

**University of North Texas**  
**College of Business**  
**Department of Marketing, Logistics, and Operations Management**

**OPSM 4830.001 PRODUCTIVITY AND QUALITY MANAGEMENT**

Semester: Spring 2020  
 Class Time: Tu 6:30 p.m. - 9:20 p.m.  
 Classroom: Wh 322  
 Instructor: Dr. Divesh Ojha  
 Office: BLB 385C

Ph: (940) 565-2862  
 E-mail: use CANVAS email  
 Office Hours: Mo, Thu 6:30 p.m.-7:30 p.m.  
**via Zoom** or by appointment

**Course Description:** This course is concerned with the theory and practice of quality science. It also explores the connection between quality improvement and productivity gains. Topics to be covered include, among others, acceptance sampling, total quality management, process control, and their impact on productivity.

**Course Objectives:** The course aims to equip students with a sound understanding of the basic principles of quality management and how to apply them to enhance the productivity of a manufacturing or non-manufacturing organization. Also examined are some important analytical tools for detecting, analyzing, and eliminating quality problems to achieve increased profitability and improved competitiveness.

**Textbook:** Managing Quality: Integrating the supply chain 6th edition by S. Thomas Foster ISBN 13: 978-0-13-379825-8 Publisher: Pearson.

**Supplemental Materials:** Lecture notes/videos and other course-related information will be posted on Blackboard throughout the semester.

**Evaluation Methods:** The course grade will be determined as follows:

Assigned reading summaries	15%
Online Review Quizzes	15%
Research Participation	10%
Attendance and Participation	8%
Discussion lead/notes	2%
Group Project	30%
Exam 1	6%
Exam 2	7%
Exam 3	7%
<b>Total</b>	<b>100%</b>

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Optional comprehensive final (taken in lieu of one of the three Exams 1 or 2 or 3)

90.00% or above	A
80.00% - 89.99%	B
70.00% - 79.99%	C
60.00% - 69.99%	D
59.99% or below	F

**Other Policies:**

1. Course work - There will be 10 online review quizzes. There will be 9 reading summaries, one group project, 3 exams and one cumulative optional final examination if needed. No late submissions of will be accepted, nor will make-up tests be given unless there is documented evidence of an extreme circumstance causing the delay or absence.
2. Class attendance - Attendance is strongly recommended. However, whether present or not, each student will be held responsible for any materials discussed and announcements made in class.
3. Academic integrity - Anyone in this class engaging in academic dishonesty will receive a failing grade in the course. In addition, the case will be referred to the University for appropriate disciplinary actions. Academic

dishonesty includes, but is not limited to, the following:

- (1) use of any unauthorized assistance in taking quizzes, tests, or examinations,
  - (2) dependence upon the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments,
  - (3) acquisition, without permission, of tests, notes, or other academic work belonging to a University faculty or staff member,
  - (4) any other act that gives a student an unfair advantage,
  - (5) use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment, and
  - (6) unacknowledged use of work prepared by another person or agency in the selling of term papers or other academic materials.
4. Disability accommodation - The University of North Texas fully complies with the Americans with Disabilities Act. If you have an established disability as defined in the Act and would like to request accommodation, please see me within the first week of class or as soon as possible.
  5. Reading Summaries - All reading summaries should be typewritten in Times New Roman of size 12 on 8 ½ x 11 white paper. Two single spaced pages are allowed for the summaries. There will be class discussion based on assigned readings. An assigned group will be leading the discussion and making the notes of the key takeaways from the discussion. The notes from the discussion should be emailed to the entire class before the next class meeting.
  6. In-class and online review quizzes will occur though out the course.
  7. Group project - Each of the project teams is also required to carry out a quality improvement project, submit a report, and make a presentation. In order for such a major undertaking to be successful, each group needs to select an organization (either a service company or a manufacturing concern or a government agency or a nonprofit institution), make initial contacts, visit the facility, and discuss with one or more of the managers there to understand the quality control process. Relevant information gathered should be carefully analyzed and synthesized to gain insights into the company's quality management system so that meaningful suggestions for improvement can be made.

