

PLEASE READ THIS SYLLABUS THOROUGHLY BY JANUARY 14, 1998

**ISM 303-01
TOTAL QUALITY MANAGEMENT
SPRING 1998**

PLACE

Class sessions will be held at 206 Joseph M. Bryan School of Business and Economics.

TIME

2:00 P.M. to 3:15 P.M. on Mondays and Wednesdays.

FACULTY MEMBER

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APPOINTMENT TIME

11:00 A.M. to 12:00 noon. on Mondays and Wednesdays only. You are encouraged to stop in during office hours to talk about any problems or suggestions you may have concerning the course, careers, graduate school, benefits of majoring in operations management, or things in general. If you want to talk to the faculty member and find the appointment hours to be inconvenient, feel free to schedule any other appointment time.

COURSE DESCRIPTION

This course is an introduction to the concepts, principles, and practices of managing quality in organizations. Through out the course, emphasis will be placed on the managerial processes underlying quality in both service- and goods-producing organizations. The course is directed toward the recognition, and the strategic, tactical, and operational role, of quality as a competitive weapon in the marketplace. Specific topics to be covered include the historical perspective on quality, importance of quality, customer focus, continuous process and product improvement, total employee involvement, quality tools, and implementing a quality program. To the extent to which it is relevant and feasible, the course coverage will include ethical and global issues, the influence of political, social, legal and regulatory, environmental and technological issues, and the impact of demographic diversity on the operations of an organization. The course material presents the topics in an integrated manner using a systems approach to managing quality in an organization.

PRE-REQUISITE COURSES

No pre-requisite courses. Admission to the Bryan School of Business and Economics is, however, necessary.

TEXT AND SUPPLEMENTARY MATERIAL

Besterfield, D. H., Besterfield-Michna, C., Besterfield, G. H., and Besterfield-Sacre, M. (1995). Total Quality Management. Upper Saddle River, NJ: Prentice-Hall, Inc.

Students should have the text available for each class session.

GRADING

The course grade is based on three exams (including the non-comprehensive final exam), one individual written analysis of an article, one out-of-class exercise, a written analysis of a "quality event", and a term paper. Each of the first two exams will consist of approximately 5 short-answer questions (i.e., multiple-choice, true/false,

brief discussions, etc.) and 1 essay question (the answer to which will be at least three-four pages long). The final exam will consist of approximately 10 short-answer questions (i.e., multiple-choice, true/false, brief discussions, etc.) and 2 essay questions. All exams are closed-book, and closed-notes. Grades are based on the following "absolute" scale (i.e., there will not be any "curving").

	Points	Date
Out-of-class Exercise	5	1/21/1998
Exam # 1	50	2/17/1998
Written Analysis of Article	10	2/25/1998 (Due)
Exam # 2	50	3/18/1998
Written Analysis of a "Quality Event"	15	4/1/1998 (Due)
Term Paper (Written)	60	4/20/1998 (Due)
Term Paper (Presentation)	10	
Final Exam	100	5/11/1998 (12:00 Noon)

TOTAL	300	

A ? 270; A- ? 260; B+ ? 250; B ? 240; B- ? 230; C+ ? 220; C ? 210; C- ? 200; D+ ? 190; D ? 180; D- ? 170; F < 170.

RE-EXAMINATION POLICY

As a rule, re-examinations will not be held. Absence from the examinations due to illness, summons to jury duty, or any other compelling reason should be backed by the appropriate documents (e.g., medical certificate, etc.) in order to qualify for re-examinations. If possible, meet/talk with the instructor before missing any examination to discuss the circumstances.

OUT-OF-CLASS EXERCISE

Each student should complete the Out-of-Class exercise described on the last page of this syllabus and submit it at the beginning of the class session on January 21, 1998. Late submissions will not be accepted. Students should work on this assignment on an individual basis (not in groups). Individuals should neither seek nor receive help from friends and/or family in completing this assignment.

WRITTEN ANALYSIS OF ARTICLE

Each student has to submit an analysis of an article on quality that s/he has read from journals (such as Quality Progress, Quality Digest, Quality Management Journal, Fortune, Business Week, Production and Inventory Management Journal, or Industrial Management) or newspapers (such as the Wall Street Journal, the Washington Post, the New York Times, or the News & Record). The article written assignment should relate to any one topic covered in sessions 1 through 21 and is due on April 1, 1998.

Each written assignment should include three sections. The first section should be the summary of the article and a description of which topic (of the course) the article relates to; the second section should relate to what you learnt about the issue/topic concerned from the Total Quality Management (ISM 303-01) course, and the last section should an analysis and critique of the article from the view point of what you learnt from the course. The third section is an integration of the first two sections. That is, the analysis and critique should integrate the article with what you learnt from the course on that subject. For the sake of clarity, please include a copy of the article in your submission. The article should be appropriately referenced in your written assignment. Prior to making your choice on a particular article, please feel free to consult with the faculty member on the relevance of the article to the Total Quality Management (ISM 303-01) course material. Please select the article of appropriate length i.e., neither too short nor too long. Individuals are requested to refrain from repeating the details provided in the article (just to fill up space) in their written analysis. That is,

individuals are requested to cover the topic thoroughly, but efficiently. Do not add verbiage for the sake of length. Oversized articles, or drawings should be folded to the 8.5 " by 11" format. In preparing the written analysis, write from an objective view, in third person. Do not use the words "I", "We", or "You". Use subheadings to correspond with specific issues. The written assignment will be graded on organization, thoroughness, insightfulness of analysis, and written communication skill.

