

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

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**Course Title: Manufacturing Processes & Precision Measuring**  
**Prefix and Course Number: CAD 246**

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**Course Learning Outcomes:**

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

- Have a thorough understanding of such manufacturing techniques as:
  - Casting processes
  - Hot and cold working
  - Powder metallurgy
  - Machining methods
  - Joining processes
- Demonstrate knowledge and application of both manual and electronic precision measuring tools

**Course Outline:**

- I. Primary Manufacturing Processes
  - a. Casting Processes
  - b. Hot and Cold Working
  - c. Machining Methods
  - d. Joining Processes
  - e. Fabrication/Jigs & Fixture
- II. Secondary Manufacturing Processes
  - a. Powder Metallurgy
  - b. Plastics
  - c. Corrosion and Protection
- III. Dimensions, Tolerance, and Precision
  - a. Reading Engineering Drawings for Dimensions and Tolerances
  - b. Determine Measuring Tools and Units Required for Fabrication Methods
- IV. Instrument Reading
  - a. Non-Precision Measuring Instruments
  - b. Precision Measuring Instruments and gages
  - c. Electronic/Digital Measuring Equipment