The project report can be prepared with the aid of the textbook, class notes, and handouts. Use of personal experience, the Internet, and information from other sources should prove helpful and is encouraged. The issues addressed in the paper should be comprehensive and consist of the following:

- (1) Description of the organization. This includes the name, location, and brief history of the firm, the type of industry it is in, the organizational structure, the variety of products made, the volume of each product, the transformation process(es) employed, the types of equipment used, the facility layout, the production strategy adopted, and the labor requirements (for example, skilled and unskilled workforces). Moreover, any quality-related corporate strategy that is being implemented should be reported as well.
- (2) Description of the quality function. This includes the size, structure, organizational position, and objectives of the quality control department, the variety of goods, parts, and components bought, the purchase volumes, the number and types of suppliers used, and the information technologies employed.
- (3) Description of the quality improvement tools, processes, and programs that are currently in place. These include, but are not limited to, acceptance sampling, benchmarking, business reengineering, continuous quality improvement, control charts, experimental design, fishbone diagram, ISO certification, kaizen, Pareto analysis, quality control circle, quality function deployment, six-sigma, Taguchi method, and total quality management. Any forms, tables, or graphs used in the quality system should be documented.
- (4) Analysis and discussion of the existing practices. This includes a critical review of the quality improvement process in light of all the information collected, identification of its strengths as well as weaknesses, description of concerns raised by the individual(s) interviewed, and initiatives being taken within the organization to address the problems encountered.

- (5) A day in the life of the interviewee. This includes the quality professional's name, job title, contact information (such as postal mail address, electronic mail address, and work phone number), age group, salary range, educational background, and previous business experiences. In addition, it is necessary to give a detailed account of his/her current work responsibilities, allocation of time among various activities, interaction with colleagues in other functional areas, notable professional accomplishments, career developments (such as six-sigma master black belt, memberships in professional societies, and participation in conferences/seminars/workshops), future goals, and so on.
- (6) Conclusion and recommendations. This includes a succinct summary of the project undertaken, major findings of the study, specific recommendations for quality improvement, and challenges facing the quality control department of the company.

Each team has to submit two typewritten progress reports during the course of the semester. The required format of the submission is shown on this page. Additionally, **each team must turn in two copies of the final project report** in essay form, typewritten, double-spaced, with one-inch margins at the top, bottom, left, and right, and no more than 25 pages of text in Times New Roman font of size 12. A maximum of 15 pages of attachments may be included for clarification purposes. Strict adherence to the guidelines in the *APA Style Manual* is required in preparing the report, so be sure to consult the following book, which is available in the University libraries:

American Psychological Association. *Publication manual of the American Psychological Association* (6<sup>th</sup> ed.). Washington, DC: American Psychological Association, 2010.

Particular attention will be paid to the following areas when a project report is evaluated: content of materials, organization of paper, improvement recommendations made, clarity of presentation, writing style and format, visual illustrations, as well as typographical and grammatical errors if any. The grade will be determined as follows:

Description of organization	15%
Description of quality function	15%
Description of quality initiatives and programs	20%
Analysis and discussion of quality system	20%
A day in the life of interviewee	10%
Conclusion and recommendations	20%

Each group must present its completed project to the rest of the class. The presentation should be professional in nature with respect to appearance and style. Moreover, it should last about 20 but no more than 25 minutes.

The project presentation will be evaluated based on thoroughness of materials covered, relevance of recommendations, clarity of delivery, professionalism (such as dress and visual aids), and overall organization. Please note that each student's grade on the term project will be subject to peer evaluations. Suppose, for instance, that you receive a grade of 90% for the report and the presentation combined and get an average group assessment of 90%. Your overall project grade will then be  $90\% \times 90\% = 81\%$ . See Page 10 for a sample completed evaluation form.

8. Dropping a group member - In case an individual does not perform to the team's expectation in the research project by constantly missing group meetings, failing to provide requested information in a timely fashion, contributing work that is poorly done, or exhibiting other unprofessional behaviors, the other members may collectively decide to drop him/her from the team. However, in the interest of fairness, the five-step procedure outlined below must be closely followed:
  - (1) There needs to be a unanimous agreement among all other team members that the student's performance is unsatisfactory.
  - (2) The concern must be conveyed to the individual in writing and discussed with him/her in person. The written notice must be signed and dated by the rest of the group.
  - (3) A copy of the above-mentioned notice has to be submitted to the instructor at the same time.
  - (4) The student has one week of class time to improve his/her performance.

- (5) If no satisfactory improvement is made over the two-week period, then a final written notice of dropping the person as a member of the team will be signed and dated by the other members and given to him/her. In the meanwhile, a copy of the document must be forwarded to the instructor. If a student is dropped from a team and not accepted by another, then he/she must undertake another research project independently. **Notice that no team members can be dropped after the second exam.**
9. Course evaluations: There will be an online SPOT evaluation of teaching administered by the University of North Texas at the end of the semester. Through these two surveys, you are going to have opportunities to comment on how this class is taught. Your feedback will be valued and appreciated as I continue to improve my performance in the classroom.
10. Acceptable student behaviors - Student behaviors that interfere with an instructor's ability to conduct a class or other students' opportunity to learn are unacceptable and will not be tolerated at UNT. They will be directed to leave the classroom and the instructor may refer them to the Center for Student Rights and Responsibilities for consideration of violation of the Code of Student Conduct, which can be found at [www.unt.edu/csrr](http://www.unt.edu/csrr). The University's expectations for student behaviors apply to all instructional forums, including traditional and electronic classrooms, labs, discussion groups, field trips, etc.
11. UNT endeavors to offer you a high-quality education and provide a supportive environment in which you can learn and grow. As a faculty member, I am committed to helping you succeed as a student. Here is how you can achieve your goals at UNT: show up, find support, take control, be prepared, get involved, and be persistent!