Students should work on this written assignment on an individual basis (not in groups). Individuals should neither seek nor receive help from friends and family in completing this written analysis. The written assignment should be typed (maximum 12 point size lettering), double-spaced on 8.5" by 11" paper, and minimum 2 full pages in length. Each written assignment should not typically exceed 4 pages in length. The assignment should be stapled and well-paginated.

The individual written assignments are to be submitted at the beginning of the class period on February 25, 1998. Late submissions will not be accepted. Each student should attest (with a signature) that "I HAVE ABIDED BY THE ACADEMIC HONOR POLICY ON THIS ASSIGNMENT" on a separate cover page of the individual written assignment. The separate cover page should also include the title of the assignment, course title and number (and section number), and name of the student.

WRITTEN ANALYSIS OF QUALITY EVENT

Each student has to submit an analysis of an event (that he/she has been personally been involved in during the last six months, preferably) with regard to good/poor quality. The written assignment should include three sections. The first section should be a summary of the exact event that took place and its relationship to quality; the second section should relate to what you learnt about the issue/topic concerned from the Total Quality Management (ISM 303-01) course, and the last section should be at least a one-page analysis and critique of why the experience was good/bad and what could have contributed to the good/poor quality. Also include in your analysis, the actions that should have been taken (or have been taken) from all parties concerned to improve the quality (or resulting in good quality) of the experience. Prior to making your choice of an event to describe, please feel free to consult with the faculty member on the relevance of the event to the Total Quality Management (ISM 303-01) course material. Individuals are requested to cover the issue/event thoroughly, but efficiently. Do not add verbiage for the sake of length. Oversized attachments (if any), or drawings should be folded to the 8.5 " by 11" format. Use subheadings to correspond with specific sections of your analysis. The written assignment will be graded on organization, thoroughness, insightfulness of analysis, and written communication skill.

Students should work on this written assignment on an individual basis (not in groups). Individuals should neither seek nor receive help from friends and family in completing this written analysis. The written assignment should be typed (maximum 12 point size lettering), double-spaced on 8.5" by 11" paper, and minimum 3 full pages in length. Each written assignment should not typically exceed 5 pages in length. The assignment should be stapled and well-paginated.

The individual written assignments are to be submitted at the beginning of the class period on April 1, 1998. Late submissions will not be accepted. Each student should attest (with a signature) that "I HAVE ABIDED BY THE ACADEMIC HONOR POLICY ON THIS ASSIGNMENT" on a separate cover page of the individual written assignment. The separate cover page should also include the title of the assignment, course title and number (and section number), and name of the student.

TERM PAPER ASSIGNMENT

Each student group (consisting of four students) is to write a paper relating one aspect of Total Quality Management (TQM), such as customer focus, usage of tools for continuous improvement, benchmarking, empowerment, or performance measurement and reward systems for continuous improvement to a specific organization. This would entail a good review of the literature (referencing at least 8-10 articles) on that subject and an analysis of that aspect as it relates to the organization. You may need to interview line managers or

staff personnel in the organization to obtain an understanding of the topic being studied. The interview process must include a visit to the facility. The analysis should make use of the concepts presented in the course with respect to that topic. Where appropriate, it should also draw upon concepts presented in the textbook, or current journals and newspapers (such as the Quality Management Journal, Quality Progress, Production and Inventory Management Journal, Fortune, and The Wall Street Journal, etc.).

In addition to analyzing the topic as it exists in the organization, the paper should make at least one or two recommendations for improvement where appropriate. In general, the paper should be written from the point of view of an objective quality management consultant, who is writing for an audience that is familiar with the principles, concepts, decision/problem areas, and techniques of Total Quality Management (at the level of ISM 303-01), but is not familiar with the specific organization being analyzed.

Each group is encouraged to develop the outline as we progress through the course. This approach will not only reinforce your learning, but also distribute the work associated with the term paper more evenly over the semester. Feel free to discuss your term project with the professor as it is being developed. You are required to submit a two-page outline (with all the relevant issues) of your paper by March 11, 1998. The written paper should be typed (maximum 12 point size lettering), double-spaced on 8.5" by 11" paper, and appropriately paginated. No minimum or maximum length is specified, although the papers are typically 15 to 20 pages long. Cover the topics thoroughly, but efficiently. Do not add verbiage for the sake of length. Include diagrams, photos, sketches, or other types of illustrations that will clarify your presentation. Oversized articles, or drawings should be folded to the 8.5 " by 11" format. In preparing the written analysis, write from an objective view, in third person. Do not use the words "I", "We", or "You". Use subheadings to correspond with specific issues addressed in the paper.

