

University of Indianapolis
School of Business
Course Syllabus

MBA 662 – Quality & Process Management
Thursdays 5:45-8:45 P.M. – Esch 261

Instructor: Dr. Karl Knapp
Office: Esch 052P
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Office Hours: T/R 8:00-9:30,
W 11:00-12:30, R 4:00-5:30
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Description

A key factor for an organization to remain competitive is its ability to produce goods or deliver services in an efficient and effective way. Quality and Process Management serves as an in-depth examination of quality principles applied specifically to manufacturing, service and supply chain environments. Managerial and statistical aspects of quality, as well as ethical and international implications, are covered.

Course Objectives

- Develop critical thinking/reasoning skills
- Enable students to:
 - Compare and contrast philosophies of noted quality “gurus”.
 - Apply various quality requirements to different organizational needs, taking into consideration ethical and international implications.
 - Analyze an organization’s quality system and commitment.
 - Apply quality management theories to leadership principles.
 - Measure, analyze, and manage processes for continuous improvement.
 - Design methods to measure quality and find root causes of problems.
 - Apply quality management tools to business and case-based projects.

Course Communications & Resources

Students are expected to check their UIndy e-mail accounts on a regular basis.

Required Materials

Textbook – Westcott (2006) *The Certified Manager of Quality/Organizational Excellence Handbook, 3e*, ISBN 13 978-0-97389-678-8.

Attendance

As adults, your attendance is up to you. Student attendance and participation have been shown to be linked with learning. As such, I recommend that you attend class regularly. Attendance and class participation will be used by the instructor to make decisions on borderline grades.

Makeup Exams and Late Work

Exams are to be taken on the date determined by the instructor. Alternative, make up exams, will be administered at the discretion of the instructor.

Assignments are due printed, stapled, and ready to hand in at the beginning of class on the day designated. Late assignments will be discounted by one letter grade (10%) for each class period that they are late.

Academic Dishonesty and Plagiarism

“Plagiarism is the passing off of another person's work as if it were one's own” (Plagiarism, 2006)¹.

Cheating or plagiarism will not be tolerated. Penalties are severe. Cheating or plagiarism will be handled according to the student handbook.

¹ Plagiarism. (2006, August 5). In Wikipedia, The Free Encyclopedia. Retrieved August 5, 2006, from <http://en.wikipedia.org/wiki/Plagiarism>

Grading Scale

93.00 - 100.00 A	90.00 - 92.99 A-	87.00 - 89.99 B+	83.00 - 86.99 B
80.00 - 82.99 B-	77.00 - 79.99 C+	73.00 - 76.99 C	70.00 - 72.99 C-
67.00 - 69.99 D+	63.00 - 66.99 D	60.00 - 62.99 D-	00.00 - 59.99 F

Graded Work & Weighting

The following work will be weighted in calculation of the final grade as follows:

Assignment/Exam	% of Total	Points
Exam 1	20%	200
Exam 2	20%	200
Exam 3	20%	200
Homework		
HW 1: Quality Characteristics & Measurement	4%	40
HW 2: Company Quality Assessment	4%	40
HW 3: Statistical Process Control Charts	4%	40
HW 4: Process Flow Diagram	4%	40
HW 5: Quality Function Deployment	4%	40
Group Project		
Quality Audit Report	10%	100
Quality Audit Presentation	10%	100
Total Points	100%	1000

Extra Credit & Other Adjustments

Extra credit assignment opportunities are not planned, but may be granted by the professor. The professor reserves the right to adjust the final grade based on his judgment of student performance. Class participation (good/bad) may modify the final grade (up/down) based on the professor's judgment.

Professor's Note

The professor reserves the right to modify or add to the above class outline or syllabus if in his judgment such modifications or additions it would improve the learning experience. The professor will notify students in advance in class and via email of any changes.

Disability

If you need course adaptations or accommodations because of a disability please contact the professor.

