

SYLLABUS  
PART I  
EDISON COMMUNITY COLLEGE  
IMT 246S SIX SIGMA  
4 CREDIT HOURS

**COURSE DESCRIPTION**

An introduction to the tools and techniques of the Six Sigma philosophy of management that focuses on eliminating defects through practices that emphasize understanding, measuring, and improving processes. Prerequisite: IMT 130S, IMT 220S, and MTH 125S or department permission.

**COURSE GOALS**

The student will:

Bloom's Level		Program Outcomes
1	1. Define Six Sigma.	2, 3
2	2. Explain the reasons why companies undertake Six Sigma.	2, 3
1	3. Define business metric.	2, 7
3	4. Calculate such values as mean, standard deviation, control limits, mode, median, and range.	4
5	5. Create process maps, histograms, Pareto charts, run charts and cause-and-effect (fishbone) diagrams.	4
1	6. Define the five processes of DMAIC.	4
3	7. Produce a multivariate study to identify significant inputs to a process.	4
3	8. Produce hypothesis testing procedures to make rational decisions about possible causes of a given effect.	4
3	9. Produce a failure mode effects analysis.	4
3	10. Produce a 3 factor, 2 level design of experiments to predict process behavior.	4
5	11. Create a control plan guide for maintaining improvements made with Six Sigma.	4, 8
2	12. Differentiate between good Six Sigma projects and poor Six Sigma projects.	2, 8

**CORE VALUES**

The Core Values are a set of principles, which guide in creating educational programs and environments at Edison. They include communication, ethics, critical thinking, human diversity, inquiry/respect for learning, and interpersonal skills/teamwork. The goals, objectives, and activities in this course will introduce/reinforce these Core Values whenever appropriate.

**TOPIC OUTLINE**

1. What is Six Sigma?
2. Why do Six Sigma?
3. Setting Business Metrics
4. Implementing Six Sigma
5. Roles and Responsibilities
6. The Core of Six Sigma
7. Quick Overview of Six Sigma Tools
8. Selecting Six Sigma Projects

SYLLABUS  
PART I  
EDISON COMMUNITY COLLEGE  
IMT 246S SIX SIGMA  
4 CREDIT HOURS

9. How to Sustain Six Sigma
10. Six Sigma Proof Positive