

QUALIMATIONS

Lean Manufacturing process

This course will introduce to practicing engineers and analyst to lean production principles and practices. Industrial and organizational planning experts and others responsible for continuously improving operational performance must develop systems that are fast, flexible, focused and friendly for their companies, customers and production associates. The course will provide with an introduction to lean production describing the background behind its development and how evaluations and assessments of production systems are performed. Lean production tools and techniques will be described and in some cases demonstrated in simulation exercises. Issues relating to employee involvement, improvement teams, training and culture will be presented. Planning for lean process implementation and the necessity of sustain improvements will be discussed. Examples of applications in manufacturing and business processes will be presented as part of this course.

Introduction to Lean Manufacturing,

- Lean principles during a hands-on training simulation
- Adjusting the Culture and policy, Data driven problem solving tools to assist in the continual improvement process
- Methods to manage culture change, power of teamwork
- Planning for Lean thinking.

Standardized Work (with examples),

- Preventing & reducing waste, duplication of effort and process variation
- Data Analytics and KPIs for Lean process.

Value-Stream Mapping and Transactional Office Process Mapping,

- Identify opportunities to improve processes to minimize costs and waste.

5S / Visual Workplace,

- Benefits of clean, well-organized and understandable workplace
- Visual management transforms factory on product quality, productivity, scheduling and safety

Pull Systems / Kanban,

- Flow processing, strategic material replenishment
- "How" to facilitate a Kaizen Event. Practices continuous improvement techniques

Total Productive Maintenance,

- Reliability concepts and performance.
- Use TPM to improve performance for higher productivity and better quality
- Calculate Overall Equipment Effectiveness metric for equipment performance

Error Proofing,

- Quality at the source using devices in the process that eliminate or reduce errors

Plant Layout,

- Potential cost savings overall production flow and plant floor optimization.
- Cellular Manufacturing

Course Objectives:

- You will learn a brief history of manufacturing approaches employed and the background and philosophy of lean production. You will also learn the concept of waste and that the quest for truly lean production is a journey and not a destination.
- The need for strategy, alignment with other corporate or plant objectives, and preparation for lean production will be presented.
- You will learn some evaluation techniques that one can use in preparation for and use in lean production activities and opportunities through value stream.
- You will learn a set of approaches used in implementing lean production in production operations. While these tools are often useful, they are not an end in themselves and they are not necessarily the essence of lean production either.
- Concepts as workplace organization, pull production, cellular arrangement and layout improvement, visual management, quick change, mistake reduction, employee involvement, need for employee creativity and motivation for lean implementation will be discussed and examples will be given.
- Methods for promoting success in implementing lean transformations will be discussed.
- The change processes, why some change processes fail and the importance of culture will be presented.
- You will have an opportunity to enrich the learning of yourself and others by completing a book report and a possible project report.