A. COURSE DESCRIPTION

Credits: 3
Lecture Hours/Week: *.*
Lab Hours/Week: *.*
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None

The course teaches the theory and applications of statistical analysis, quality problem solving and implementation. Prerequisites: Junior status or consent of instructor.

B. COURSE EFFECTIVE DATES: 08/22/2016 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Advanced Topics in Quality
2. Benchmarking and Auditing
3. Other variable control charts
4. Probability
5. Process Capability
6. Quality Costs
8. Quality advocates and Total Quality Management
9. Quality basics
10. Quality control charts for attributes
11. Quality improvement: Problem Solving
12. Reliability
13. Statistics
14. Variable Control Charts
D. LEARNING OUTCOMES (General)
   1. solve, apply, and explain central tendency statistical problems
   2. describe samples
   3. develop pareto charts
   4. apply quality tools to solve problems
   5. develop cause and effects charts
   6. solve, apply, and explain measure of dispersion problems
   7. describe population
   8. define, apply, and explain variability principle
   9. define and discuss quality
   10. define, calculate, describe, apply, and explain and describe process capability
   11. calculate, describe, apply, and explain upper and lower control limits on control charts and other control charts
   12. define events and people in quality
   13. define attributes principle
   14. use quality tools to problem solve
   15. assist Individuals in exploring, assessing, and preparing for careers relating to technology.
   16. calculate various probabilities and reliability
   17. describe 6 sigma
   18. describe Quality Function Deployment
   19. describe and apply Design of Experiments (DOE)
   20. describe and calculate probability
   21. describe and explain Quality Costs
   22. describe discuss Quality Systems, Benchmarking and Auditing and the importance and integration of quality concepts
   23. develop research skills
   24. develop your communication skills
   25. develop your critical thinking
   26. provide individuals with a strong foundation in leadership, management, and entrepreneurship.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies
   None

F. LEARNER OUTCOMES ASSESSMENT
   As noted on course syllabus

G. SPECIAL INFORMATION
   None noted