

ENGR 102 Articulation Competencies

Interpreting Engineering Graphics (2 Credits)

The students will study the principles of technical drawing used in the fields of Engineering, Drafting, Machining, Welding, Industrial Technology, Digital Design and Architecture. Interpreting multi-view and orthographic drawings, reading blueprints, drawing symbols and related project documents are components of the course.

Upon completion of this course, successful students will score 80% or better on the following competencies to receive WVC college credits.

Student Learning Outcomes:

CATEGORIES			
1. Problem Solving: A. Critical Thinking B. Creative Thinking C. Quantitative Reasoning D. Qualitative Reasoning	2. Communication: A. Oral Expression B. Written Expression C. Artistic Expression	3. Social Interaction: A. Collaboration B. Ethical Conduct C. Professional Conduct D. Cultural Diversity	4. Inquiry: A. Information Literacy B. Research C. Documentation

Course Competencies Checklist:

- Identify orthographic projections to produce multiview drawings. (1A,C)
- Interpret descriptive geometry and basic dimensioning techniques. (1C)
- Examine sections and elevations to interpret specific details of a project. (1C)
- Identify various categories of drawings. (4C)
- Interpret specifications and specific symbols in technical drawings. (1C, 4C)

Program Outcomes:

- Drafters generate technical drawings and three-dimensional models for architectural, civil, electrical, or mechanical fields. WVC's Drafting Certificate program teaches students the basic operation of a variety of industry standard software to supplement their chosen specialty. Students pursuing employment in industrial fields such as machining or electronics can apply their drafting skills to their trade just as students pursuing their transfer degrees would be able to apply their drafting knowledge to engineering or architecture fields.
- Students who complete the drafting certificate will demonstrate an understanding of engineering graphic principles and will be able to generate two-dimensional technical drawings as well as 3D models of parts and assemblies.

Course Topics:

- Universal technical drawing layout and Standards
- Geometric interpretation and communication
- Exploring and interpreting blueprint reading of various industry drawings
- Review of contract documents and project specifications
- Identify and interpret introductory symbols used in industry including: machining, electrical, construction, and welding