## Concepts of Lean and Six Sigma (ETI 1622)

**Instructor**: Alessandro Anzalone, Ph.D.

Class Location: Room 218, BSSB

Class Time: Mondays and Wednesdays 11:00-12:15 pm

**Office Hours:** Tuesdays 2:00-4:00 pm, other times by appointment.

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## **Course Description:**

This course provides a comprehensive overview of the Lean and Six Sigma methodologies including the Define, Measure, Analyze, Improve, and Control (DMAIC) process improvement paradigm, techniques, tools and metrics that are critical for process improvement success. The course will include demonstration and use of Lean and Six Sigma tools.

#### **Course Outcomes:**

- 1. Monitor and document quality measurements or observations in charts or records.
- 2. Understand the importance of root cause analysis and timely implementation of corrective & preventative actions.
- 3. Develop and apply both Lean and Six Sigma tools and techniques to improve quality and productivity.
- 4. Measure and analyze process capability, and utilize Six Sigma capability indices.
- 5. Demonstrate knowledge of the alignment of company goals and objectives with improvement strategy.
- 6. Understand effective team membership and use of team based tools to analyze and improve processes.
- 7. Apply the 5S's of sort, set in order, shine, standardize, and scrap.
- 8. Understand elimination of Muda or waste in all aspects of the process.

#### **Textbook and Materials:**

**Required**: Michael George, Lean Six Sigma : Combining Six Sigma Quality with Lean Production Speed, McGraw-Hill, 1<sup>st</sup> edition , 2002, ISBN-13: 978-0130176158.

**Academic Dishonesty Policy:** All parties identified as cheating or plagiarizing on an exam, project or assignment will be assigned a grade zero on that item and subject to academic discipline in accordance with HCC policy.

**Attendance Policy**: It is important that you attend every class period and be on time. Missing class means that you miss some important material. Since this course is a cumulative experience, you will put yourself at an extreme disadvantage.

1. It is your responsibility to sign the attendance sheet provide at every class meeting.

- 2. If you are absent, it is your responsibility to get announcements, materials, and assignments before the next class period.
- 3. More than 3 absences per semester are considered excessive and will result in points taken off your final grade for the unexcused absences after the third absence. Please note that excused absences must be documented and may be death or illness of family members, personal illness, military duty, car trouble, etc.

### **Instructional Methods (including Examination Policies):**

This course combines traditional lectures with case studies.

Students will be evaluated with regular homework assignments, in-class assignments, class participation, midterm, course project, and final exam.

- 1. Unexcused absences on test day will receive a zero for that test.
- 2. Tests will be closed book closed notes. Reference materials will be provided if required.
- 3. Tests will be short answer, T/F, multiple choices, and some problems.
- 4. Please contact me by email or phone if at all possible before the time of the test (leave a voice message) in the event you have to miss a test.
- 5. No retests will be given for any exams that have been taken.
- 6. Every student will be required to take the final exam.
- 7. Make up tests from excused illnesses must be made up within 2 weeks of the absence and the test may be of a different format than the class test.
- 8. If you are auditing this class, it must be declared at registration.
- 9. Some work will be competency-based and assessed accordingly.

**Grading System:** The final grades will be determined on the following basis:

90 - 100 A 80- 89 B

70 - 79 C

60 - 69 D

0-59 F

**Request for Accommodations**: If, to participate in this course, you require an accommodation due to a physical or learning impairment, you must contact the Office of Services to Students with Disabilities. The office is located in the BSSB 109. You may also reach the office by telephone at (813) 253-7914.

# **Class Schedule**

Date	Chapter	Assignment
01/11	Introduction	
01/13-01/20	Chapter 1	
01/18	Dr. Martin Luther King's Day, no class	
01/25-01/27	Chapter 2	
02/01-02/03	Chapter 3	
02/08-02/10	Chapter 4	
02/15-02/17	Chapter 5	
02/22-02/24	Chapter 6	
03/01	Midterm	
03/03-03/08	Chapter 7	
03/10-03/15	Chapter 8	
03/17-03/22	Chapter 9	
03/24-04/05	Chapter 10	
03/26-04/04	Spring Break	
04/07-04/12	Chapter 11	
04/19-04/21	Chapter 12	
04/26	Review Session	
05/03	Final Exam	

This Class schedule is subject to change.