

# Minnesota State University Moorhead

## OM 380: Methods Improvement

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Study and analysis of productive and non-productive work elements for the purpose of productivity improvements and establishing time standards.

**B. COURSE EFFECTIVE DATES:** 10/07/2013 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Lean Manufacturing Overview
2. 5S Overview
3. Intro to Six Sigma
4. Metrics for Lean
5. Troubleshooting: Identifying Problems
6. Troubleshooting: Understanding Cause and Effects
7. Troubleshooting: Taking Corrective Actions
8. Cell Design and Pull Systems
9. Strategies for Setup Reduction
10. Conducting Kaizen Event
11. Process Flow Charting
12. Value Stream Mapping: The Present State
13. Value Stream Mapping: The Future State
14. Six Sigma Goals and Tools
15. Approaches to Maintenance
16. Total Productive Maintenance

#### **D. LEARNING OUTCOMES (General)**

1. Perform a lean manufacturing exercise.
2. Appraise waste in terms of lean manufacturing.
3. Identify common types of waste.
4. Explain the advantages of lean manufacturing.
5. Describe goals for a lean company that produces large volumes of a few products.
6. Describe goals for a lean company that produces small batches of many products.
7. Explain the importance of reducing product changeover times.
8. Explain the importance of reducing inventory.
9. Explain the importance of encouraging continuous product flow.
10. Implement a pull system.
11. Analyze a cell.
12. Identify sources of process variation.
13. Distinguish between inspection and error detection.
14. Explain the necessity of employee involvement.
15. Analyze and implement activities of a Five S Approach.
16. Perform a continuous improvement project.

#### **E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

None

#### **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

#### **G. SPECIAL INFORMATION**

None noted