(4) TQM for Managers-BMGT4043

<table>
<tr><td>1.</td><td>Name of Course</td><td colspan="5">TQM for Managers</td></tr>
<tr><td>2.</td><td>Course Code</td><td colspan="5">BMGT4043</td></tr>
<tr><td>3.</td><td>Name(s) of academic staff</td><td colspan="5"></td></tr>
<tr><td>4.</td><td>Rationale for the inclusion of the course/module in the programme</td><td colspan="5">Quality is gaining in importance in all areas of modern life. Consumers require "products" where they are sure of getting top-quality, value-for-money services. The further reason for systematic quality management in the modern industry is widely documented: growing competition, lack of willingness to provide a service, growing loss of individuality by standardization of products, adverse price-performance ration etc.
Total Quality is a description of the culture, attitude, and organization of a company that aims to provide, and continue to provide, its customers with products and services that satisfy their needs. The culture requires quality in all aspects of the company's operations, with things being done right first time, and defects and waste eradicated from operations.</td></tr>
<tr><td>5.</td><td>Semester and Year offered</td><td colspan="5">½</td></tr>
<tr><td rowspan="3">6.</td><td>Total Student Learning Time (SLT)</td><td colspan="4">Face to Face</td><td>Total Guided and Independent Learning</td></tr>
<tr><td rowspan="2">L = Lecture
T = Tutorial
P = Practical
O= Others</td><td>L</td><td>T</td><td>P</td><td>O</td><td rowspan="2">Guided = 42
Independent = 84
Total = 126</td></tr>
<tr><td>28</td><td>14</td><td>0</td><td>0</td></tr>
<tr><td>7.</td><td>Credit Value</td><td colspan="5">3</td></tr>
<tr><td>8.</td><td>Prerequisite (if any)</td><td colspan="5">Management</td></tr>
<tr><td>9.</td><td colspan="6">Objectives:
To promote an understanding of
• The fundamentals of TQM and its historical development,
• The integration of quality control and management tools, the Six Sigma philosophy,
• Lean manufacturing and service concepts,
• Quality Function Deployment,
• Benchmarking and Statistical Process Control.
• The role of Supply Chain Management (SCM) in quality improvement will be reviewed.</td></tr>
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10.	Learning outcomes: At the end of this subject, students should be able to: • Understand the concepts quality and total quality management as well as of their importance • Familiar with the numerous leading contributors to the field • Know the various international and national quality systems and standards • Understand the importance of quality from the strategic context • Apply the various quality management methods and tools via in-class activities
11.	Transferable Skills: • To enhance the student's ability in applying demand analysis and segmentation techniques in quality management. • To develop the student's ability for managing the firm's marketing efforts directed to the total quality management • Provide a framework for understanding TQM strategy development and, thereby, provide the student with decision-making capabilities in the field.
12.	Teaching-learning and assessment strategy A variety of teaching and learning strategies are used throughout the course, including: • Lecture sessions • Tutorial sessions • Case Studies • Student-Lecturer discussion • Collaborative and co-operative learning • Workshops and Training Seminars • Independent study Assessment strategies include the following: • Ongoing quizzes • Midterm tests • Performance Assessment (Participation, project, Assigned exercises) • Case Presentations
13.	Synopsis: This course focuses on the essence, principles, and practices of total quality management (TQM). Some of the ideas and topics that are covered are: process improvement; process orientation; service quality; human resources; customer satisfaction programs; quality function deployment; process control and capability; role of inspection; economics of quality; productivity measurement; learning and organizational performance measures;
14.	Mode of Delivery: Face to Face • Lecture sessions • Tutorial sessions

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15. Assessment Methods and Types:
The assessment for this course will be based on the following:

Coursework	**50%**
Quizzes	10%
Assignments	10%
Project	10%
Mid-Semester Exam	20%
Final Examination	**50%.**
Total	**100%**

16. Mapping of the course/module to the Programme Learning Outcomes
The learning outcomes of this course are mapped to the eight MQF domains using a scale of **one** to **five** where (one being the least relevant/related and five being the most relevant/ related).

A1	A2	A3	A4	A5	A6
4	4	4	4	3	3

17. Mapping of the course/module to the Programme Learning Outcomes
The learning outcomes of this course are mapped to the eight MQF domains using a scale of **one** to **five** where (one being the least relevant/related and five being the most relevant/ related).

