

URBANDALE COMMUNITY SCHOOL DISTRICT  
CURRICULUM FRAMEWORK

---

SUBJECT:	Vocational Education	
COURSE TITLE:	Computer Aided Drafting I	
PREREQUISITES:	None	1 Semester

---

**COURSE DESCRIPTION:**

An introductory course designed to present drafting and computer aided drafting (CAD) fundamentals and principles. Emphasis is placed on actual operation and utilization of drafting principles as applied through the use of CAD software. Practical experience is gained through work with basic design projects.

**CONTENT STANDARDS AND BENCHMARKS:**

In order that our students may achieve the maximum benefit from their talents and abilities, the students of Urbandale Community School District's Computer Aided Drafting I (CAD I) course should be able to...

**Content Standard I. Demonstrate comprehension, computation, and applied technology skills.**

- Benchmarks:
- Demonstrate the proper use of CAD software.
  - Complete orthographic, isometric and sectional drawings using CAD software.
  - Determine proper drawing set-up procedures.
  - Use proper terminology as it relates to drafting.
  - Demonstrate the use of math as it relates to CAD.
  - Output a drawing using a printer.

**Content Standard II. Develop communication, employability and life management skills.**

- Benchmarks:
- Demonstrate good preparation and organizational skills for class.
  - Demonstrate an understanding of the educational qualifications and levels of Computer Aided Drafting.
  - Demonstrate punctuality, responsibility, reliability, and honesty.
  - Demonstrate self-regulation.
  - Demonstrate problem solving skills.



**Urbandale Community School District  
Curriculum Framework Outline**

---

<b>Subject:</b>	<b>Vocational Education</b>	
<b>Course Title:</b>	<b>Computer Aided Drafting I</b>	
<b>Prerequisites:</b>	<b>None</b>	<b>1 Semester</b>

---

**CONTENT STANDARDS AND COURSE BENCHMARKS WITH INDICATORS  
FOR COMPUTER AIDED DRAFTING I:**

**Standard I. Demonstrate comprehension, computation, and applied technology skills. Students in Computer Aided Drafting 1 should be able to...**

**Benchmark: Demonstrate the proper use of computer aided drafting (CAD) software.**

Indicators: Create drawings.  
Edit drawings.

**Benchmark: Complete orthographic, isometric and sectional drawings using CAD software.**

Indicators: Properly position different views of an orthographic drawing.  
Visualize and draw isometric drawings from orthographic drawings.  
Use hatching to complete sectional views.

**Benchmark: Determine proper drawing set-up procedures.**

Indicators: Create and organize necessary layers  
Setup and change grids  
Change drawing units  
Insert and edit title block

**Benchmark: Use proper terminology as it relates to drafting.**

Indicators: Use CAD terminology as they are actively involved in class discussions.  
Communicate with others about class activities.  
Complete class writing assignments.

**Benchmark: Demonstrate the use of math as it relates to CAD.**

Indicators: Demonstrate use of fractions, decimals, and metrics in measurement units.  
Determine proper plotting scale



Apply various scales  
Demonstrate use of absolute, relative, and polar coordinates.

**Benchmark: Output a drawing using a printer.**

Indicators: Determine paper size  
Check output with print preview  
Print the drawing.

**Standard II. Develop communication, employability and life management skills.  
Students in Computer Aided Drafting 1 should be able to...**

**Benchmark: Demonstrate good preparation and organizational skills for class.**

Indicators: Bring proper materials to class  
Maintain a filing system for class handouts (portfolio)  
Choose appropriate file names for easy recognition and access.

**Benchmark: Demonstrate an understanding of the educational qualifications and levels of Computer Aided Drafting.**

Indicators: Research jobs related to CAD.  
Research college requirements and degrees.  
Explain the differences between educational degrees and certificates.  
Explore attitudes and aptitudes required of CAD users.

**Benchmark: Demonstrate punctuality, responsibility, reliability, and honesty.**

Indicators: Arrive on time to class.  
Demonstrate good attendance.  
Complete work to the best of ability.  
Complete assigned work on time and on their own.

**Benchmark: Demonstrate self-regulation.**

Indicators: Plan activities and events with appropriate time line and outcome.  
Be sensitive to feedback from peers and instructors.  
Evaluate own actions.

**Benchmark: Demonstrate problem solving skills.**

Indicators: Engage intensely in tasks, even when answers or solutions are not immediately apparent.  
Push the limits of their own knowledge and ability.  
Generate and maintain own standards of evaluation.



Generate new ways of viewing a situation outside the boundaries of standard conventions.

No student enrolled in the Urbandale Community School District shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination in the District's programs on the basis of race, color, creed, sex, religion, marital status, ethnic background, national origin, disability, sexual orientation, gender identity, or socio-economic background. The policy of the District shall be to provide educational programs and opportunities for students as needed on the basis of individual interests, values, abilities and potential.

