

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

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**Course Title:** Schematics/Advanced CAD

**Prefix and Course Number:** CAD 268

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**Course Learning Outcomes:**

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

- Generate flow diagram and logic diagram drawings
- Use industry standards and symbols when producing electronic, electrical, circuit board, integrated circuits, hydraulic, and pneumatic schematic drawings and ladder logic diagrams

**Course Outline:**

- I. Flow and Logic Diagram Drawings
  - A. Basic Theory and Design
- II. Electronic Schematic Drawings
  - A. Industry Standard Symbols and Formats
- III. Electronic Printed Circuit Board/Integrated Circuit Drawing/Design
  - A. Manufacturing Process
  - B. Printed Circuit Board Designs
  - C. Integrated Circuits
- IV. Industrial Electricity Hardware
  - A. Components
  - B. Catalog Specifications
  - C. Ordering Procedures
  - D. Industrial Controls
- V. Industrial Electricity Schematics
  - A. Industry Standard Symbols
  - B. Circuit and Timing Schematics
- VI. Interconnecting Schematics
  - A. Electronics
  - B. Industrial Electricity Controls
  - C. Fluid Power
  - D. Programmable Logic Controls
- VII. Fluid Power Schematics
  - A. Hydraulics
  - B. Pneumatics
- VIII. Programmable Logic Controls
  - A. Definitions and Uses
  - B. Basic Programming Functions
- IX. Advanced CAD Functions
  - A. Advanced AutoCAD
  - B. Advanced SolidWorks