| Course Code | MB18OM02 | Course Name | Quality Toolkit for Managers | Course Category | | Foundation Course | L | T | P | C |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 2 | 0 | 2 | 3 |

| Pre-requisite Courses | NA | Co-requisite Courses | NA | Progressive Courses | OM |
|---|---|---|---|---|---|
| Course Offering Department | Department of management Studies | Data Book / Codes/Standards | | | |

| Course Learning Rationale (CLR): | The purpose of learning this course is to: |
|---|---|

**Learning**

**Program Learning Outcomes (PLO)**

| CLR | | 1 | 2 | 3 | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CLR-1 : | To make the students understand the concepts of the concepts of Total Quality Management and Total Quality Education by quality Gurus. | | | | | | | | | | | | |
| CLR-2 : | To provide more insights on Strategic quality management and various award for quality Excellence | | | | | | | | | | | | |
| CLR-3: | To provide the importance of the QC tools and Continuous improvement approaches | | | | | | | | | | | | |
| CLR-4 : | To expose the students to Prediction of errors and Root cause analysis of business activities | | | | | | | | | | | | |
| CLR-5 : | To provide knowledge on Quality System certification process | | | | | | | | | | | | |

| Course Learning Outcomes (CLO): | At the end of this course, learners will be able to: | Level of Thinking (Bloom) | Expected Proficiency (%) | Expected Attainment (%) | | Business Environment & Domain Knowledge (BEDK) | Critical Thinking, Business Analysis, Problem Solving and Innovative Solutions (CBPI) | Global Exposure and Cross-cultured understanding (GECCU) | Social Responsiveness and Ethics (SRE) | Effective Communication (EC) | PSO–1Application of knowledge multidisciplinary comprising of finance, operations, system, marketing and human resources management to integrate business projects. | PSO– 2Usage of business metrics to evaluate business projects to develop growth strategies | PSO–3Authorize the students to innovate and execute the business idea during the challenging Businesssituation. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CLO-1 : | Students will have a better understanding of Principles and philosophies of Quality Management | 1 | 60 | 50 | | H | M | H | M | L | M | M | M |
| CLO-2 : | Studentswill understand Strategic quality management and the Quality excellence awards | 2 | 80 | 70 | | L | H | L | L | M | M | M | L |
| CLO-3 : | Students will learn to Describe, distinguish and use the several techniques and quality management tools | 2 | 80 | 75 | | M | H | L | L | M | M | L | L |
| CLO-4 : | Students will learn to Predict the errors in the measuring process, distinguishing its nature and the root causes and the implication of quality in business | 1 | 80 | 70 | | M | H | M | L | M | M | L | L |
| CLO-5 : | Students will learn hoexplain the regulation and the phases of a quality system certification process. | 2 | 90 | 80 | | M | H | H | L | M | M | L | L |

| Duration (hour) | | 9 | 9 | 9 | 9 | 9 |
|---|---|---|---|---|---|---|
| S-1 | SLO-1 | Quality, Qualitydefinition, Importance | Evolution, Key elements of TQM | Statistical Concepts in Quality Management | Quality Function Deployment – definition and importance | ISO- Evolution, Need and Structue |
| | SLO-2 | Levels of Quality | Key principles and Core concepts of TQM | Statistical Concepts in Quality Management | House of Quality | ISO- Evolution, Need and Structue |
| S-2 | SLO-1 | Dimensions of Quality-Product | TQMEX – Total quality Management Excellence Model | Six sigma, its key concepts and Steps in implementing Six sigma (DMAIC, DMADV, DFSS) | Construction of QFD matrix for a Service Sector | Development of ISO 9000 Quality Management principles |
| | SLO-2 | Dimensions of Quality- Service | TQMEX – Total quality Management Excellence Model | Six sigma, its key concepts and Steps in implementing Six sigma (DMAIC, DMADV, DFSS) | Construction of QFD matrix for a Service Sector | Development of ISO 9000 Quality Management principles |
| S-3 | SLO-1 | Cost of Quality | Quality Leadership, Leadership functions | Seven old QC tools | FMEA – Definition, Terminologies | Requirements of ISO 9001 Quality Management Systems |
| | SLO-2 | Categories of cost | Leadership Competencies | Seven old QC tools | FMEA –Process | Requirements of ISO 9001 Quality Management Systems |
| S-4 | SLO-1 | Deming's principles- PDCA Cycle | CSR – Evolution and Models | Seven new management and planning QC tools | FMEA – Inputs | Steps to certification under ISO 9001:2008 QMS |

