COURSE STRUCTURE

The course comprises 4 modules and each module spans 8 hours sessions and a 4 hour test cum viva (total 36 hours). This will be spread over a period of 4 to 6 weeks. The objective of the course is to improve the participant's ability to learn and experience the concepts and principles of Lean. Learning by doing is the spirit of LEAN. Thus the Hence completing a significant project is an essential part of the course. The project also presents an opportunity to evaluate one's capability to lead initiatives towards achieving process excellence. The participants need to be given time to immediately apply the principles learnt. Hence a space of about 3 to 4 weeks is essential for this course..



Course Modules

LEAN Foundation

At the end of the module the participant should be able to diagnose the problems in an organization and realize the potential for improvement and Draw a roadmap for that organization for journey towards LEAN.

Module

1

8 Hours

Building blocks of Lean – Foundation:

- ➤ Evolution of Manufacturing from customized artisan oriented manufacturing, Approaches of F.W. Tailor, Henry Ford through Toyota Production System current Lean Manufacturing
- ➤ Kaizen Continual improvement philosophy Origin and evolution
- Foundations of Kaizen and Kaizen Management Model
- ➤Introduction to 3M and their types
- > Muda walk and basic process mapping tools
- >Principles of lean manufacturing
- ➤ Value stream mapping Learning it at the classroom

Assignment: Value Stream Mapping of one product /service stream in their respective organisation – current and future map.

LEAN Tools

Module 2

8 Hours

At the end of the module the participant should possess fair understanding of tools required to create flow, how to use the tools and develop the acumen to select key projects and implement them .

Contents:

- ➤ Review of the assignments i.e. value stream maps
- ➤ Lean simulation game Understanding Pull system
- ➤ Creating flow and Layout design
- ➤ Breaking batch size through SMED
- Five S and Workstation design to enable flow
- ➤ Visual Management to enable flow
- >Takt time and production leveling
- ➤ Standardized Work
- Project selection and discussion



Course Modules

Module 3

12 Hours

LEAN - Equipment Reliability and Quality Reliability.

Working knowledge of simple and powerful tools used to solve quality problems and Basics in Total Productive Maintenance – TPM – and Total Quality Management - TQM.

Contents:

- > Review of the assignments
- ➤ Basics of TPM
- >KANZEN QUALITY MODEL
- ➤ Basics of TQM
- ➤ Basics of Six Sigma
- ➤ Problem solving tools
- ➤ Project selection and discussions

Module

2+2 Hours

LEAN – In Service Processes (2 Hrs) LEAN – Implementation (2 Hrs)

Objective: The participant should be able to understand the application of Lean Principles in all functions and processes in the organization; and learn team based approach for implementing Lean in organizations.

Contents:

- ➤ Review of the assignments
- ➤ Total Service Management
- >Leading people to implement changes
 - i. Goal Alignment Policy deployment
 - ii. Cross-functional Team (CFT) based kaizen methodology for bringing process improvements Gembakaizen

Module 5

4 Hours

Test and Viva, Final project review and assessment

Objective: The participants will subjected to an objective type test, and evaluation based on the projects completed by them.



Suggested textbooks for reference:

#	Titles	Author
1	Kaizen – Key to Japan's Competitive Success	Masaaki Imai
2	Gemba Kaizen – Low cost common sense approach to management	Masaaki Imai
3	Production System	Taiichi Ohno
4	Machine That Changed the World	James Womack
5	JIT Factory Revolution	Hiroyuki Hirano
6	JIT implementation manual	Hiroyuki Hirano
7	A Revolution in Manufacturing	Shigeo Shingo
8	Lean Thinking	Womack & Jones
9	Lean Toolbox	John Bicheno
10	Field Book	Jeffery Liker
11	Learning to See	Rother, James Womack, Daniel Jones, John Shook
12	Lean Solutions	Womack and Jones
13	Lateral Thinking	Edward De Bono
14	Six Thinking Hats	Edward De Bono
15	People and Performance	Peter Drucker
16	TPM for Process Industries	Suzuki
17	World Class Quality	Keki Bhote
18	The Goal	Eli Goldratt & Jeff Cox



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