



COURSE TITLE BLACKBOARD SITE	EME 6403 Quality Control Fall 2011 – <u>http://my.ltu.edu</u> and select CRN 1528	
INSTRUCTOR	John Shevlin Adjunct Professor, College of Engineering <u>jshevlin@Itu.edu</u> (Preferable mode of contact) Cell Phone: 513-226-7367 Office hours by appointment	
SCHEDULE	August 31 – December 22, 2011 Refer to <u>http://www.ltu.edu/registrars_office/calendar_final_exam.index.asp</u> for the last date to withdraw and other important registration related information.	
LEVEL/ HOURS PREREQUISITE	Masters Degree / 3 semester credit hours Admission / prerequisite requirements per policy	
REQUIRED TEXT	Managing Quality (4th ed.), by T. Foster. Prentice Hall, 2009.	
(See Blackboard for additional resources)	ISBN 978-0-13-608850-9 Available for online purchase through LTU Bookstore at: http://lawrence-tech1.bkstore.com/bkstore/TextbookSelection.do?st=489_	
ADDITIONAL RESOURCES	LTU Online student resources: http://www.ltu.edu/ltuonline/	
TECHNICAL SUPPORT	Technical support for using Blackboard is provided by the Helpdesk. Visit www.ltu.edu/ehelp or 248.204.2330 or helpdesk@ltu.edu. Send the Help Desk a form detailing any issues by clicking here http://tinyurl.com/3yqrvne.	





# COURSE SCHEDULE FOR TRADITIONAL SEMESTER COURSES

This fully online course begins with a partial week online course orientation period to familiarize yourself with the online learning environment and to meet online or via the phone with your instructor. Each subsequent week starts on a Monday and ends on a Sunday.

Dates	Modules	Topics / Readings	Assignments Due
Prior to Semester Start and Aug 31 – Sep 4		Overview of textbook Online Learning Orientation Course Orientation and group formation	Course orientation Instructor conversation Individual pre-assessment
– Sep 11	(note: more than one module may be	on Quality (note: more than one chapter may be scheduled in a module)	Bb Discussion Board Forum – DB01 Quality in Products Case Study 1-2 - Granite Rock Company (note: Be sure to follow the requirements for Case Studies found in the Assignment Detail Section of this Syllabus)
Week of Sep 12 – Sep 18	Module 2	Chapter 2 – Quality Theory	Bb Discussion Board Forums - DB02 Quality in Services
Week of Sep 19 – Sep 25	Module 3	1 11 2	Bb Discussion Board Forum – DB03 Supplier Audit
Week of Sep 26 – Oct 2		Chapter 4 – Strategic Quality Planning	Bb Discussion Board Forums - DB04 Quality Costs Lean Summary - Chapter 4
Week of Oct 3 – Oct 9	Module 5		Bb Discussion Board Forum – DB05 VOC Case Study 5-1 - Customer Quality Feedback at Apple
Week of Oct 10 – Oct 16	Module 6	Chapter 6 – The Voice of the Market	Bb Discussion Board Forum – DB06 Design for Manufacture
Week of Oct 17 – Oct 23		in the Product and Process Design	Bb Discussion Board Forum – DB07 HR Lean Summary - Chapter 7
Week of Oct 24 – Oct 30	Module 8		Bb Discussion Board Forum – DB08 Systems Perspective