Course Schedule

Week						
8/27	Class Overview	Definition of Quality (11) Characteristics & Drivers of Quality (11) Competition	Exercise (HW1)	Exercise (HW1)	Exercise (HW1)	Exercise (HW1)
9/3	Homework 1 Due Little q & Big Q Quality function mission (11) Quality planning, deployment & documentation Balanced scorecard (11)	Quality auditing (11)	Quality auditing (11) Discuss project	Baldrige Award (12) ISO 9000 (12)	Total quality management (TQM) (12)	Self-Control* Continuous improvement & benchmarking (12)
9/10*	Quality history & philosophies (12)	Role of upper mgt in quality Quality councils Quality culture	Classic tools Check sheets (13) Cause & effect diagrams (13)	Pareto charts (13) Histograms (13) Scatter diagrams (13)	Process Improvement Root cause analysis (13)	Plan/Do/Check/Act (13) SIPOC Analysis (13)
9/17	Homework 2 Due Six Sigma (13)	Six Sigma (13)	Six Sigma (13)	Six Sigma (13)	Six Sigma (13)	Failure Mode & Effects Analysis (FMEA) (13)
9/24	Statistical Process Control (13)	Statistical Process Control (13)	Statistical Process Control (13)	Statistical Process Control (13)	Statistical Process Control (13)	Exam Review
10/1	Homework 3 Due Exam 1	Exam 1	Exam 1	Exam 1	Exam 1	Exam 1
10/8*	Exam 1 results discussion	Brainstorm (13) Mind Maps (13) Analogies (13) Nominal group Multi-voting (13)	Lateral thinking (13) Critical thinking DFM DFSS	The cost of quality (13)	The cost of quality (13)	The optimum cost of quality*
10/15	Process mapping (14)	Process mapping (14)	Process mapping (14)	Process mapping (14)	Procedures & work instruction	Procedures & work instruction
10/22	Homework 4 Due Lean (14) Cycle time (14) Value stream mapping (14)	Value stream mapping (14)	Five S (14) The eight wastes (14)	Poke-Yoke (14) SMED (14) Kaizen Blitz (14) Kanban (14)	JIT (14) TAKT Time (14) Cellular Operations (14)	Outsourcing (14) TOC, Six Sigma & Lean Exam Review
10/29	Exam 2	Exam 2	Exam 2	Exam 2	Exam 2	Exam 2
11/5	Exam 2 results discussion	Sampling (15) Basic statistical analysis (15) Trends & patterns (15)	Variation (common/special causes) (15)	Process capability analysis (15)	Process capability analysis (15)	Reliability and validity (15)
11/12*	Class exercise	Class exercise	Class exercise	Class exercise	Class exercise	Class exercise
11/19	Quality (service) level agreements (16)	Quality function deployment (17)	Quality function deployment (17)	Quality function deployment (17)	Other voice of the customer tools (17)	Quality for service firms* Customer satisfaction & loyalty (17)
11/26	Thanksgiving	Thanksgiving	Thanksgiving	Thanksgiving	Thanksgiving	Thanksgiving
12/3	Homework 5 Due Quality Audit Presentations	Quality Audit Presentations	Quality Audit Presentations	Supplier selection (18) Supplier relationship mgt (18) Supplier certification (18)	Supplier partnerships & alliances (18) Supplier logistics (18)	Exam Discussion
12/10*	Exam 3	Exam 3	Exam 3	Exam 3	Exam 3	Exam 3

Behavioral Expectations (may modify final grade on instructor's discretion)

	A	B	C	D	F
Participation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Listening	<input type="radio"/> Student does not interrupt the class or other class members; Utilizes active listening skills	<input type="radio"/> Student very rarely interrupts the class or class members; Utilizes some active listening skills	<input type="radio"/> Student rarely interrupts the class or class members; Listens fairly attentively	<input type="radio"/> Student has a tendency to interrupt the class or class members. Does not listen attentively	<input type="radio"/> Student interrupts the class or class members; Does not listen at all
Interaction	<input type="radio"/> Student interacts very frequently and actively in the class; Asks excellent, clarifying questions	<input type="radio"/> Student interacts frequently and actively in the class; Asks good clarifying questions	<input type="radio"/> Student interacts sometimes in the class; Asks good questions	<input type="radio"/> Student interacts rarely in the class; Sometimes asks good questions	<input type="radio"/> Student does not interact in the class; Does not ask questions
Original Thought	<input type="radio"/> Student thinks for themselves; Questions items when they disagree; Provides alternative points of view and demonstrates respectful debate skills	<input type="radio"/> Student usually thinks for themselves; Questions items when they disagree; Usually provides alternative points of view and demonstrates respectful debate skills	<input type="radio"/> Student sometimes thinks for themselves; Questions items when they disagree; Sometimes provides alternative points of view and demonstrates respectful debate skills	<input type="radio"/> Student rarely thinks for themselves; Accepts most information on face value; Rarely provides alternative points of view and demonstrates limited respect in debate	<input type="radio"/> Student does not think for themselves; Accepts all information on face value; Never provides alternative points of view and demonstrates no respect in debate
Relevant Comments	<input type="radio"/> Comments made are relevant to the discussion, linked to the comments of others and aid to understanding of the situation	<input type="radio"/> Comments made are usually relevant to the discussion, linked to the comments of others and aid to understanding of the situation	<input type="radio"/> Comments made are mostly relevant to the discussion and aid to understanding the situation	<input type="radio"/> Comments made are barely relevant to the discussion and aid in a small way to understanding the situation	<input type="radio"/> Comments made are not at all relevant to the discussion
New Ideas	<input type="radio"/> Comments made introduce new ideas from the book, personal experience or other sources	<input type="radio"/> Comments made introduce sometimes incorporate new ideas from the book, personal experience or other sources	<input type="radio"/> Comments made are mostly "safe" repetitions of case facts with some analysis and conclusions	<input type="radio"/> Comments made are all "safe" repetitions of case facts without analysis and conclusions	<input type="radio"/> Comments made are merely reiterations of recent prior comments
Preparation	<input type="radio"/> Student obviously reads and thoughtfully considers chapters and cases before class	<input type="radio"/> Student reads and considers chapters and cases before class	<input type="radio"/> Student reads most chapters and cases before class	<input type="radio"/> Student rarely reads chapters and cases before class	<input type="radio"/> Student does not read before class
Attendance	<input type="radio"/> Student attends almost all class sessions	<input type="radio"/> Student attends most class sessions	<input type="radio"/> Student attends majority of class sessions	<input type="radio"/> Student partially attends class sessions	<input type="radio"/> Student does not attend class sessions