### Research Participation (10%)

As part of your learning experience in this course, you will be required to participate in research studies conducted by faculty members of the Department of Marketing, Logistics and Operations Management. Your participation in this research will make up **10%** of your final class grade.

To fulfil the requirement, you **must** create an account on the College of Business SONA page—[unt-cob.sona-systems.com](http://unt-cob.sona-systems.com)—which is a web application that allows you to browse available studies. Credit will be assigned based on the length of time the study takes to complete and whether you participate online or in the COB behavioral Lab (BLB 279):

- Short online studies (5-15 minutes) earn 1 credit
- Medium online studies (15-30 minutes) earn 2 credits
- Long online studies (30-45 minutes) earn 3 credits
- On-campus, lab studies (30-45 minutes) earn 5 credits

To fulfill the 10% course requirement, you must earn a total of **10 SONA credits** throughout the semester (i.e., 1 credit = 1 percent of your final grade). All credits earned will be added to your final course grade at the **end** of the semester.

To sign up, please visit [unt-cob.sona-systems.com](http://unt-cob.sona-systems.com). If you have questions, **DO NOT** contact your professor. Contact the behavioral lab manager by email at [COB.REP@unt.edu](mailto:COB.REP@unt.edu). Your questions will be addressed promptly.

**\*\*Note:** Access the studies early and often to make sure you have first access to available studies. Once you sign up, the lab manager will update you periodically about new studies that have been posted.

**Please do not complete the Psychology department's SONA research as it will not be considered for credit.**

***“When is the deadline for students to participate?”***

**Answer: The deadline for participation in studies for credit is April 26, 2020.**

***“What can students do if they can't or don't want to complete surveys?”***

**Answer: They can complete a 2-page research article critique paper for SONA credits. One article is worth 2 SONA credits. Please contact [cob.rep@unt.edu](mailto:cob.rep@unt.edu) and they will assign you articles for the critique. They will also review them and assign credits accordingly.**

Thanks in advance for your participation! Have a great semester!

### Course Schedule (Instructor reserves the right to change the schedule if needed)

Date/Day	Chapter Number	Chapter Name
Tuesday, January 14, 2020	Syllabus Distribution/Chapter 1	Differing Perspective on quality
Tuesday, January 21, 2020	Chapter 2	Quality Theory
Tuesday, January 28, 2020	Chapter 3	Global Supply chain Quality and International Quality Standards
Tuesday, February 4, 2020	Chapter 7	Quality and Innovation in Product and Process Design
Tuesday, February 11, 2020	<b>Exam 1</b>	<b>(on Chapters 1,2,3,7)</b>
Tuesday, February 18, 2020	Chapter 8	Designing Quality Services
Tuesday, February 25, 2020	Chapter 9A	Acceptance Sampling
Tuesday, March 3, 2020	Chapter 10	The Tools of Quality
Tuesday, March 10, 2020	<b>Spring Break</b>	
Tuesday, March 17, 2020	<b>Exam 2</b>	<b>(on Chapters 8,9A,10)</b>
Tuesday, March 24, 2020	Chapter 11	Statistically Based Quality Improvement for Variables
Tuesday, March 31, 2020	Chapter 12	Statistically Based Quality Improvement for Attributes
Tuesday, April 7, 2020	Chapter 13	Lean Six sigma Management and Tools
Tuesday, April 14, 2020	Project Presentation	
Tuesday, April 21, 2020	Project Presentation	
Tuesday, April 28, 2020	<b>Exam 3</b>	<b>(on Chapters 11,12,13)</b>
Tuesday, May 5, 2020	<b>Optional Final</b>	