| | | | | | | |
|---|---|---|---|---|---|---|
| | SLO-2 | Walter Shewart's Principles – PDSA cycle | *Strategic Quality Management and its process* | Seven new management and planning QC tools | FMEA –Team Members and Roles | Steps to certification under ISO 9001:2008 QMS |
| **S-5** | SLO-1 | Juran's Quality trilogy | *Quality Culture, its stages* | *Kaizen and Gemba kaizen, Lean management principles* | TPM – Definition and Pillars of TPM | *Concept of Sig sigma, its scale of defects* |
| | SLO-2 | Juran'sSteps to quality improvement | *Change management* | Tools for Continuous improvement | TPM – Definition and Pillars of TPM | *Six sigma benchmarks* |
| **S-6** | SLO-1 | Philip B. Crosby's Steps to Quality improvement | *Deming's prize and Malcolm Baldrige National Quality Award* | *Breakthrough Improvement – Creativity* | TPM – Classification of losses | *Lean Management – Background* |
| | SLO-2 | Four Absolutes and 6C's of QM | *Deming's prize and Malcolm Baldrige National Quality Award* | *Breakthrough Improvement – innovation and types of innovation* | TPM implementation | *Toyota Production System* |
| **S-7** | SLO-1 | Masaaki Imai thoughts of Quality | *Ramakrishna Bajaj National Quality award and TBEM* | *TRIZ and systematic inventive value augmentation,* | *Customer relationship management* | *Key Lean techniques.* |
| | SLO-2 | Feigenbaum's thoughts of Quality | *Ramakrishna Bajaj National Quality award and TBEM* | *Value analysis and Value Engineering* | *Customer Value Management* | *Key Lean techniques.* |
| **S-8** | SLO-1 | Kaoru Ishikawa's Cause and Effect diagram and Quality circles | *European Quality Award* | *Benchmarking – Evolution, Process* | *CRM in the context of B2B and B2C* | *Lean Manufacturing –how people and Customers benefit from lean.* |
| | SLO-2 | Shigeo Shingo's Quality teachings | *CII-EXIM Bank Award for Business Excellence* | *Benchmarking – Types and Steps.* | *E-CRM* | *Lean Manufacturing –how people and Customers benefit from lean.* |
| **S-9** | SLO-1 | Genichi Taguchi's Robust design methodology | *International Quality Maturity Model* | *BPR principles* | *Classification of Services* | *House of Lean* |
| | SLO-2 | Genichi Taguchi's Quality Loss function | *Highlights of Capability Maturity Model Integration (CMMI)* | *BPR in Manufacturing and Service Sector* | *Service quality measurement - SERVQUAL model* | *Lean Maintenance* |

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| **Learning Resources** | 1. Poornima M. Charantimath, Total Quality Management, Pearson Education, 2011.<br>2. James R Evans, Quality Management, Cengage Learning India private limited 2010.<br>3. Dale H Besterfield et al., Total Quality Management, Pearson Publication, Third edition, 2003 |

**Learning Assessment**

| | Bloom's Level of Thinking | Continuous Learning Assessment (50% weightage) | | | | | | | | Final Examination (50% weightage) | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | CLA – 1 (10%) | | CLA – 2 (15%) | | CLA – 3 (15%) | | CLA – 4 (10%)# | | | |
| | | Theory | Practice | Theory | Practice | Theory | Practice | Theory | Practice | Theory | Practice |
| Level 1 | Remember | 20 | 10 | 25 | 5 | 30 | 0 | 35 | 5 | 30 | 0 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Understand | | | | | | | | | | |
| Level 2 | Apply | 30 | 10 | 35 | 5 | 40 | 0 | 30 | 0 | 40 | 0 |
| | Analyze | | | | | | | | | | |
| Level 3 | Evaluate | 20 | 10 | 25 | 5 | 30 | 0 | 30 | 0 | 30 | 0 |
| | Create | | | | | | | | | | |
| | Total | 100 % | | 100 % | | 100 % | | 100 % | | 100 % | |

# CLA – 4 can be from any combination of these: Assignments, Seminars, Tech Talks, Mini-Projects, Case-Studies, Self-Study, MOOCs, Certifications, and Conf. Paper etc.

| **Course Designers** | | |
|---|---|---|
| Experts from Industry | Experts from Higher Technical Institutions | Internal Experts |

**Dr.K.Sadasivan**            **Dr.S.Manivanan**           **Dr  V M Ponniah**

Subject Coordinator           HOD-OPERATIONS           DEAN