The term paper and presentation will be graded on organization, thoroughness, insightfulness of analysis/recommendations, written communication and class presentation skills. It is highly recommended that a project management approach be taken for ensuring the timely completion of the project. The detailed procedure for completing the term paper is given after page 14 of this syllabus. Points on the term paper will be deducted if the procedure described is not adhered to. Excellent papers will be entered into the 1998 APICS Student Paper Competition. Guidelines for the competition are provided along with this syllabus. Format your paper according to those instructions.

Each student/member of the group should attest (with a signature) to the statement that "WE HAVE ABIDED BY THE ACADEMIC HONOR POLICY ON THIS ASSIGNMENT" on a separate cover page of the term paper. The cover page should also include number and title of the course, title of the assignment, and names of the students.

The term paper and a set of your presentation transparencies should be submitted to the faculty member at the beginning of the class session on April 20, 1998. Late submissions will not be accepted. The deadline should be met irrespective of the scheduled time and day of your presentation. Submissions can be made any time prior to the due date (that is, there is no need to wait till the very last minute to make your submission). Copies of your transparencies should be made available to all the members of the class on the specific day of your presentation. Each presentation (lasting not more than 15 minutes) will be followed 10 minute question/answer session. The presentation should focus only on the highlights of your literature review, application of the topic to the organization, and the recommendation (s). Please refrain from repeating the written report (in its entirety) just to fill up time in your presentation. Feel free to invite any member of the organization you visited.

Notify the professor (by April 13, 1998) if you plan to invite any person(s) from the organization for your presentation. For each class session an overhead projector and screen will be presented. If any of the presenting groups would like to use any other kind of audio-visual equipment, the professor should be notified one week prior to the date of the presentation for making the necessary arrangements.

PEDAGOGIC APPROACH

Lectures, simulation games, and video films will be used. The "lecture" sessions will rely on the socratic method to the extent possible. All students are expected to attend each class session. If a specific class

session is missed by any student, it is her/his responsibility to cover the topics so missed. Material covered in a previous class will not be repeated in a subsequent class. The schedule of sessions on this syllabus contains a listing of topics and assignments to be covered in the respective sessions. For a better understanding of the course content, each student should prepare (in written form) for the topics and assignments (listed in the syllabus) prior to the appropriate class session. Each student should be prepared to discuss the assigned readings for each class session. In the past years, students who have adhered to this approach have done very well and reaped the maximum benefit from the course. Unless otherwise indicated in class, any problems or questions given in the schedule are not to be turned in for credit. However, you may wish to work on the problems and questions and have them checked by the professor. The assigned questions given in the syllabus are only representative of the type of questions that can be expected on the exams. The list of questions is not an exhaustive one. The course syllabus provides a general plan for the course; deviations may be necessary. Feel free to discuss any aspect of the course with professor throughout the semester. Make use of him as an advisory member of your term paper project group.

STATEMENT OF STUDENTS' RIGHTS AND RESPONSIBILITIES

As a student in this class you have explicit rights and responsibilities. Your full understanding and acceptance of the following rights and responsibilities can lead to more useful time in the class and more effective learning.

You have the right to expect:

- a) Your professor to be prepared for each class, to start class promptly at the designated time and to end the class at the designated time.
- b) Your professor to teach all scheduled classes or arrange for a qualified substitute if it is necessary to miss class because of illness or University approved commitments.
- c) Clear statements of course expectations, policies, testing, and grading practices and student performance.
- d) Your professor to hold a reasonable number of office hours to discuss assignments or to assist you with course matters.
- e) Knowledgeable assistance from your professor regarding class assignments and course content.
- f) Your professor to behave in a manner reflecting equitable treatment, ethical practices, and respect for human rights.
- g) Opportunities to challenge ideas and defend your beliefs in a professional manner.
- h) To be challenged so as to grow both academically and professionally.

- i) Your professor to abide by University policies and to have fairness and clarity in the evaluation of your performance.
- j) Adequate opportunity to appeal any perceived violations of the above rights.

You have specific responsibilities to:

- a) Plan your study and work schedule appropriately to allow sufficient time to do quality work in the course. (Please review "Suggested Academic Workload Guidelines" for the Bryan School of Business and Economics published in the UNCG Undergraduate Bulletin).
- b) Attend each class prepared to discuss readings and participate in discussions.
- c) Complete assignments by due dates and submit quality work.
- d) Understand and follow course policies as explained in class and in the syllabus.
- e) Commit yourself to grow both academically and professionally.
- f) Work effectively and cooperatively as a team member on group projects as assigned.
- g) Practice ethical behaviors and display respect for the rights of others. Please refrain from eating and drinking in the class room.
- h) Contact your professor and discuss circumstances which may prevent you from achieving acceptable performance and to make contact on a timely basis.
- i) Fully understand and abide by the UNCG Honor Policy and other University policies relating to student conduct.
- j) Report observed violations of the UNCG Honor Policy.

WITHDRAWAL

The last date to drop courses without receiving academic penalty is March 11, 1998 (Wednesday).

