Print Date: 7/15/14

**Course Objectives/Course Outline**
**Spokane Community College**

**Course Title:** **Manufacturing & Measuring Systems**
**Prefix and Course Number:** **CAD 265**

**Course Learning Outcomes:**
**By the end of this course, a student should be able to**:

- Identify materials, their impact, and how testing and quality is performed in manufacturing and structural steel
- identify and apply measuring instruments and measuring systems used in fabrication and machining
- operate measuring instruments with reliability
- calculate standard tolerances and determine compliance on parts
- determine acceptable parts based on statistical data from measurements

**Course Outline**

I. Materials in Manufacturing/Construction
   a. Metals
   b. Other Manufacturing Materials
   c. Construction Materials
   d. Paving/Surfacing Materials
II. Quality Assurance and Control
   a. Inspection and Testing
   b. Tolerances
   c. Inspection Tools
III. Manufacturing and Environmental Issues
   a. Effects of Manufacturing on Environment
   b. Environmental Regulations
   c. Work Place Safety Issues
IV. Industry Standards
   a. ISO 9000
V. Instrument Reading
   a. Non-Precision Measuring Instruments
   b. Precision Measuring Instruments and gages
   c. Electronic/Digital Measuring Equipment
VI. Measuring Systems and Quality Control/Assurance
   a. Interpretation and Documentation of Measurements
   b. Measurement Systems
   c. Statistical Processing of Data