MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE
COURSE OUTLINE

Faculty is required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT.: Industrial Technology

COURSE NUMBER: INDT2130

NUMBER OF CREDITS: 2 credits (Lecture)

COURSE TITLE: Lean Six Sigma

CATALOG DESCRIPTION: The student will acquire the knowledge and skills to be able to participate in Lean Manufacturing implementations and also problem solving using the Six Sigma DMAIC methodology.

AUDIENCE: Industrial Technology Students

FULFILLS MN TRANSFER CURRICULUM AREA(S) *(Leave blank if not applicable)*
Area: by meeting the following competencies:
Area: by meeting the following competencies:
Area: by meeting the following competencies:

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE: None

LENGTH OF COURSE: 1 Semester

THIS COURSE IS USUALLY OFFERED:
Every other year □ fall □ spring □ summer □ undetermined x

Four goals are emphasized in course at Minnesota West Community & Technical College:

1) ACADEMIC CONTENT: The academic objectives of this course are:
The student will acquire the knowledge and skills to be able to participate in Lean Manufacturing implementations and also problem solving using the Six Sigma DMAIC methodology.

2) THINKING SKILLS: This course will help students improve the effectiveness of their thinking skills through:
a. Participating in classroom discussions and activities
b. Taking closed book quizzes and tests

3) COMMUNICATIONS SKILLS: This course will help students improve their oral and written communication skills through:
a. Participating in class discussions and reports
b. Participating in assignments, worksheets, and reports
4) HUMAN DIVERSITY: This course will help students recognize, understand, and appreciate human diversity through:
   a. Participating in classroom discussions
   b. Working with other students on activities
   c. Working with students from other cultures

TOPICS TO BE COVERED:
1. Lean Philosophy
2. Types of Waste
3. Lean Tools
4. DMAIC Methodology
5. Root Cause Analysis problem solving technique

LIST OF EXPECTED COURSE OUTCOMES:

LEARNING/TEACHING TECHNIQUES used in the course are:
- Collaborative Learning
- Problem Solving
- Student Presentations
- Interactive Lectures
- Creative Projects
- Individual Coaching
- Lecture
- Films/Videos Slides
- Demonstrations
- Other (describe below)
- Lab

ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:
- Reading
- Tests
- Individual Projects
- Oral Presentations
- Worksheets
- Collaborative Projects
- Textbook Problems
- Papers
- Portfolio
- Group Problems
- Term Paper
- Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES:
Provides students with the knowledge and understanding to be able participate in Lean Manufacturing Implementations and also use the DMAIC methodology for problem solving and defect reduction.

The information in this course outline is subject to revision.

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or via your preferred Telecommunications Relay Service.

A Member of the Minnesota State Colleges and Universities System
An Affirmative Action Equal Opportunity Educator/Employer

7/30/13