

Common Course Numbering System

Your current Institution is CCCS

Searching Current Courses For Spring 2015

Course: MTE 125

Title: Statistical Process Control

Long Title:

Course Description: Expose students to the classical concepts of quality control in a style and depth that should be acquired by all employees of the process industry. Discuss and use quality management philosophies, and Statistical Process Control tools and charts. Demonstrate and use employee involvement processes.

Min Credit: 3

Max Credit:

Origin Notes: FRCC

Course Notes: revised prfx was TEC,dscrptn,cmpntcs,outln 10/15/12

STANDARD COMPETENCIES:

1. Define skills required to participate as an effective member of a quality management team.
2. Apply various SPC tools appropriately and accurately.
3. Interpret results and applications of various SPC tools and methods.
4. Explain sampling concepts.
5. Apply sampling methods appropriately for various quality control situations.
6. Create and construct experiments applying various methods appropriately to various problems.

TOPICAL OUTLINE:

- I. Quality as a competitive tool.
 - a. Explain and understand the historical background of the quality movement.
 - b. Identify Deming's fourteen points.
 - c. Demonstrate the application of Deming's philosophy to current production.
- II. Process Analysis and Control.
 - a. Describe the methods of Juran, Crosby, Ishikawa and Taguchi.
 - b. Explain and understand ISO guidelines. Demonstrate the benefits of ISO certification.
 - c. Demonstrate the use of the Red Bead experiment.
- III. Oral and written skills for the process industry.

- a. Explain and understand team roles and responsibilities.
 - b. List the roles in a team meeting and explain their purpose.
 - c. Use effective communication skills.
- IV. Statistical Tools.
- a. Define problem solving approach.
 - b. Demonstrate the use of Run and Flow diagrams.
 - c. Discuss and use Cause and Effect diagrams and Scatter plots.
 - d. Discuss and use Pareto and Pie Charts.
 - e. Identify and demonstrate the use of histograms.
- V. Variation
- a. Explain and understand variation.
 - b. Discuss and use standard deviation.
- VI. Control Charts.
- a. Identify and demonstrate the use of variable control charts.
 - b. Discuss and use process capability.
 - c. Identify and demonstrate when a process is in control.
 - d. Explain special cause variation.

Course Offered At:

Front Range Community College FRCC

RELEASE: 8.5.3

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