

INTERNATIONAL MANAGEMENT INSTITUTE, BHUBANESWAR
PROGRAMME NAME: POST GRADUATE DIPLOMA IN MANAGEMENT (PGDM)-PART TIME
QUALITY MANAGEMENT
CREDIT: (2 CREDITS)
SESSION DURATION: 90 MINUTES

TERM: III
YEAR: 2018-2019

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Course Introduction: Now days, quality becomes the benchmark of performance and it is quality that wins at the end of an evaluation process. It has always been the key to business success and long-term survivability. Quality management is a system that serves to control quality in the critical activities of an organization by bringing together resources, equipment, people, and procedures. It uses techniques and principles such as quality function deployment, the Taguchi method, service quality management, and Six Sigma to control quality in every sphere of activity in the organization. This course addresses the basic concepts and couple of tools which are implemented to improve the quality of product and services in the manufacturing / service industries. It would help the industry practitioners to use these concepts for improving the quality of product.

Learning Outcomes (LO):

1. To enable the student to gain both qualitative and quantitative orientation.
2. To facilitate hands-on practice of the fundamentals of statistics for quality and acceptance sampling.
3. To understand the concept of seven statistical tools of quality with different quality charts.
4. To understand the process of benchmarking, quality standards, six sigma, quality function deployment, etc. concepts to industry's success.
5. To understand different tools and techniques for quality from a business application perspective through case discussion.

Course Pedagogy: The sessions will be a blend of interactive lectures and discussions and will be supplemented by cases and exercises. **Students are expected to come prepared and participate in the discussions.**

Course Readings:

1. Kanishka Bedi (2006). *Quality Management (QM)*. Oxford University Press.
2. Besterfield, D. H.; Besterfield-Michna, C.; Besterfield-Sacre, M.; Besterfield, G.H.; Urdhwareshe, H.; Urdhwareshe, R. (2015). *Total Quality Management (TQM)*, 4th Edition. Pearson.
3. Fryman, M.A. (2011). *Quality Management: A Process Improvement Approach (QM-APIA)*. Cengage Learning.
4. Nagalingappa, G; Manjunath, V.S. (2010). *Total Quality Management: Text and Cases (TQM-T&C)*, 1st Edition. Excel Books.

Course Evaluation criteria:

End-term	100%
Total	100%

Session Plan:

Session	Topic	Learning Outcomes	Readings
1-2	Introduction to Quality Management <ul style="list-style-type: none"> ❖ What is quality? ❖ Dimensions of quality ❖ Dimensions of service quality ❖ Measuring service quality using SERVQUAL ❖ Quality ratings in the hotel industry Total Quality Management <ul style="list-style-type: none"> ❖ TQM basic concepts ❖ Quality Gurus (Deming's 14 point, PDCA cycle, Juran's trilogy) ❖ Comparison of quality Gurus ❖ Barriers of TQM 	LO – 1	(QM: Ch- 1, Page No. 3-40; Ch-7, Page No. 431-452; Ch-10, Page No. 599-650) (TQM: Ch- 1, Page No. 1-12) (TQM-T&C: Ch-1, Page No. 1-22; Ch-2, Page No. 24-61) Read: SERVQUAL Score with MS-Excel & Will Discuss a Case on Quality Ratings in the Hotel Industry
3-5	Statistical Process Control <ul style="list-style-type: none"> ❖ Flow chart ❖ Pareto diagram ❖ Cause & Effect diagram ❖ Check sheet ❖ Histogram ❖ Scatter diagram ❖ Variable control charts ❖ Control charts for attributes ❖ Process capability ❖ Capability index 	LO – 1 LO – 2 LO – 3 LO – 5	(QM: Ch- 4, Page No. 239-314) (TQM: Ch- 18, Page No. 417-473) (TQM-T&C: Ch-7, Page No. 192-239) (QM-APIA: Ch-9, Page No. 185-199; Ch-10, Page No. 208-228; Ch-11, Page No. 235-246) Read: Control Chart with MS-Excel
6-7	The Fundamentals of Statistics for Quality <ul style="list-style-type: none"> ❖ Normal distribution ❖ Measures of central tendency: mean, median, mode ❖ Measures of dispersion: range, standard deviation ❖ Simple, addition, and conditional probability Acceptance Sampling <ul style="list-style-type: none"> ❖ Types of sampling plans ❖ Single sampling plan and the OC curve 	LO – 1 LO – 2 LO – 3 LO – 5	(QM: Ch- 3, Page No. 97-126) (QM-APIA: Ch- 3, Page No. 65-94) Read: OC Curve with MS-Excel
8-9	Benchmarking <ul style="list-style-type: none"> ❖ Type of benchmarking ❖ Approaches to benchmarking 	LO – 1 LO – 2 LO – 4	(QM: Ch-1, Page No. 40-46; Ch-8, Page No. 489-506, 531) (TQM: Ch- 8, Page No. 177-188)

	<ul style="list-style-type: none"> ❖ Reasons to benchmark ❖ Deciding what to benchmark Six Sigma <ul style="list-style-type: none"> ❖ Meaning of six sigma ❖ Steps in implementing six sigma ❖ DPMO ❖ Six sigma training hierarchies ❖ Six sigma advantages ❖ Poka-Yoke 	LO – 5	(TQM-T&C: Ch-9, Page No. 256-263; Ch- 11, Page No. 278-292) Case: Mumbai Dabbawallahs
10-11	Quality Function Deployment <ul style="list-style-type: none"> ❖ Benefits of QFD ❖ The voice of the customer ❖ House of quality ❖ Building a house of quality Quality Management Systems <ul style="list-style-type: none"> ❖ What is ISO 9000? ❖ Benefits of ISO 9000 certification ❖ ISO 9000 : 2000 series of standards ❖ ISO 9001 requirements ❖ Implementation ❖ ISO 14000 ❖ Malcolm Baldrige criteria for business performance excellence ❖ Quality assurance 	LO – 1 LO – 4	(QM: Ch- 2, Page No. 57-82; Ch-5, Page No. 327-384) (TQM: Ch- 10, Page No. 221-253; Ch- 12, Page No. 279-302) (TQM-T&C: Ch-4, Page No. 97-123)
12-14	Experimental Design and Taguchi Method <ul style="list-style-type: none"> ❖ ANOVA, Basic statistics and hypotheses ❖ T-test, F-test ❖ Design of experiments ❖ Factorial experiments ❖ Taguchi's loss function 	LO – 1 LO – 2 LO – 3 LO – 5	(QM: Ch-9, Page No. 545-568) (TQM: Ch- 19, Page No. 479-510; Ch-20, Page No. 519-524) (TQM-APIA: Ch-12, Page No. 253-272) Read: ANOVA and Design of Experiments (DoE) with MS-Excel or SPSS.