COGNITIVE COURSE OBJECTIVES

Upon completing the course, the student should be able to:

- 1) **Present** a historical perspective of the quality movement.
- 2) **Elaborate** on the role of quality in the competitiveness of individuals, organizations, and nations.
- 3) **Describe** the contributions made by the "quality pioneers" (Deming, Juran, Feigenbaum, Crosby, Ishikawa, and Taguchi).
- 4) **Explain** the important elements (and their inter-relationships) of Total Quality Management.
- 5) **Understand** the linkage between customer focus and the quality function.
- 6) **Elaborate** on the important aspects and issues of continuous process improvement.
- 7) **Understand** the inter-relationships between quality and other measures of performance such as productivity, effectiveness, efficiency, profitability, etc.
- 8) **Explain** the factors that make a service quality more difficult to manage as compared to quality in a manufacturing organization.
- 9) **Understand** the role of Quality Circles in enhancing performance.
- 10) **Use** Flow charts, Pareto Diagrams, Cause-and-Effect Diagrams, Control charts, Histograms, Scatter Diagrams, and Run Charts in managing quality.
- 11) **Benchmark**.
- 12) **Understand** the role of Total Employee Involvement in enhancing quality.
- 13) **Explain** the significance of vendor/customer relationships in quality management.
- 14) **Explain** the role played by the Malcolm Baldrige Award, the Deming Prize, and ISO 9000 in enhancing global quality.
- 15) **Develop** the ability to work in a team to achieve the desired objective(s) for the group.
- 16) **Develop** the ability to continuously improve.
- 17) **Acquire** a good understanding of strategic, tactical, and operational role of quality in an organization and the inter-relationships between the quality function and the primary areas of the organization (such as engineering, operations, marketing, finance, accounting, etc.) so as to be an active participant in continuous quality improvement program.

BIOGRAPHIC SKETCH OF FACULTY MEMBER

Vidyaranya B. Gargeya is an Assistant Professor in the Department of Information Systems and Operations Management Department in the Joseph M. Bryan School of Business and Economics at the University of North Carolina at Greensboro. He currently teaches in the undergraduate, graduate, and executive programs. He holds a bachelor's degree in Chemical Engineering from Andhra University, Visakhapatnam (India), a Post Graduate Diploma in Management from the Indian Institute of Management, Bangalore, and a Ph.D. in Business Administration from Georgia State University. He has considerable work experience as an engineer, and manager in the petroleum industry. Dr. Gargeya has taught previously at the University of Hartford, Georgia State University, and the Jamnalal Bajaj Institute of Management Studies, University of Bombay (India). His teaching and research interests include Operations Management, Global Operations Strategy, Total Quality Management, and Service Operations Management. He has published in journals such as *Journal of Operations Management*, *International Journal of Production Research*, *Omega*, *International Journal of Quality and Reliability Management*, etc. Dr. Gargeya currently serves on the Board of Examiners of the 1997 North Carolina Quality Leadership Award and he has also consulted with Fortune 500 companies.

SCHEDULE OF SESSIONS

SESSION #	DATE	TOPICS AND ASSIGNMENTS
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| 1 | 1/12 | <p>IN SEARCH OF THE HOLY GRAIL
 Chapter 1 (Pp. 1-7): Exercise 1.
 Video Film: GM Plant Closings (7 minutes).</p> <ol style="list-style-type: none"> 1) Making use of the facts presented in the video film, what advantages did the Arlington, TX plant have over the Willow, MI plant? How are the vents related to quality? 2) Why should individuals and organizations focus on quality? 3) “In Search of the Holy (Quality) Grail is a Myth.” Take a position and defend. 4) Briefly describe the Journey to Excellence Model. 5) “High productivity and high quality <u>can not</u> be achieved simultaneously. Both are mutually exclusive.” Take a position and defend. 6) Define quality and substantiate your definition. |
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SESSION #	DATE	TOPICS AND ASSIGNMENTS
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| 2 | 1/14 | <p>READ THE SYLLABUS IN DETAIL BY THIS DATE</p> <p>TEACHERS AND TEACHINGS IN QUALITY
 Chapter 1 (Pp. 7-14): Exercise 2.
 Video Film: Dr. W. Edwards Deming (6 minutes).</p> <ol style="list-style-type: none"> 1) What were the contributions of Taylor and Shewhart towards the quality movement? 2) Is Deming right in saying that “we should eliminate numerical quotas for production and management by objectives?” Take a position and defend. 3) Identify and elaborate on the three elements in the Juran Trilogy? 4) Crosby said “Quality is free.” Do you agree with him? Substantiate your position with a detailed explanation. 5) What is the primary thrust of Feigenbaum’s quality philosophy? 6) Are there fundamental differences in what the four “Quality Coaches” are saying? Substantiate your position with a detailed explanation. 7) Describe the elements of Total Quality Management as a process of continuous improvement. |
| 3 | 1/21 | <p>SUBMISSION OF NAMES OF GROUP MEMBERS FRO TERM PAPER</p> <p>CUSTOMER FOCUS
 Chapter 3 (Pp. 37-43): Exercises 1 and 2.
 Video Film: University National Bank.</p> |

- 1) Discuss the Transaction Model with regard to quality.
- 2) Differentiate between product and process quality. How are they related?
- 3) Why is it difficult to understand customer focus in a service environment as opposed to a manufacturing environment? Elaborate on your understanding.
- 4) Based on the facts provided in the video film, what are the definitions of “customer” and “quality” adopted by the University National Bank?