**University of Indianapolis
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Homework Assignment**

**MBA 662 – Quality & Process Management
Homework 1 – Measurements & Marketing of Quality**

This assignment is to examine the utilization of quality in automobile commercials (print, online, video and/or radio). Pick two individual automobile brands. Examine their various promotional materials. Write a short paper examining the following factors:

- Do they discuss the ‘quality’ of their products in their marketing communications?
- What aspects of quality do they emphasize?
- Do they offer measurements of their quality?
- What measurements?
- Are they independent assessments or self-assessments?
- Are they quantitative or qualitative measurements?
- Do third-party review sites agree with their assessments (Edmunds, Car and Driver, Consumer Reports, ...)?
- How credible do you find their statements about quality?

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Homework Assignment**

**MBA 662 – Quality & Process Management
Homework 2 – Companywide Assessment of Quality**

Using the 2009 Baldrige Award criteria document (linked from KarlKnapp.com class web site or directly at http://www.baldrige.nist.gov/PDF_files/2009_2010_Business_Nonprofit_Criteria.pdf), pick a company and assess its level of quality. For each of the criteria (see page 7 of the 2009 Baldrige Award criteria document) rate the firm on a scale of 1 to 10 with 10 being best in world class and 1 being very poor in this area. Provide a sentence or two for each of the 19 criteria explaining why you gave each rating.

Example format:

2009 Categories and Items	Points	Score	Total (P*S)
1. Leadership			
1.1. Senior leadership	70		
<i>Explanation of rating here</i>			
1.2. Governance and Social Responsibility	50		
<i>Explanation of rating here</i>			
2. Strategic Planning			
2.1. Strategy Development	40		
<i>Explanation of rating here</i>			
2.2. Strategy Deployment	45		
<i>Explanation of rating here....</i>			
3. Customer Focus			
3.1. Customer Engagement	40		
3.2. Voice of the Customer	45		
4. Measurement, Analysis and Knowledge Management			
4.1. Measurement, Analysis & Improvement of Org. Performance	45		
4.2. Management of Information, Knowledge & Information Tech.	45		
5. Workforce Focus			
5.1. Workforce Engagement	45		
5.2. Workforce Environment	40		
6. Process Management			
6.1. Work Systems	35		
6.2. Work Processes	50		
7. Results			
7.1. Product Outcomes	100		
7.2. Customer-Focused Outcomes	70		
7.3. Financial and Market Outcomes	70		
7.4. Workforce-Focused Outcomes	70		
7.5. Process Effectiveness Outcomes	70		
7.6. Leadership Outcomes	70		
Total Points	1,000		

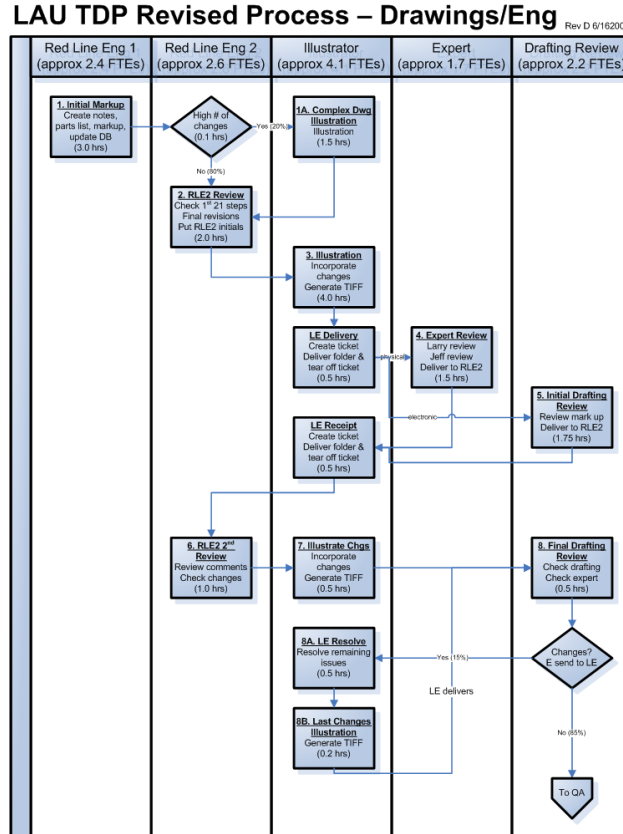
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Homework Assignment**

