

East Penn School District  
Secondary Curriculum

A Planned Course Statement  
for

**Drafting & Design I**

Course # 900

Grade(s) 9,10,11,12

Department: Technology Education

Length of Period (mins.) 42

Total Clock Hours: 63

Periods per Cycle: 6

Length of Course (yrs.) 0.5

Type of Offering:  required  elective

Credit: 0.5

Adopted: 4/23/07

Developed by:

Scott Didra

## Description of Course #900

### Course Title: Drafting and Design I

**Description:** This is an introductory course giving the student a basic understanding of mechanical drawing and Cad Drafting. Presented are: the use of drawing instruments, CADD drafting, and the theory of shape description as it applies to design. Emphasis will be placed on the importance of neatness and paying attention to detail. Process learning and problem solving are key points in this class. Drawings will be completed on the board and in CADD.

#### Goals:

- To provide an area of education in which the student will develop mature working habits, a feeling of responsibility, and the ability to plan and execute work independently and in cooperation with others.

#### Requirements:

- Students will be required to complete all work assigned by the instructor.

#### Text:

French, Svensen, Hesel, and Urbanick, Mechanical Drawing, eleventh edition

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#### Key to Levels of Achievement (Listed with each learning objective)

Awareness (A):	Students are introduced to concepts, forms, and patterns.
Learning (L):	Students are involved in a sequence of steps and practice activities which involved further development and allow evaluation of process.
Understanding (U):	Students demonstrate ability to apply acquired concepts and skills to individual assignments and projects on an independent level.
Reinforcement (R):	Students maintain and broaden understanding of concepts and skills to accomplish tasks at a greater level of sophistication.

<b>Unit</b>	<b>#</b>	<b>Objective</b>	<b>L</b>	<b>Content</b>	<b>Evaluation</b>	<b>Standard</b>
<b>I. Measuring and Dimensioning</b>	1	Students will acquire an understanding of basic measurements as they relate to Drafting and industry.	A	<ul style="list-style-type: none"> <li>Information and tools required to convey specific information to a reader of a drawing</li> </ul>	<ul style="list-style-type: none"> <li>Project graded assignments</li> </ul>	3.6 3.7
<b>II. Sketching</b>	2	Students will acquire an understanding of how Drafting is used to communicate ideas and plans.	A	<ul style="list-style-type: none"> <li>Explanation of Drafting as a graphic language and it's meaning.</li> </ul>	<ul style="list-style-type: none"> <li>Graded assignments</li> </ul>	3.6
<b>III. Two-dimensional Drawing</b>	3	Students will be able to identify tools used in drafting.	A	<ul style="list-style-type: none"> <li>Identification of basic drafting instruments.</li> </ul>	<ul style="list-style-type: none"> <li>Teacher observation</li> </ul>	3.6
	4	Students will be able to properly use drafting tools and instruments.	L	<ul style="list-style-type: none"> <li>Demonstration of the correct use of drafting tools and instruments.</li> </ul>	<ul style="list-style-type: none"> <li>Teacher observation</li> </ul>	3.6 3.7
	5	Students will build upon basic drafting skills as they continue to develop techniques in the correct use of drafting instruments.	L U	<ul style="list-style-type: none"> <li>Selection and use of drafting media, compasses, triangles, pencils, etc.</li> <li>Measure and layout drawings to scale using proper tools.</li> </ul>	<ul style="list-style-type: none"> <li>Teacher observation</li> <li>Project graded assignments</li> </ul>	3.8
	6	Students will be able to apply the principles of basic geometry, with accuracy and skill to problems in drafting and design.	A	<ul style="list-style-type: none"> <li>Construction of Geometric shapes using straight lines, arcs, circles, squares, and polygons.</li> </ul>	<ul style="list-style-type: none"> <li>Teacher observation</li> </ul>	3.6
<b>IV. Introduction to Cad Drafting</b>	7	Students will be introduced to the CADD system of Drafting.	A	<ul style="list-style-type: none"> <li>Demonstration of CADD software through use of the projector.</li> </ul>	<ul style="list-style-type: none"> <li>Teacher observation</li> </ul>	3.6
<b>V. Applying Drafting Skills to CADD Drafting Software</b>	8	Students will build upon basic drafting skills as they continue to develop techniques in the correct use of the CADD software.	L U R	<ul style="list-style-type: none"> <li>Reproduction of Drawings assigned on the board.</li> <li>Drawings are now completed in CADD.</li> </ul>	<ul style="list-style-type: none"> <li>Teacher observation</li> <li>Project graded assignments.</li> </ul>	3.8
<b>VI. Portfolio</b>	9	Students will understand the importance of organization and presentation of final plans and projects.	L R	<ul style="list-style-type: none"> <li>Demonstration of putting together a portfolio of work</li> </ul>	<ul style="list-style-type: none"> <li>Teacher Observation</li> </ul>	3.6 3.7
	10	Students will put together a portfolio of all work from the course.	L U	<ul style="list-style-type: none"> <li>Projects from course</li> </ul>	<ul style="list-style-type: none"> <li>Teacher Observation</li> <li>Project graded assignments</li> </ul>	3.6 3.7 3.8