Dates	Modules	Topics / Readings	Assignments Due
Week of Oct 31 – Nov 6	Module 9	Chapter 9 – Managing Supplier Quality in the Supply Chain	Bb Discussion Board Forum – DB09 Statistical Thinking
			Case Study 9-2 - Managing the Supply Chain at Honeywell
Week of Nov 7 – Nov 13	Module 10	Chapter 10 – The Tools of Quality	Bb Discussion Board Forums - DB10 Experimental Design
Week of Nov 14 – Nov 20	Module 11	Chapter 11 - Statistically Based Quality Improvement for Variables	Bb Discussion Board Forums - DB11 Taguchi Case Study 11-1 - Ore-Ida Fries
Week of Nov 21 – Nov 27	Module 12	Chapter 12 - Statistically Based Quality Improvement for Attributes <i>Light Week – Thanksgiving Break</i>	Bb Discussion Board Forums - DB12 TBD Lean Summary - Chapter 12
Week of Nov 28 – Dec 4	Module 13	Chapter 13 - Six Sigma Management and Lean Tools	Bb Discussion Board Forums - DB13 TBD
Week of Dec 5 – Dec 11	Module 14	Chapter 14 - Managing Quality Improvement Teams	Term paper topic
Week of Dec 12 – Dec 18	Module 15	Chapter 15 - Implementing and Validating the Quality System Term Paper Completion and Final Exam Preparation	Term Paper due no later than midnight December 18
Week of Dec 19 – Dec 22	Final Exams	Course Summary End of Course	Bb Discussion Board Forums Other assignment(s) due

# STUDENT EVALUATION

The course has 37 assignments totaling 364 points. Letter grades are awarded based on the total number of points achieved. Points are deducted for late assignments, excluding the final exam which will not be accepted if submitted late.

Assignments	Points
Individual Lean Summaries (3 @ 5 points each)	15
Individual Term Paper	20
Individual Case Studies (4 @ 7.5 points each)	30
Final Exam	35
Participation (13 @ 3 points each)	39
Quizzes (15 @ 15 points each)	225





Class Points	Letter Grade
96 and above	A
90 – 95	A-
87 – 89	B+
83 – 86	В
80 – 82	В-
77 – 79	C+
73 – 76	С
70 – 72	C-
61 – 70	D (Undergrad Only)
60 and below	E

Note: Grades lower than a "B" fall below the LTU graduate standard

## **EDUCATIONAL GOALS**

Quality Control is a study of current topics in quality control techniques to include total quality management, statistical quality control, statistical process control, quality circles, and Deming's methods. Emphasis will be placed on the systems approach to quality control.

## **STUDENT LEARNING OBJECTIVES / OUTCOMES**

The course is designed to cover the managerial and technical elements of Quality Control. Therefore, the main objectives of this course are to provide an understanding of the current ideas of "Quality" from a management perspective and also to develop an understanding and apply tools of quality management and control. These objectives will be evaluated via assignments, quizzes, examinations, and other methods throughout the course.

### PREREQUISITE SKILLS

PowerPoint, Word, Excel (Potentially), Understand and interpret graphs.

### INSTRUCTIONAL METHODS AND COURSE ORGANIZATION

A variety of instructional methodologies are used in this course. List the specific methods used in your course, which may include but are not limited to:

**Blackboard learning environment –** Blackboard at <u>my.ltu.edu</u> contains the syllabus, all assignments, reading materials, streaming videos, narrated Powerpoint mini-lectures, podcasts, written lecture notes, chapter quizzes, links to Web resources, and discussion forums. You will submit all assignments via Blackboard, and are expected to participate regularly in discussion topics. Please take time to familiarize yourself with the organization of the Blackboard site. You will want to check the site frequently for announcements reminding you of new resources and upcoming assignments.

**Student/Instructor Conversations –** Students keep in touch with the instructor via e-mail messages, telephone conference calls, and IM conversations.

**Self-assessments** – Pre- and post- self-assessment tools will help students measure their entering skills and progress during the course.

**Required readings –** Textbook chapters should be read according to the schedule outlined in the syllabus. Chapters will be discussed online.





**Assignments** – Lean Summary's, Case Studies, Quizzes and Exams will be used to assess your knowledge

# **CLASS POLICIES AND EXPECTATIONS**

(Please review to verify the information supports student expectations. Update as needed for alignment with your course policies, learning objectives, and student expectations.)

*I plan to offer you a valuable learning experience, and expect us to work together to achieve this goal. Here are some general expectations regarding this course:* 

Each student has a LTU email account. If you wish to use a different email address for this course, please **change your email address in Blackboard under "Blackboard Tools", then "Personal Information"** and send an email to me so I can store your address in my email directory.