**MBA 662 – Quality & Process Management
Homework 4 – Process Flow Diagram**

Pick a process in either your company or a process in a company where you can talk with a manager and employee knowledgeable about the process. The process MUST have at least FIFTEEN steps and involve at individuals from at least THREE different groups.

1. Create a 'swimlane' process-flow diagram based on INTERVIEWS with a manager.
2. Discuss this process-flow diagram with an employee who performs at least a part of the process. Attempt to identify the accuracy of your diagram as compared with the experience of the employee.
3. Write a short paper covering:
 - a. Difficulties experienced in creating this process-flow diagram
 - b. Discussion about any differences of opinion regarding the process between the employee and the manager
 - c. Comments on the importance of documenting a process. Why do you think this is important? How detailed should process flow designs be made? Who should update the process flow diagrams as processes change?
 - d. Include a copy of your "swimlane" process flow diagram

Example of a Swimlane Process Flow Diagram



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**MBA 662 – Quality & Process Management
Homework 5 – Quality Function Deployment**

Pick a company that produces products that you are interested in. Pick a particular product or product line and develop all of the relevant items so that you can complete a quality function deployment (QFD) matrix. Refer to the example posted on the Blackboard course site for reference as well as the information from the book. Use the template given on Blackboard to complete the assignment. Specifically, you should:

1. Identify the specific market segment that the product is serving.
2. Using some process (describe the process used in an accompanying document) develop the list of customer needs that the product is attempting to address.
3. Using the 1, 3, 9 weights, provide a weighing of the various customer needs (describe the source for these weightings in your accompanying document).
4. Identify the engineering metrics used to determine if the product is meeting the identified customer needs (be sure to include measurable metrics, not just perception measures).
5. Identify the importance of each of the engineering metrics in determining whether the customer needs are going to be met (using the 1, 3, 9 weight scale).
6. Rating the product of the selected firm and two competitors, complete the technical benchmarking section with the actual values for the engineering metrics. Add a description of why these are good benchmarks to the accompanying document.
7. Establish the technical targets for each of the engineering metrics.
8. Add the subjective analysis of the customer perception of the product of the firm and the other competitors in the customer perception section.
9. Add a final summary of the results of the QFD to the accompanying document. How does the product measure up with its ability to meet customer needs? What 'product development' activities should the firm engage in to improve its products (or development of new products)? How will these activities provide a competitive advantage over its competitors?

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Homework Assignment**

**MBA 662 – Quality & Process Management
Group Project – Quality Audit Report & Presentation**

Pick an area of your company (you may choose the area that you work in). Perform an informal quality audit in the following areas:

- Product and process control practices
- Quality assurance practices

As background for your audit, gather information as appropriate. Commonly gathered information includes:

- Written policies of the company as they apply to quality
- Stated objectives in the budgets, programs, contracts, etc.
- Customer and company quality specifications
- Pertinent government specifications and handbooks
- Company, industry and other pertinent quality standards on products or processes
- Published guides for conduction of quality audits
- Pertinent quality departmental instructions
- General literature on auditing

YOUR DELIVERABLES

Your deliverable is an informal audit report. Your audit report should contain the following:

- Executive summary
- Purpose and scope of the audit
- Details of the audit plan
- Standards, checklists, or other reference documents used during the audit
- Audit observations, including supporting evidence, conclusions and recommendations – using the audit customer's terminology
- Recommendations for improvement opportunities
- Recommendations for follow up on the corrective action that is to be proposed and implemented by line management.
- Distribution list for the audit report (you should only distribute the results of your audit report to the manager whose activity is audited.)

GROUP PRESENTATION

The group should agree on the organization and area to be audited. Your group is the audit team. Your group should work together to analyze the information gathered and work together to create a professional audit report. A formal presentation of the process and findings of each group will be required at the end of the semester. The reactions of the manager and actions taken as a result of your audit should be part of the presentation.