4 1/26 SUBMISSION OF OUT-OF-CLASS EXERCISE

ASSESSING CUSTOMER SATISFACTION

Chapter 3 (Pp. 43-55): Exercises 3, 5, and 7.

Video Films: Worthington Steel (6 minutes) and The Limited (6 minutes)

- 1) Elaborate on the Kano Model.
- 2) Elaborate on how Worthington Steel identifies and satisfies customer expectations.
- 3) Describe the process by which the Limited translates quality concepts (of customer expectations) into action.

SESSION #	DATE	TOPICS AND ASSIGNMENTS
5	1/28	<p>SUBMISSION OF ABSTRACT OF PAPER</p> <p>CONTINUOUS PROCESS IMPROVEMENT Chapter 5: Exercise 1.</p> <ol style="list-style-type: none"> 1) Identify and describe the steps in the Problem Solving (Continuous Improvement Process) method. 2) Distinguish between activity, task, process, and system with detailed explanations and examples. 3) Why is system and problem definition important to process improvement? 4) Flow chart the process of learning at the 5) Describe Kaizen.
6	2/2	<p>CONTINUOUS PROCESS IMPROVEMENT (Continued) Chapter 5: Exercise 3. Video Film: Quality (10 minutes).</p> <ol style="list-style-type: none"> 1) Describe how you would use the Problem Solving method in enhancing your performance (or maintaining high levels of performance) in the undergraduate program at UNCG? 2) Using the facts provided in the video film, what aspects of the Continuous Improvement Process did you see at Motorola, Zytec, and Hewlett Packard?
7	2/4	<p>BENCHMARKING Chapter 10: Exercises 2-11. Video Film: Benchmarking at Xerox (9 minutes).</p>

- 1) Describe the importance and process of benchmarking.
- 2) Based on the facts provided in the video film, describe how Xerox used the process of benchmarking?

8 2/9 GROCERY STORE BENCHMARKING EXERCISE

- 1) Describe the "Grocery Store" Benchmarking exercise.
- 2) What are the weaknesses in the exercise.

DISCUSSION OF STATUS OF TERM PAPERS

SESSION #	DATE	TOPICS AND ASSIGNMENTS
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9	2/11	WIN-WIN SUPPLIER-BUYER PARTNERSHIPS
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Chapter 6: Exercises 1, 4, and 5.
Video Film: NCR (20 minutes).

- 1) Why is the adversarial supplier-buyer paradigm flawed in an era of total quality management.
- 2) Describe the supplier-buyer partnership analogy in a university setting.
- 3) What is the role of supplier certification in total quality management?
- 4) Based on the facts presented in the video film, how did NCR build a win-win supplier-buyer partnership? Also, identify the likely pitfalls in the process.

10	2/16	PERFORMANCE MEASURES
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Chapter 7 (Pp. 101-128): Exercises 1, 6, 9, 10, and 14.

- 1) What criteria should be used in selecting measures of performance?
- 2) Differentiate between input, process, output, and outcome measures.
- 3) Develop a list of performance measures for a university.
- 4) Be prepared to develop a Pareto diagram and analyze the findings.

10	2/18	EXAM # 1 (75 minutes)
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11	2/23	MALCOLM BALDRIGE NATIONAL QUALITY AWARD
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Chapter 7 (Pp. 128-144): Exercises 16 and 17 (Do these exercises in connection with the organization you are visiting for the term paper).

- 1) Describe the seven elements of the Malcolm Baldrige National Quality Award (MBNQA).
- 2) Can the MBNQA criteria be applied to a department/function within a university?

Take a position and defend.

SESSION #	DATE	TOPICS AND ASSIGNMENTS
14	2/25	<p>SUBMISSION OF WRITTEN ANALYSIS OF “QUALITY EVENT”</p> <p>SUBMISSION OF SCHEDULED DATE OF VISIT FOR TERM PAPER</p> <p>VARIATION AND PROCESS IMPROVEMENT Game: World Class.</p> <ol style="list-style-type: none"> 1) What is the role of variation in enhancing/diminishing quality? 2) In the World Class game, <ol style="list-style-type: none"> a) what is being simulated? b) how many work centers exist? c) what does the rolling of the die signify? and d) what is the average production at each work center?
15	3/9	<p>VARIATION AND PROCESS IMPROVEMENT (Continued) Game: World Class.</p> <ol style="list-style-type: none"> 1) In the World Class game, <ol style="list-style-type: none"> a) identify the primary source (both in terms of mechanisms of the the simulation process as well as what was simulated as the “real world”) of variation, and b) what are the measures of performance? <p>DISCUSSION OF STATUS OF TERM PAPERS</p>
16	3/11	<p>SUBMISSION OF OUTLINE OF PAPER WITH LIST OF ISSUES/QUESTIONS</p> <p>VARIATION AND PROCESS IMPROVEMENT (Continued) Game: World Class.</p> <ol style="list-style-type: none"> 1) In the World Class game, <ol style="list-style-type: none"> a) how does reduction in variation impact the measures of performance? and b) what are the mechanisms by which the variation could be reduced in the “real

world” production setting?