LO1	LO 2	LO3	LO4	LO5	LO 6	LO7	LO8	LO9	LO10	LO11	LO12
4	4	2	2	4	3	2	2	2	2	4	4

18. Content outline of the course/module and the SLT per topic

WEEK	Details	SLT			
		L	T	Indep.	Total
WEEK 1	**Introduction** • Definition of Quality, • Dimensions of Quality, • Quality Planning, Quality costs – • Analysis Techniques for Quality Costs, • Basic concepts of Total Quality Management, • Historical Review, Principles of TQM, • Leadership – Concepts, Role of Senior Management, • Quality Council, • Quality Statements, • Strategic Planning, • Deming Philosophy, • Barriers to TQM Implementation.	2	1	6	9

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	WEEK 2	**TQM Principles** • Customer satisfaction – Customer Perception of Quality • Customer Complaints • Service Quality • Customer Retention • Employee Involvement – Motivation, Empowerment • Teams, Recognition and Reward, Performance Appraisal, Benefits • Continuous Process Improvement – Juran Trilogy, PDSA Cycle, 5S, Kaizen • Supplier Partnership – Partnering, sourcing • Supplier Selection, Supplier Rating • Relationship Development • Performance Measures – Basic Concepts • Strategy – Performance Measure.	2	1	6	9
	WEEK 3	**Statistical Process Control (SPC)** • The seven tools of quality • Statistical Fundamentals – Measures of central Tendency and Dispersion • Population and Sample • Normal Curve • Control Charts for variables and attributes • Process capability, • Concept of six sigma, • New seven Management tools.	2	1	6	9
	WEEK 4	**TQM TOOLS** • Benchmarking – Reasons to Benchmark • Benchmarking Process • Quality Function Deployment (QFD) – House of Quality • QFD Process, Benefits • Taguchi Quality Loss Function • Total Productive Maintenance (TPM) – Concept, Improvement Needs, • FMEA – Stages of FMEA	2	1	6	9

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	WEEK 5	**Organization Responsibilities** • Quality Operations. • Quality Uniformity. • Compliance Audits. • Six Sigma Introduction. • Procedure. • Quality Problems. • TQPC Management Operations. • Preventive Action	2	1	6	9
	WEEK 6	**Establishing the Limits for Quality Control** • Preproduction Product Analysis. Taguchi Methods. Prototyping. Mold Limits. • Material Selection. • Estimating Part Cycle Time. • Injection Molding Machine Selection. • Machine Hourly Rate. • Machine Setup Charges. • Calculating Product Manufacturing Cost. • Material Supplier Limits. Establishing Manufacturing Limits. • Auxiliary Equipment. • In-Process Inspection. • Establishing Total Quality Process Control. • Acceptable Quality Limits.	2	1	6	9
	WEEK 7	**Material Selection and Handling** • Product Certification. • Material Specification. • Product Variable Specification. • Incoming Material Testing. • Material Testing Equipment. • Material Safety Data Sheets. • Record Accuracy. • Bar Coding: An Aid in Total Quality Process Control. • Regrind Control. • Material Handling and Storage. • Regrind Usage. • Processing Aids.	2	1	6	9

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	WEEK 8	**Quality Systems** • Need for ISO 9000 and Other Quality Systems • ISO 9000:2000 Quality System – Elements, Implementation of Quality System, Documentation • Quality Auditing • TS 16949, ISO 14000 – Concept, Requirements, and Benefits	2	1	6	9
	WEEK 9	**Quality Improvement Techniques** • Pareto Diagrams • Cause-Effect Diagrams • Scatter Diagrams • Run Charts • Cause and Effect Diagrams	2	1	6	9
	WEEK 10	**Statistical Concepts** • Definitions • Measures of Central Tendency • Measure of Dispersion • Concepts of Population and Samples • Normal Curves	2	1	6	9
	WEEK 11	**Control Charts for Variables** • Definitions • Variation: Common vs. Special Causes • Control Chart Techniques • X-bar and R chart Correlation • X-bar and S charts	2	1	6	9
	WEEK 12	**Reliability / Quality Costs** • Product Life Cycle • Measures of Reliability • Quality Cost Measurement • Utilizing Quality Costs for Decision-Making	2	1	6	9
	WEEK 13	**Control Chart Interpretation and Analysis** • Using Charts to Pinpoint Problems • Process Capability **Other Variable Control Charts** • Individuals and Moving Range Charts • Moving Average and Moving Range Charts • Charts for Individuals • Median and Range Charts	2	1	6	9

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	WEEK 14	**Fundamentals of Probability / Control Charts for Attributes** • Basic Concepts and Definitions • Discrete Probability Distributions • Continuous Probability Distributions • Definitions • Control Charts for Non-conforming Units • Control Charts for Counts of Non-conforming Units	2	1	6	9
		Total	28	14	84	126
19.	**Main references supporting the course**: Goetsch & Davis. (2010). *Quality Management for Organizational Excellence: Introduction to Total Quality,* (6th Edition), Pearson					
	Additional references supporting the course: 1. Amitava Mitra. (2008). *Fundamentals of Quality Control and Improvement*, (3rd Edition), Wiley 2. James R. Evans, William M. Lindsay. (2008). *Managing for Quality and Performance Excellence*, (7th Edition), Cengage Learning					
20.	**Other additional information** All related subject materials will be available to the students during the period of the course					