**Annexure ‘CD – 01’**

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U T T A R P R A D E S H

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| --- | --- | --- | --- | --- | --- |
| **L** | **T** | **P/S** | **SW/FW** | **No. of PSDA** | **TOTAL CREDIT UNITS** |
| 2 | 0 | 0 | 2 | 2 | 03 |

**Course Title:** **Total Quality Management Credit Units:03**

**Course Level: PG Course Code:** **POM714**

**Course Objectives:** **The course objective is to make the students understand, appreciate and expose them to the concepts of quality philosophies, techniques and principles with an aim to managing, controlling and improving quality and related aspects in any organization. In addition to empower the students with basic knowledge and skill to implement quality measures in any organization.**

**Pre-requisites:** **As this course is offered at Master’s level any graduate student from any discipline can undertake this course.**

**Course Contents/Syllabus:**

|  |  |
| --- | --- |
|  | **Weightage (%)** |
| **Module I: Introduction to History, Concepts and Principles of Quality** | **10%** |
| **Descriptors/Topics**   * **Brief History** * **Definitions and dimensions of Quality Total Quality:** * **Principles, Practices and techniques** * **Quality and competitive advantage** * **Organizational level – three levels of quality** * **Quality in Organization – manufacturing , services sector** |
| **Module II:** **Philosophies and Frameworks:** | **25%** |
| **Descriptors/Topics**   * **The Deming Philosophy** * **The Juran Philosophy** * **The Crosby Philosophy** * **Brief about philosophies as advocated by other Quality Guru’s - A. V. Feigenbaum, Karou Ishikawa, Genichi Taguchi** * **Quality Management Awards and Frameworks - The Malcolm Balridge National Quality Award, The Deming Prize, European Quality Award, Rajiv Gandhi National Quality Award** * **Introduction to standards ISO 9000:2000 and benefits accrued from this certification** |
| **Module III :** **Management System** | **20%** |
| **Descriptors/Topics**   * **Leadership and Strategic Planning – Leadership for quality, creating the leadership system, seven management and planning tools** * **Focusing on Customers- The importance of customer satisfaction and loyalty, Understanding customer needs, Linking customer information to design, production, and service delivery, Measuring customer satisfaction** * **Process Management- Business processes, Designing work processes, process Improvement (Kaizen, Deming Cycle, creative problem solving), Breakthrough Improvement (Benchmarking, Reengineering)** |
| **Module IV: Statistical Process Control** | **10%** |
| **Descriptors/Topics**   |  | | --- | | * **Quality Control Measurements** * **Process Capability** * **Control charts for variables data – x bar , r and s charts** * **Control charts for attribute data –p , np c, and u charts** * **Designing and Analyzing Control Charts** | |
| **Module V:** **Technical System and Quality Tools** | **20%** |
| **Descriptors/Topics**   * **Introduction to Quality tools** * **Seven quality tools-Flow charts, ,check sheets, histograms,, Pareto Analysis, Cause and Effect Diagram,, scatter diagram control charts** * **Six Sigma- statistical basis for six sigma, Six sigma methodology-Define, Measure, Analyze, Improve, Control (DMAIC)** * **Design for Quality and Product Excellence – Product Design processes ,Concurrent Engineering, Design for six sigma -define, measure, analyze, design and verify process (DMADV)** * **Design Development –Quality Function Deployment** |
| **Module VI : Automation and Quality Management** | **15%** |
| **Descriptors/Topics**   * **Introduction to AI and new age technologies** * **Leveraging AI into Quality Management** * **Future of AI and new age technologies in Quality management** |

**Course Learning Outcomes:**

1. **Define the definitions and dimensions related to Quality.**
2. **Demonstrate a business strategy driven by Total Quality Management (TQM) .**
3. **Identify the issues of quality affecting the organization.**
4. **Examine impact of quality on profitability.**
5. **Compare the existing quality practices with that of other organizations in order to affect improvement.**
6. **Change and create the transformation necessary for successful implementation of total quality practices by taking into account new age technologies like AI.**

**Pedagogy for Course Delivery:** **The course will be delivered through a lecture / interaction mode. Minimum of two case studies would be discussed in the class. Every student would be given a mini project on an issue related to the subject which would be presented to the class.**

**List of Professional Skill Development Activities (PSDA):**

**1. Prepare a report on Total Quality Management function of an Organization.**

**2. Develop a case study related to the process of Quality management.**

**Lab/ Practicals details, if applicable:NA**

**Assessment/ Examination Scheme:**

|  |  |
| --- | --- |
| **Theory L/T (%)** | **Lab/Practical/Studio (%)** |
| **100%** | **NA** |

**Theory Assessment (L&T):**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Continuous Assessment/Internal Assessment**  **(50%)** | | | | | **End Term Examination**  **(50%)** |
| **Components (Drop down)** | **Mid Term Examination** | **Project** | **Presentation** | **Assignment** | **Attendance** |  |
| **Linkage of PSDA with Internal Assessment Component, if any** | **-** | **PSDA 1** | **PSDA 2** |  | **-** |  |
| **Weightage (%)** | 15% | 10% | 10% | 10% | 5% | 50% |

**Lab/ Practical/ Studio Assessment: NA**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Continuous Assessment/Internal Assessment**  **(\_\_\_\_ %)** | | | | **End Term Examination**  **(\_\_\_\_ %)** | | |
| **Components (Drop down** |  |  |  |  |  |  |  |
| **Weightage (%)** |  |  |  |  |  |  |  |

**Text Reading & References:**

* **Evans, James R., Lindsay, William M., (2011), The Management and Control of Quality, 8th Edition, Cengage Learning**
* **Dale, Barrie G., Wieley, Ton Var Der, Iwaarden, Jos Van., Managing Quality, 5th Edition, Wiley India**
* **Subburaj Ramasamy, (2008), Total Quality Management, Tata McGraw Hill Education, India**

**Any other Study Material:**

* **Quality Journals**
* **Case studies, articles and research papers as instructed by faculty in-charge**

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| --- | --- | --- | --- | --- | --- | --- |
| Bloom’s Level > | Remembering | Understanding | Applying | Analysing | Evaluating | Creating |
| Course Learning Outcomes  Assessment type/PSDA | CLO1 | CLO2 | CLO3 | CLO4 | CLO5 | CLO 6 |
| PSDA 1 |  |  |  |  |  |  |
| PSDA 2 |  |  |  |  |  |  |
| Assignment |  |  |  |  |  |  |
| Mid Term Examination |  |  |  |  |  |  |