- 2) What are the sources of variance in the learning process within a class room? How can the variance be reduced?

SESSION #	DATE	TOPICS AND ASSIGNMENTS
17	3/16	<p>TOOLS FOR PROCESS IMPROVEMENT Chapter 8 (Pp. 151-162 and 206-209); Exercises 1, 2, and 4 (Use regression analysis in a spreadsheet package such as EXCEL).</p> <ol style="list-style-type: none"> 1) Cause-and-effect analyze your good/poor performance on a course in the previous semester. 2) How does a histogram aid in enhancing quality? 3) Describe a scatter diagram. <p>STATISTICAL FUNDAMENTALS Chapter 8 (Pp. 162-171); Exercise 8.</p> <ol style="list-style-type: none"> 1) Understand the difference between standard deviation of a population and the standard deviation of a sample. Please refer to your Economics and Business Statistics I (ECO 250) notes to achieve this objective. 2) Know how to compute the standard deviation of a normal distribution and a binomial distribution. Please refer to your Economics and Business Statistics I (ECO 250) notes to achieve this objective. 3) What is the Central Limit Theorem? Please refer to your Economics and Business Statistics I (ECO 250) notes to achieve this objective.
18	3/18	EXAM # 2 (75 Minutes)
19	3/23	<p>STATISTICAL PROCESS CONTROL CHARTS Chapter 8 (Pp. 171-192, and 197-206); Exercises 9, 15, and 17.</p> <ol style="list-style-type: none"> 1) Distinguish between a run chart and a process control chart. 2) What is a statistical process control chart and how is it used to enhance the quality of a process? 3) Elaborate on the differences between an x-bar (variable) chart and p-bar (attribute) chart.
20	3/25	<p>PROCESS CAPABILITY Chapter 8(Pp. 192-196); Exercises 11-14.</p>

- 1) Be prepared to develop a process capability index and interpret it.
- 2) What is the significance of having a process capability index of 6 sigma.

SESSION #	DATE	TOPICS AND ASSIGNMENTS
21	3/30	<p>EXAMPLE APPLICATIONS (VIDEO FILM) Video Film: Kurt Manufacturing (30 minutes)</p> <ol style="list-style-type: none"> 1) Using the facts presented in the video film, answer the following: <ol style="list-style-type: none"> a) who initiated the process improvement program at Kurt Manufacturing? b) what techniques were used by the company? Elaborate on those techniques. c) Who is/are the owner(s) of the process?
22	4/1	<p>SUBMISSION OF WRITTEN ANALYSIS OF QUALITY EVENT</p> <p>EXAMPLE APPLICATIONS (CASE STUDIES) Case Studies: “Provide Employee Day Care Center” and “Accelerate Health Insurance Payments”.</p> <ol style="list-style-type: none"> 1) Why did implementing total quality management fail at ABC? What should have been done? Substantiate your response with detailed explanations. 2) Why did Phillips fail? What should he have done? Elaborate on your conclusions.
23	4/6	<p>ISO 9000 Chapter 9: Exercises 1-8.</p> <ol style="list-style-type: none"> 1) Compare and contrast the Malcolm Baldrige National Quality Award and the ISO 9000 registration process.
24	4/8	<p>QUALITY FUNCTION DEPLOYMENT Chapter 11: Exercises 1-9.</p> <ol style="list-style-type: none"> 1) What is Quality Function Deployment? Describe its use. 2) Describe the benefits of the Quality Function Deployment system.
25	4/13	<p>TAKING THE BULL BY THE HORNS AND LEADING THE CHARGE Chapter 2. Video Film: Louisville Redbirds (5 minutes).</p> <ol style="list-style-type: none"> 1) Differentiate between managing and leading. 2) “Leadership has to flow from the top of the organization.” Do you agree with this statement? Take a position and defend. 3) Based on the facts presented in the video film, what leadership “qualities” does Ray

Smith exhibit in running the Louisville Redbirds?

