

Advanced Quality Planning and Management

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This course is designed in a unique manner that tries to deliver key concepts in Quality management through cases relevant to each concept and also live exercises that would expose students to these concepts by practicing and experimenting the same. The thrust would be on the practical application of quality concepts in organizations based on the necessary theoretical backup that students need to possess. The course intends to make the students understand the relevance of inculcating a quality culture through exposure to situations inside the classroom that would need them to make appropriate responses. **In effect, the effort will be to simulate an organization's environment inside the class room. The focus will be to make students to think and arrive at solutions.**

Knowledge of Quality Management principles enables leaders of effective organizations to remain flexible and adaptable in an ever-changing market. The success of any business depends on how leaders recognize the need for improvement, commit to improving, create a customer focus, create and deploy strategic plans, manage supply chains, measure their success, manage their process and focus on business results.

Quality Management (QM) is aimed at continually improving performance over the long term by focusing on customers while addressing the needs of all stakeholders. It is both a philosophy and a set of guiding principles that represent the foundation of a continuously improving organization. The bottom line of QM is results: increased productivity, efficiency, customer satisfaction/delight, and world-class performance.

The Course also gives an in-depth insight in to principles and implementation of Six sigma, issues related to service quality and also best practices in quality management.

Course Objectives

By the end of this course, you should be able to:

1. Implement the principles and concepts inherent in a Quality Management In a manufacturing or service organization.
2. Successfully implement process improvement teams trained to use the various quality tools for identifying appropriate process improvements.
3. Develop a strategy for implementing QM in an organization.
4. Appreciate the importance of defining and improving the processes and functions of an organization to satisfy the customers needs
5. Understand whether an organization is doing the right things in the right way
6. Appreciate and inculcate a quality culture in yourself and your organization
7. Use all the Quality tools and effective implementation of a DMAIC approach

Course objectives and Outcomes

LG CO	Critical and integrative Thinking	Effective written and oral communication	Societal and Environmental Awareness	Ethical Reasoning	Leadership
CO1: Knowledge	3	2	2	2	1
CO2: Skill sets	3	2	2	2	1
CO3: Strategy development	3	1	2	2	1
CO4: Defining & Improving processes	3	1	2	2	1
CO5: Implementation of DMAIC approach	3	1	2	2	1

**Course contributes mostly to: Employability/ Entrepreneurship/
Skill Development**

Accomplishment of Course Objectives

- In order to achieve the above objectives, you will engage in a variety of activities:
- Attend all lectures. Be an active listener/participant.
- Read the text and other instructional materials.
- Be ahead of class lectures by pre-reading the Chapters and come to class fully ready to discuss the issues/topics
- Keep up-to-date regarding QM trends and developments in India and USA by reading quality-oriented periodicals published in print and in the Internet.
- Participate in discussions of case studies of organizations implementing QM.
- In your study group / teams, conduct comprehensive analyses of case studies.
- Practice solving the problems assigned

Required Material

1. Text book-**Quality Control and Management by Evans Lindsay—Cengage**
2. Reference Books:
Quality Management by Howard S Gitlow, Alan J Oppenheim, Rosa Oppenheim and David M Levine Tata McGraw Hill Third Edition
A First course in Quality By K.S.Krishnamoorthy
3. Additional readings for future sessions will be assigned in class.

The course will be based on the lecture, case and situation simulation methods. Hence, it is expected that each student will have read the assigned material and/or case and be prepared to discuss them and answer related questions in class. The assigned reading load is heavy, as the breadth of the Quality Management field necessitates. Your registration in this course is a commitment to do a careful, critical reading of all required materials prior to each class. Discussions and individual contributions are encouraged, expected, and shall count toward your final performance evaluation.

Course Structure

The course is designed to address systematically the following processes involved in Quality Management in organizations

- a) Defining quality
- b) Planning Quality
- c) Controlling Quality
- d) Assuring Quality
- e) Delivering Quality
- f) Improving Quality

Tentative Session Plan

The following planned semester schedule is tentative and is subject to change as the course progresses:

Sessions	Topic
1,2	Fundamentals of Quality Management
3,4	Deming's Theory; Schools of thought in Quality
5	Process—Definition, criticality and linkage to quality
6	The spectrum and scope of quality management Assurance vs control; Product vs process quality
7,8	Defining quality-VOC/VOP/Specifications/SOP
9,10,11	Controlling Quality-Inspection, sampling, Control charts and process capability, Statistical quality Control
12,13	Assuring Quality-Practices and Tools-Audits
14,15	Cost of Quality-Analysis, Interpretations, Modelling and practical application
16,17,18	Improvement of Quality-DMAIC cycle-Basic tools, Advanced tools, Application of these tools in practical scenarios
19	Delivering quality-Good Practices-Potential challenges
20	Planning and coordinating Quality processes-Integrated QMS concept in organizations-Quality management Frameworks in place
21,22	Practical SIX Sigma
23	Service quality-Differences from Product quality in practice-Methods to address the differences
24	Lessons in quality based on experiences of organizations in quality thinking
25	Future Directions/thinking/trends in quality
26,27	Evaluation/summarization/Course outcome review

Evaluation System:

-	Case Study Discussions	30%
-	Quiz	10%
-	Project	10%
-	Class/Outside class Exercises	15%
-	End Term examination	25%
-	Course Viva	10%

100%

Note: The Instructor reserves the right to change the evaluation pattern if necessary based on the performance of the class and other factors. Any change made (if needed) will be announced to the class.

Expectation from the student:

Every session would have about 45 minutes of lecture, 15 minutes of discussion /questions and answers and 15 minutes devoted to application of the concepts in the chosen field through case studies, problems, examples etc.

Group Case Analysis and Oral Presentations

You will be divided into groups of 3-4 students. Your group will perform a comprehensive analysis and oral presentation of case studies. Your group will also submit a written analysis of at least one of the cases your group will have presented. The written case analysis is a memorandum that recommends action to the case study's decision maker(s). Each oral case presentation will involve a comprehensive analysis in which the group will be expected to identify, evaluate and recommend; it is essential that your group present an in-depth diagnosis and recommend a realistic, workable plan of action. Ideally, the presentation should demonstrate a systematic analysis of the company's situation, appropriately incorporate QM concepts and tools from the readings and lecture materials, and propose specific, actionable recommendations.

In planning your oral presentation, your group should assume the role of a team of management consultants presenting their findings to the company's Chief Executive Officer (CEO). The rest of the class will assume the role of company executives and employees. By the end of your presentation, the company's CEO should: (a) have a clear action agenda, and (b) equally importantly, know precisely what directives to give during the next management meeting.

The oral presentation itself will take the form of a 15 to 20-minutes (strictly enforced time limit) presentation to the class of your group's analysis and recommendations. You are encouraged to use visual aids (slide show presentation, overhead-projector transparencies, flip-charts, handouts, or some combination of these), your imagination, resourcefulness, and originality to help you in communicating the points you wish to make. A hard copy of presentation slides (MS PowerPoint, 3/page handout format preferred) should be handed to the Instructor prior to the presentation. The presentation will be a question-and-answer period, with questions being posed by your classmates and your instructor. It is important that each member of the group contribute equally not only in the preparation for the presentation, but also in the actual class presentation and the question-and-answer period.