefore, the following etiquette is expected of students:

1. Attend class each time the class meets.
2. Be on time for class and remain for the entire period. Students are inconsiderate of their classmates when they arrive late and leave early.
3. Refrain from talking while the teacher or another student is lecturing. Idle chattering and giggling are disruptive to the class and disrespectful to the teacher and classmates.
4. Without prior approval from the instructor, students are not allowed to use cell-phones, devices with earphones or any other electronic device (including laptops) in class.
5. Be attentive and participate in class.
6. Refrain from eating and drinking in the classroom.

Academic Dishonesty: The University of Texas at Tyler has a “zero tolerance policy” on plagiarism. Any student who commits an act of scholastic dishonesty is subject to discipline. Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give an unfair advantage to a student or the attempt to commit such acts. For purposes of this class, scholastic dishonesty occurs if you:

- Quote or paraphrase a source without properly citing it.
- Misquote or misrepresent an outside source.
- Pass off any portion of an outside source as your own.
- Turn in for credit any paper that has been purchased through the internet, copied from the internet, or cut and paste a source from the internet.
- Turn in a paper written by someone else.

The penalties for academic dishonesty vary, ranging from an F on an assignment, an F in the course, or expulsion from the university, depending on the severity of the incident. The Office of Student Affairs keeps records of any suspected case of scholastic dishonesty, and instructors are required to alert them if we believe a student has plagiarized or cheated in any way.

Writing Assistance: Each student is entitled to free writing assistance in the Writing Center. Students who take advantage of this service will receive five extra points on essay grades if they take their drafts to the Writing Center. The student must provide documentation that he or she received assistance in the Center. An appointment is strongly advised.

Note: The instructor reserves the right to modify the syllabus. All modifications will be communicated to the students in a timely manner.