SESSION #	DATE	TOPICS AND ASSIGNMENTS
26	4/15	<p>EMPLOYEE INVOLVEMENT AND EMPOWERMENT Chapter 4: Exercises 3-6. Video Film: Federal Express (5 minutes).</p> <ol style="list-style-type: none"> 1) Explain in your own words the meaning of empowerment. 2) Explain the empowerment matrix. 3) Describe teamwork and the guidelines for building it. 4) Evaluate your project group on criteria set for team performance. 5) Based on the facts presented in the video film, how are the employees at Federal Express empowered by Fred Smith?
27	4/20	TERM PAPER PRESENTATIONS
28	4/22	TERM PAPER PRESENTATIONS
29	4/27	TERM PAPER PRESENTATIONS
30	3/29	TERM PAPER PRESENTATIONS
31	5/4	TERM PAPER PRESENTATIONS
32	5/11 (Noon)	FINAL EXAM (150 Minutes)

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PROCEDURE FOR TERM PAPER ASSIGNMENT

- 1) Form a group of four members. Submit the names of the members to the professor by January 21, 1998.
- 2) Determine group availability for meeting times and places. Assess group interests on the type of topic and organization to be studied. Plan to meet once a week throughout the semester. It is expected that each individual contributes his/her fair share to the term paper throughout the semester. Please submit separately (not as a group) the Peer Evaluation Form (duly filled in) by May 6, 1998. Research potential organizations based on agreed-upon interests. In order to obtain a rich experience, the organization should be large enough (employing at least 20 people). Exceptions to this could be made depending on the industry. A partial list of organizations that students have visited in the past is attached to this syllabus. The deadline for submitting an abstract (title, topic, and organization) on your paper is January 28, 1998.
- 3) Call the plant/facility to get the name and address of the plant/facility manager. Address a letter to the individual explaining the class assignment and requesting a visit to the facility. This is mandatory. A sample letter is attached. If you call to request for a visit without having sent the letter, there is a strong likelihood that your request will be denied. The professor should be intimated of the scheduled date of the visit by February 25, 1998.
- 4) Once your request for a visit has been approved by the facility manager, call in advance to arrange the visit. Please avoid being assigned to a standard public tour. Public tours will not provide you with adequate information to write the term paper. Inform the contact personnel at the facility, that if any questions about the specifics of the class assignment should arise, they are welcome to call up the professor. Please try to schedule the visit to the facility sometime during the third week of March, 1998. This should enable you to get sufficient exposure to the course material for preparing a fairly detailed outline of your term paper.
- 5) Over the first six weeks of the semester, it would be appropriate to conduct a thorough literature review of the topic and prepare a detailed outline of your paper. Before making the visit to the facility, as a group, "brainstorm" and make a list of questions that you would like to ask during your visit. This will help you to include all the key issues. Submit a list of your questions/issues (preferably an outline of your paper) to the professor by March 11, 1998.
- 6) Visit the facility. Spend the time fruitfully in touring the facility, as well as interviewing key individuals. There should not be any inhibitions in asking the relevant questions about the issues concerned.
- 7) Send a "letter of thanks" to the individual(s) concerned within one week after the visit. A copy of this letter needs to be turned in with your paper. This is mandatory.
- 8) Meet (as a group) as soon as you can after the visit to discuss the issues that you have learned. If there are any unanswered questions, call the contact person in the organization for a telephonic interview.
- 9) Meet as a group to discuss the preparation of the final paper and its presentation in class.
- 10) When the final report is complete, mail a copy (with a cover letter) to the contact person at the facility that you visited. A copy of this cover letter should be included in the report to be submitted to the professor. This is mandatory.
- 11) The term paper (along with the copies of three letters) and the set of transparencies of your presentation should be handed over to the faculty member (at the beginning of the class period) on April 20, 1998. Late submissions will not be accepted.

STUDENT NAME AND ADDRESS

Date

Name of Plant/Facility Manager
Name of Organization
Street Address of Organization
Town, and Zip Code

Dear _____:

I am a student in the Bryan School of Business and Economics at the University of North Carolina at Greensboro, and I am writing to enquire whether it would be possible for a small group of ___ students to visit your facility as part of a class assignment to study practices adopted by firms in achieving quality. We are enrolled in a Total Quality Management course taught by Dr. Vidyaranya B. Gargeya. He has assigned us to visit local manufacturing/service facilities, and then prepare written reports and make presentations in class. The course covers topics such as customer focus, benchmarking, product and process improvement, performance measurement, and employee involvement. We would like to have an opportunity to interview you or any one of the members on your staff to learn about one of these topic areas that relate to your organization. We would like to also tour your facility so that we could observe the quality processes in general.

If permission is granted to us to visit your facility, we will be happy to provide you with a copy of our written paper. I will be calling you personally within the next ___ working days to discuss the possibility of our making a visit to your facility. In the meantime, if you have any questions, please call me at _____. Also, Dr. Vidyaranya B. Gargeya has indicated that he will be happy to answer any questions you may have with regard to the term paper assignment. His office telephone number is (336) 334-5666.

On behalf of the members in my group, I look forward to talking to you in the near future.

Sincerely yours,

Name of Student

cc: Dr. Vidyaranya B. Gargeya
479, Bryan Building
University of North Carolina at Greensboro

PEER EVALUATION FORM (TO BE TURNED IN BY MAY 6, 1998)

Your Name: _____

Team Number:

Please use this form to rate the performance of your project team members. These ratings will be used to adjust (if necessary) the grade received by individual team members on the term paper. Write the name of each person on your

team in the space provided. Do not include your name. Circle the appropriate number based on the following evaluation categories. Feel free to make any written comments on the reverse of this sheet. Your ratings and comments on this form will be strictly confidential and hence please turn in this form individually (not in a group).