Readings, discussion forum participation, and written assignments must be completed according to the class schedule. It is important to contact the instructor as needed to discuss personal needs regarding course requirements and assignments.

It is essential that all students actively contribute to the course objectives through their experiences and working knowledge.

All assignments must be submitted on schedule, via Blackboard, and using Microsoft Office compatible software. If you need to submit an assignment via email, contact the instructor in advance.

Assignments must be completed to an adequate standard to obtain a passing grade. Requirements for each assignment are detailed in this syllabus.

Be prepared to log into Blackboard at least once each day. Please focus your online correspondence within the appropriate Blackboard discussion forums so that your colleagues can learn from you.

At midterm and at the end of the course, you will be invited to participate in a University evaluation of this course. Your feedback is important to the University, to LTU Online, and to me as an instructor, and I encourage you to participate in the evaluation process.

It is important for you as students to know what to expect from me as your instructor:

- I will be available to you via e-mail and phone, and will promptly reply to your messages.
- I will be available to you for face-to-face appointments as requested.
- I will maintain the Blackboard web site with current materials, and will resolve any content-related problems promptly as they are reported to me.
- I will send out a weekly e-mail update to all class members to guide upcoming work and remind you of assignment due dates.
- I will return all assignments to you promptly, and will include individualized comments and suggestions with each assignment.
- I will hold our personal written or verbal communications in confidence. I will not post any of your assignments for viewing by the class without requesting your approval in advance.
- I will treat all members of the class fairly, and will do my best to accommodate individual learning styles and special needs.
- If any of these points need clarification, or when special circumstances arise that require my assistance, please contact me so that we can discuss the matter personally.

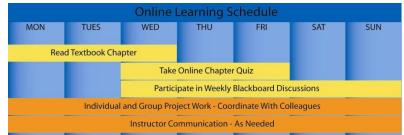


# PRACTICAL GUIDELINES FOR CLASS LOAD EXPECTATIONS

A three-credit course generally requires <u>at least</u> nine hours per week of time commitment. Here are some practical guidelines to help schedule your time commitments for this online course:

- A 14-week semester (the Summer semester is compressed into 10 weeks) would require at least 126 hours of time commitment to successfully complete all readings, activities, assignments, and texts as described in this syllabus.
- You should reserve at least 6 hours per week to read the required textbook chapters and resources, participate in online discussions, review presentation materials, and work through online quizzes. This effort will total at least 84 hours over the course of the semester.
- You should organize your remaining time to roughly correspond with the point value of each major assignment. This means that you should plan to spend <u>at least</u>:
  - 8-9 hours preparing your case study review;
  - 24-40 hours working with your group on the three parts of your semester-long project;
  - 8-9 hours working on the various components of your reflective consolidation (final exam).

These guidelines may not reflect the actual amount of outside time that you – as a unique individual with your own learning style – will need to complete the course requirements. The number of hours each week will vary based on assignment due dates, so please plan ahead to insure that you schedule your academic, work, and personal time effectively. The following graphic can be used to guide you in planning your weekly course work to remain on schedule:



## **ASSIGNMENT DETAILS**

Course assignments and evaluation criteria are detailed below. Please review these requirements carefully. See the section Academic Resources / Assessment Guidelines for information about assessment of written and oral presentations.

Details for all assignments are shown below. Please note that you should not submit any assignments to the Blackboard "Digital Drop Box." All assignments are submitted using the Blackboard "Assignments" or "SafeAssign" function. Some assignments are also posted to the Blackboard Discussion Forum for student comments.

#### Weekly Quizzes (15 @ 15 points each, Total of 225 Points)

Weekly quiz for the chapter assigned. Quiz is due no later than midnight of the close of the module (Sunday). The content is directly from the chapter and will consist of T/F, MC and Essay.

