

Course Outline

DEN 335 **Lean Manufacturing**

Course Description

This course is directed at engineers who either work in environments where Lean principles are used or are being introduced. The purpose of the course is to provide an overview of all the principles of Lean Manufacturing. Knowledge areas include: Functional concepts: value, waste and pull production; value stream mapping and identifying problems (waste); shortening production flow by eliminating waste; continuous improvement.

Course Objectives

By the end of this course, you will be able to:

- Explain the concepts that are critical to successful lean manufacturing:
 - Goals and benefits
 - Pull production
 - Justintime
 - Value
 - Waste
 - Continuous flow
- Create a currentstate value stream map and correctly identify waste to be eliminated.
- Describe the tools and processes used to create a lean manufacturing system:
 - Level Production
 - Work Cells
 - SMED (quick changeover)
 - The 5S's
 - Visual Status Indicators
 - Total Productive Maintenance (TPM)
 - “Mistake Proofing”
 - Explain continuous improvement (Kaizen).

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Textbook

To complete this course, you will need a copy of *Lean Thinking: Banish Waste and Create Wealth in Your Corporation* by James F. Womack and Daniel T. Jones