Evaluation categories

1. Did a fair share. Individuals receiving this rating will receive the group grade.
2. Did less than a fair share. If two or more team members circle this number for a particular team member, it will cost that person 8 points. (e.g., if the group grade is 60 out of 70 points, and the individual received two ratings of "did less than a fair share", then he/she will receive a score of 52 out of 70 for the term paper assignment).
3. Did much less than a fair share. If two or more team members circle this number for a particular team member, it will cost that person 15 points. (e.g., if the group grade is 60 out of 70 points, and the individual received two ratings of "did much less than a fair share", then he/she will receive a score of 45 out of 70 for the term paper assignment).
4. Did more than a fair share. Take 8 points from my score and give it this person. In rare cases, you may be grateful to a team member who went "beyond the call of duty", to the extent that you are willing to sacrifice your grade to improve theirs. Remember, this costs you as much as it helps them.

Team Member #1:

1. Did a fair share.
2. Did less than a fair share.
3. Did much less than a fair share.
4. Did more than a fair share. Take eight points from me and give them to this person.

Team Member #2:

1. Did a fair share.
2. Did less than a fair share.
3. Did much less than a fair share.
4. Did more than a fair share. Take eight points from me and give them to this person.

Team Member #3:

1. Did a fair share.
2. Did less than a fair share.
3. Did much less than a fair share.
4. Did more than a fair share. Take eight points from me and give them to this person.

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The following is a partial list of organizations visited by students for the term project assignment in the recent past. This is to give you an idea of the type of firms that you could visit. Please first make attempts to visit organizations not given in this list.

NAME OF ORGANIZATION

LOCATION (All are in North Carolina)

1) Amoco Foam Products	Greensboro
2) ALPZ Screenprinting	Greensboro
3) Anna M. Gove Student Health Service (UNC-Greensboro)	Greensboro
4) Black & Decker (U.S.) Inc.	Asheboro
5) Bradley Screen Print	Greensboro
6) Carolina Cast Stone Company	Greensboro
7) Creighton Industries	Reidsville
8) Cross Creek Apparel	Mt. Airy
9) Deere-Hitachi Construction Machinery Corporation	Kernersville
10) Dillard Paper Company	Greensboro
11) Dixie Sales	Greensboro
12) Dow Corning Corp.	Greensboro
13) Endura Products	Colfax
14) Eveready Battery	Asheboro
15) Forest City Tool	Hickory
16) Georgia-Pacific	Asheboro
17) Gilbarco, Inc.	Greensboro
18) Guilford Mills, Inc.	Greensboro
19) Image Technology	Greensboro
20) Industries of the Blind	Greensboro
21) Intellitec Inc.	Greensboro
22) Jockey International	Randleman
23) Konica Manufacturing USA, Inc.	Whitsett
24) Lampart	High Point
25) Liberty Screenprinting	Stokedale
26) Metal Stamping Works, Inc.	High Point
27) McLeod Belting Company	Greensboro
28) Moses H. Cone Memorial Hospital	Greensboro
29) Namco Controls	Newton
30) Newman Whitney (Division of Newman Machine Co., Inc.)	Greensboro
31) Owens-Brockway Glass	Winston-Salem
32) Patch Rubber Company	Roanoke Rapids
33) Precision Fabrics	Jamestown
34) R. J. Reynolds Tobacco Company	Winston-Salem
35) Roadway Package System	Kernersville
36) Shamrock Gravure Products, Inc.	Greensboro
37) Softspun Knitting Mill	Henderson
38) Spencer Infant & Children's Wear	Mt. Airy
39) The Sherwin Williams Company	Greensboro
40) Thomas Built Buses	High Point
41) UNCG Bookstore (UNC-Greensboro)	Greensboro
42) U.S. Label Corp.	Greensboro

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OUT-OF-CLASS EXERCISE**

As part of the course, you are to visit your local grocery store to collect some information. Please do not seek the help of the store employees, friends, or family in collecting this information and filling in the form. This form (duly filled-in) is to be handed to the instructor at the beginning of the class period on January 26, 1998.

Name of student:

Name of grocery store:

Location of the store (Street and Town):

Date and day of visit to the store:

Time of entry into the store: _____

Please collect the prices on the following items:

Dollars

- a) Frito-Lays potato chips (6.0 oz bag)
- b) Oscar Mayer Bologna (Beef 8 oz pack)
- c) Milk 2% (1 gallon of the cheapest brand)
- d) Bounty paper towels (Regular 1 roll)
- e) Wrigley Spearmint gum (17 stick pack)

Then purchase a packet of Wrigley Spearmint gum (17 sticks). Please stand only in the Express (12 items or less) to pay for the Wrigley Spearmint gum. While you are standing in the line, please collect the following information as well:

- 1) Time of entry into the EXPRESS lane
- 2) Total number of lanes
- 3) Total number of lanes open
- 4) Total number of EXPRESS lanes
- 5) Total number of EXPRESS lanes open
- 6) Total number of customers ahead of you in the EXPRESS lane (at the time of your entry into the EXPRESS lane)
- 7) Time of leaving the EXPRESS lane and store