#### Individual Assignment Lean Summaries (3 @ 5 points each, Total of 15 Points)

- One page "lean" summary for each of the topics found below:
  - 1. Chapter 4 Strategic Quality Planning
  - 2. Chapter 7 Quality and Innovation in the Product and Process Design
  - 3. Chapter 12 Statistically Based Quality Improvement for Attributes





Individual summaries are due at the conclusion of the appropriate chapter. The idea of a Lean Summary is a 1-page visual document that can be used as a "memory jogger" at the completion of this course. See my example on Black Board of a "Lean Summary" of this course. Other student examples will also be posted.

### Individual Assignment Case Studies (4 @ 7.5 points each, Total of 30 Points)

Individual analysis of each case study need to include the items below:

- 1. Major problem faced by the organization
- 2. Alternatives and evaluation
- 3. Your recommendations & rationale
- 4. Implementation: How? When?
- 5. Answers to any specific questions provided in the textbook

Your case study document (up to 7.5 points)

Nominal three page case with title and name – 2 points
Organization and overall writing quality – 4.5 points
Assignment submitted on time – 1 point

## Individual Term Paper (20 points Total)

Each individual is responsible to write a term paper (no more than 10 pages in length, double spaced) on a topic such as "Quality Control Techniques, Application of Quality Engineering or Quality Management System." The main focus of the paper being from the textbook that must be agreed upon by you and the instructor. You must refer to **at least five credible sources** and specify them on the list of your references; *Internet sources are only acceptable if they are credible. If you have questions, please ask.* 

Your critique and application (up to 18 points)

- -Use of either a "lessons learned" or "best practices" approach 12 points
- •Overall critical thinking and writing quality 6 points
- Your citations (up to 2 points)
  - -Use of at least five citations from trade or academic journals 1 points

-Use of APA citation formatting - 1 point

**Note:** Your topic MUST be agreed upon by both you and me. The earlier this gets addressed, the better chance you have of a) getting started earlier, b) getting the topic you desire and c) getting questions or issues resolved in a timelier manner.

### Individual Online Participation (10 posts @ 3 points each, Total of 30 points)

Students often bring valuable experience, and learning through lively online discussions is encouraged. Discussion will be conducted through the Blackboard system in the "Discussion Board" area of the module. Written responses are expected to be of high quality, challenge each other's thoughts and build upon or offer a differing viewpoint. A simple "Yes, No, I agree, etc." is considered to be non-value added and unacceptable.

I do not answer all student submissions, but am present. You will find me probing or digging to expand your responses. I do this to help drive further clarification or engagement from your classmates.

Each student is expected to actively participate in online activities. Class participation is evaluated to a maximum of 30 points (10 discussion threads @ 3 points each) based on:

Up to 3 points each – Actively participating in Blackboard discussion forums, responding to questions posted by the instructor, and interacting positively with other students. Point breakdown is as follows:





- 0 points for incomplete posts
- 1 point for mediocre posts/responses (minimum of 1) to my initial post
- 2 points for good posts/responses (minimum of 1) to my initial post
- 3 points total (2 points for good posts/responses to my initial post for a good response and 1 point for a good response to a classmate's post)

## SYLLABUS ADDENDA

Please see the LTU Online "Current Students" web site <u>http://www.ltu.edu/ltuonline/</u> for comprehensive information about Lawrence Tech's academic services, library services, student services, and academic integrity standards. The content of this web site is explicitly included as syllabus requirements.

The LTU Online "Current Students" web site also includes grading rubrics used by your instructor to evaluate written assignments, discussion forum participation, and group assignments. Please note that the SafeAssign anti-plagiarism product will be used for written assignments submitted for this course. Please see the instructions included on the <u>eHelp web site</u> regarding the use of the SafeAssign product.

#### Undergraduates: Leadership Transcripts

The leadership transcript enables students to track co-curricular activities that are undertaken above and beyond the requirements of the LTU curriculum. The leadership transcript serves students by enhancing the leadership portfolio; providing the opportunity for a transcript of distinction; enhancing their resumes; and assisting in articulating leadership experience. It can be accessed by logging on to Banner Web and clicking the Student and Financial Aid tab. Leadership Activities is located at the bottom of the list.