Here's a structured **8-week lesson plan** for a **Total Quality Management (TQM)** course.

Course Title:

Mastering Total Quality Management (TQM): Principles, Tools, and Implementation

Course Duration: 8 Weeks

Course Objectives:

By the end of this course, learners will:

- Understand the fundamentals of Total Quality Management and key quality philosophies.
- Apply quality improvement techniques such as Kaizen and problem-solving methodologies.
- Learn and utilize the 7 Old and 7 New Quality Tools for assurance and control.
- Master statistical techniques for accuracy, precision, and process control.
- Gain proficiency in SPC (Statistical Process Control) and Acceptance Sampling methods.
- Understand Quality Management Systems, including ISO 9000 standards.

Week 1: Introduction to Total Quality Management (TQM) and Quality Philosophies

- **Understanding Quality:** Definition, Importance, and Evolution
- **Principles of TQM:** Continuous Improvement, Customer Focus, and Employee Involvement
- **Quality Gurus & Their Contributions:**
    - Deming’s 14 Points
    - Juran’s Trilogy
    - Crosby’s Zero Defects
    - Ishikawa’s Cause & Effect Approach
- **TQM vs. Traditional Quality Management**
- **Case Study:** TQM Implementation in Leading Organizations

Assignment: Research and summarize the TQM approach of a real-world company.

Week 2: Customer Value Evaluation, Kaizen, and Problem-Solving Approaches

- **Understanding Customer Perceptions & Value in Quality**
- **VOC (Voice of the Customer) and its Role in Quality Management**
- **Kaizen Philosophy & Continuous Improvement Cycle**
- **PDCA (Plan-Do-Check-Act) Model for Problem-Solving**
- **Quality Circles & Employee Engagement in Quality**
- **Case Study:** Toyota Production System & Kaizen

Activity: Develop a mini Kaizen project for process improvement in a workplace scenario.

Week 3: The 7 Old & 7 New Tools for Quality Assurance

- **The 7 Old Tools for Quality Control:**
    - Cause-and-Effect (Fishbone) Diagram
    - Check Sheets
    - Control Charts
    - Histograms
    - Pareto Charts
    - Scatter Diagrams
    - Flowcharts
- **The 7 New Quality Tools:**
    - Affinity Diagram
    - Interrelationship Diagram
    - Tree Diagram
    - Matrix Diagram
    - Prioritization Matrix
    - Process Decision Program Chart (PDPC)
    - Activity Network Diagram
- **Case Study:** Application of Quality Tools in Problem Solving

Assignment: Apply one quality tool to analyze a real or hypothetical business problem.

Week 4: Basic Statistical Concepts and Control of Accuracy and Precision

- **Introduction to Statistics in Quality Management**
- **Descriptive vs. Inferential Statistics in Quality**
- **Measures of Central Tendency: Mean, Median, Mode**
- **Measures of Variability: Range, Variance, Standard Deviation**
- **Accuracy vs. Precision in Quality Control**
- **Normal Distribution & Its Importance in Quality Control**
- **Case Study:** Statistical Analysis in Six Sigma Implementation

Activity: Conduct a basic statistical analysis on a given data set.

Week 5: Process Capability & Statistical Process Control (SPC)

- **Understanding Process Capability (Cp, Cpk)**
- **Variations in Process Control: Common vs. Special Causes**
- **Statistical Process Control (SPC) Charts:**
    - $\bar{X}$-R Chart
    - p Chart
    - np Chart
    - c & u Charts
- **Case Study:** SPC in Manufacturing and Service Sectors

Assignment: Create an SPC chart using sample data and analyze its control limits.

Week 6: Acceptance Sampling and Quality Control in Production

- **Acceptance Sampling Fundamentals**
- **Types of Sampling Plans: Single, Double, and Sequential Sampling**
- **OC Curve (Operating Characteristic Curve) in Sampling Plans**
- **AQL (Acceptable Quality Level) and Its Role in Decision-Making**

- **Lot-by-Lot Inspection vs. 100% Inspection**
- **Case Study:** Application of Acceptance Sampling in Automotive Industry

Activity: Design a sampling plan for quality inspection of a product batch.

Week 7: Quality Management Systems (QMS) and ISO 9000 Standards

- **Introduction to Quality Management Systems (QMS)**
- **Principles & Key Elements of ISO 9000 Series**
- **ISO 9001:2015 Requirements & Implementation**
- **Auditing & Certification Process for ISO 9001**
- **Comparing ISO 9000 with Other Standards (Six Sigma, Lean, TQM)**
- **Case Study:** ISO 9001 Certification Journey of a Company

Assignment: Conduct a gap analysis of a business process based on ISO 9001 requirements.

Week 8: Final Project & Course Review

- **Review of Key Concepts from the Course**
- **Quality Improvement Strategies for Various Industries**
- **Ethical & Sustainable Quality Management Practices**
- **Final Project Presentations:**
    - Each student/group presents a real-world application of TQM concepts learned.

Final Assessment: Exam & Practical Application Project

Assessment & Evaluation

- Weekly Assignments (20%)
- Case Study Analyses (15%)
- Practical Activities (15%)
- Final Project (30%)
- Final Exam (20%)

Who Should Enroll?

- Business & Operations Managers
- Quality Control & Assurance Professionals
- Engineers & Process Analysts
- Students & Professionals Interested in TQM Implementation

Would you like to modify any sections or add industry-specific examples? 😊