

Six Sigma in Manufacturing – Introduction

Module 1: Introduction to Six Sigma in Manufacturing

- What is Six Sigma
- Importance in manufacturing industries
- Common challenges (defects, variation, waste)
- Need for quality and consistency

Module 2: Key Concepts in Manufacturing

- Defects and process variation
- Concept of DPMO (Defects Per Million Opportunities)
- Importance of standardization
- Customer requirements and specifications

Module 3: Application Areas

- Production and assembly lines
- Quality control and inspection
- Supply chain and inventory processes
- Maintenance and operations

Module 4: Using DMAIC in Manufacturing

- Define: identifying production issues
- Measure: collecting defect and process data
- Analyze: finding root causes
- Improve: implementing process changes
- Control: sustaining improvements

Module 5: Activity & Application

- Identify defects in a simple manufacturing example
- Discuss possible causes and improvements
- Key takeaways: reduce defects, improve quality, increase efficiency