**Due Dates:**

Available from	Time	Due Date/Day	Time Due	Item Due
		Tuesday, January 14, 2020	9:20 PM	First day of class nothing due
Wednesday, January 15, 2020	8:30 AM	Saturday, January 18, 2020	10:00 PM	Online Review Quiz - Chapter 1
Wednesday, January 15, 2020	8:30 AM	Tuesday, January 21, 2020	9:20 PM	Integrative Summary for readings 1 and 2; Group 1 discussion lead and minutes
Wednesday, January 22, 2020	8:30 AM	Saturday, January 25, 2020	10:00 PM	Online Review Quiz - Chapter 2
Wednesday, January 22, 2020	8:30 AM	Tuesday, January 28, 2020	9:20 PM	Integrative Summary for readings 3 and 4; Group 2 discussion lead and minutes
Wednesday, January 29, 2020	8:30 AM	Saturday, February 1, 2020	10:00 PM	Online Review Quiz - Chapter 3
Wednesday, January 29, 2020	8:30 AM	Tuesday, February 4, 2020	9:20 PM	Integrative Summary for readings 5 and 6; Group 3 discussion lead and minutes
Wednesday, February 5, 2020	8:30 AM	Saturday, February 8, 2020	10:00 PM	Online Review Quiz - Chapter 7
Tuesday, February 11, 2020	7:00 PM	Tuesday, February 11, 2020	9:00 PM	<b>Exam 1 (Starts at 7 pm)</b>
Wednesday, February 5, 2020	8:30 AM	Tuesday, February 18, 2020	9:20 PM	Integrative Summary for readings 7 and 8; Group 4 discussion lead and minutes
Wednesday, February 19, 2020	8:30 AM	Saturday, February 22, 2020	10:00 PM	Online Review Quiz - Chapter 8
Wednesday, February 19, 2020	8:30 AM	Tuesday, February 25, 2020	9:20 PM	Integrative Summary for readings 9 and 10; Group 5 discussion lead and minutes
Wednesday, February 26, 2020	8:30 AM	Saturday, February 29, 2020	10:00 PM	Online Review Quiz - Chapter 9A
Wednesday, February 26, 2020	8:30 AM	Tuesday, March 3, 2020	9:20 PM	Integrative Summary for readings 11 and 12; Group 6 discussion lead and minutes
Wednesday, March 4, 2020	8:30 AM	Saturday, March 7, 2020	10:00 PM	Online Review Quiz - Chapter 10
		Tuesday, March 10, 2020		<b>No class spring Break</b>
Tuesday, March 17, 2020	7:00 PM	Tuesday, March 17, 2020	9:00 PM	<b>Exam 2 (Starts at 7 pm)</b>
Wednesday, March 4, 2020	8:30 AM	Tuesday, March 24, 2020	9:20 PM	Integrative Summary for readings 13 and 14; Group 7 discussion lead and minutes
Wednesday, March 25, 2020	8:30 AM	Saturday, March 28, 2020	10:00 PM	Online Review Quiz - Chapter 11
Wednesday, March 25, 2020	8:30 AM	Tuesday, March 31, 2020	9:20 PM	Integrative Summary for readings 15 and 16; Group 8 discussion lead and minutes
Wednesday, April 1, 2020	8:30 AM	Saturday, April 4, 2020	10:00 PM	Online Review Quiz - Chapter 12
Wednesday, April 1, 2020	8:30 AM	Tuesday, April 7, 2020	9:20 PM	Integrative Summary for readings 17 and 18; Group 9 discussion lead and minutes
Wednesday, April 8, 2020	8:30 AM	Saturday, April 11, 2020	10:00 PM	Online Review Quiz - Chapter 13
		Tuesday, April 14, 2020	9:20 PM	Project paper submission all groups; Project presentations for Groups 1 to 5
		Tuesday, April 21, 2020	9:20 PM	Project presentations for Groups 6 to 9
Tuesday, April 28, 2020	7:00 PM	Tuesday, April 28, 2020	9:00 PM	<b>Exam 3 (Starts at 7 pm)</b>
		Tuesday, May 5, 2020	9:00 PM	<b>Optional Comprehensive Final Exam</b>

**MGMT 4830.001 Productivity and Quality Management  
Project Progress Report**

Group number:

Group members:

Company:

Contact person (including name, job title, postal mail address, e-mail address, and work phone number):

Activities to date (no more than one page in length):

**MGMT 4830.001 Productivity and Quality Management**  
**Peer and Self Evaluation Form for Group Project**

Instruction: Please rate each of your fellow team members with respect to the criteria listed in the table below.  
 Be honest, reasonable, and fair.

Group number: 1

Names→	Amy Becker	Chris Drake	Eileen Flay	Gene Hanks	Yourself
Meeting attendance (15%)	15%	12%	13%	15%	14%
Punctuality of work (15%)	14%	15%	12%	15%	13%
Fair share of work (30%)	29%	30%	27%	30%	29%
Quality of work (40%)	38%	37%	35%	40%	39%
Total (100%)	96%	94%	87%	100%	95%

Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Comments: \_\_\_\_\_

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