

# QUALITY (QLTY)

## QLTY 111, QUALITY MEASUREMENTS - METROLOGY 3 (5)

Learning proper use and care of quality measuring instruments or devices. Students will be trained in measurement techniques and procedures based on industry standards and practices. Also included are introduction to advanced precision measurement devices, methods for inspection, maintenance and care of instruments, and writing technical reports. Laboratory required. (A special fee will be assessed.)

**General Education:** GEO1, GEO6, GEO7

**Course Entry Requirement(s):** Prerequisite: High school algebra and geometry or division approval

**Typically Offered:** Fall Semester

## QLTY 122, BASIC QUALITY TOOLS AND APPLICATIONS 3 (5)

This course introduces basic quality tools and application techniques widely used in business and industry. Basic statistical processes control methods and quality improvements tools: histogram, Pareto charts, cause and effect analysis, scatter plots, and control charts for variable and attribute data and the interpretation for process capability and probability of occurrences analysis are covered. Quality problem root-cause analysis for corrective actions is discussed. This course offers an opportunity for experiential learning. Laboratory required. (A special fee will be assessed.)

**General Education:** GEO3, GEO6, GEO7

**Course Entry Requirement(s):** Concurrent: MTHM 155 or MTHM 168.

**Typically Offered:** Fall and Spring Semesters

## QLTY 221, QUALITY MANAGEMENT PRINCIPLES AND PRACTICES 3 (3)

Fundamental principles and practices of Total Quality Management (TQM) in an organization are covered. The basic TQM concepts of leadership, customer satisfaction, employee involvement, problem solving, bench marking, continuous process improvement, supplier partnership, and performance quality assessment are addressed. ISO 9000 related practices are discussed.

**General Education:** GEO6

**Typically Offered:** Spring Semester

## QLTY 234, LEAN SIX SIGMA FOR PROCESS IMPROVEMENT 4 (5)

This course integrates "Lean Principles and Procedures" with "Six Sigma Tools and Techniques" as practiced by quality improvement industry. Students will be engaged in hands on practical applications of setting goals for lean enterprise, value stream mapping, eliminating waste, and reducing operating costs. Students will also apply the Define, Measure, Analyze, Improve, and Control (DMAIC) Model to improve project outcomes. Laboratory is required. (A special fee will be assessed).

**General Education:** GEO1, GEO7

**Course Entry Requirement(s):** Prerequisite: QLTY 122; Concurrent: ENGL 161

**Typically Offered:** Spring Semester

## QLTY 236, RELIABILITY CENTERED MAINTENANCE 3 (4)

This course covers the concepts, core principles and applications of reliability centered maintenance (RCM) in an industrial manufacturing setting. Practical applications for Total Productive Maintenance (TPM), preventive and predictive maintenance, implementing Failure Modes and Effects Criticality Analysis (FMECA) and determining resources for corrective actions will be discussed. Laboratory required. (A special fee will be assessed.)

**General Education:** GEO6, GEO7

**Course Entry Requirement(s):** Concurrent: MTHM 155

**Typically Offered:** Spring Semester

## QLTY 241, ISO 9001 2 (2)

The course covers the internationally approved ISO 9000 series of quality management system (QMS) standards revised and latest version with major emphasis on provision of products and services that meet the customer expectations and applicable statutory and regulatory requirements.

**General Education:** GEO2, GEO6

**Course Entry Requirement(s):** Prerequisite: QLTY 122

**Typically Offered:** Spring Semester

## QLTY 287, WORK-BASED LEARNING I - QLTY 1-3 (1)

This course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.

**General Education:** GEO1, GEO2, GEO6, GEO8

**Course Entry Requirement(s):** A student must be pursuing a degree seeking program at LCCC; have completed 12 semester hours with a minimum of 6 semester hours in the discipline of placement; have a min GPA of 2.5 in the discipline and a 2.0 overall GPA; and have division approval.

**Typically Offered:** Offer as required

## QLTY 288, WORK-BASED LEARNING II - QUALITY 1-3 (1)

Building on experiences from Work Based Learning I, this course provides supervised, paid work experience with approved employer(s) in an area related to the student's program. Emphasis is placed on integrating prior or concurrent classroom learning with work experience through career readiness competencies. Students will be able to evaluate career selection and satisfactorily demonstrate work-related competencies.

**General Education:** GEO1, GEO2, GEO6, GEO8

**Course Entry Requirement(s):** Prerequisite: QLTY 287

**Typically Offered:** Offer as required

## QLTY 334, LEAN SIX SIGMA FOR PROCESS IMPROVEMENT WITH ADVANCED PROJECTS 4 (5)

This course integrates "Lean Principles and Procedures" with "Six Sigma Tools and Techniques" as practiced by quality improvement industry. Students will be engaged in hands on practical applications of setting goals for lean enterprise, value stream mapping, eliminating waste, and reducing operating costs. Students will also apply the Define, Measure, Analyze, Improve, and Control (DMAIC) Model to improve project outcomes. Laboratory is required. (A special fee will be assessed).

**General Education:** GEO1, GEO7

**Course Entry Requirement(s):** Prerequisite: QLTY 122 and admission into a bachelor degree program or division approval; Concurrent: ENGL 161

**Typically Offered:** Spring Semester