

Planned	Course	for:
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DRAFTING TECHNOLOGY II

Date	Revised:	July	2000

## Course Description:

Drafting II is designed to stimulate student's thinking and problem-solving ability. Problems are arranged in a sequence according to level of difficulty. Areas of study include those of Drafting Technology I, plus assembly drawings, dimensioning, fasteners, technical illustrations and computer-aided drafting and design.

Length of course: (X) Semester –	Intensive Schedule	( ) Quarter	( ) Other
Type of Offering: ( ) Required	() Elective	( ) Selective	

Credit: One

Prerequisite (s): Drafting Technology I with a minimum of 73% average

Goal:

The goals Drafting Technology II are:

- (1) To help every student acquire the knowledge, understanding and appreciation of science and technology.
- (2) To help every student develop self-understanding and a feeling of self-worth.
- (3) To help every student acquire the knowledge, skills and attitudes necessary to become a self-supporting member of society.
- (4) To help every student acquire skills in mathematics.
- (5) To help every student develop analytical thinking skills.

## COUR JBJECTIVES:

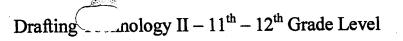
The student will:

- (1) Be able to hand letter vertical Gothic letters and numerals and space them correctly (3.5B)
- (2) Be able to sketch the various types of lines, geometric shapes and use the various methods of sketching and develop pictorial sketches (3.5B)
- (3) Be able to identify the various drafting instruments and describe the use of each. The student will also be able to prepare accurate mechanical drawings to scale (3.5B)
- (4) Be able to identify the basic elements of drafting geometry and use geometric construction as a tool in developing drawings (3.5B)
- (5) Be able to visualize an object an interpret it graphically through the use of various views and project details from view to view (3.5B)
- (6) Be able to visualize the interior details of an object and prepare drawings involving sectional views using correct symbols and lines (3.5C)
- (7) Be able to visualize the surface development of three dimensional objects and make accurate developments using parallel lines, radial lines and triangulation (3.5B)
- (8) Be able to understand systems and applications of computer graphics to industry standards (3.5B)
- (9) Be able to identify common types of technical drawings and list traits necessary for success in a drafting career (3.5B)
- (10) Be able to interpret dimensioning symbols used on technical drawings and list traits necessary for success in a drafting career (3.5B)
- Be able to describe some of the practical solutions to slanted surfaces and identify problems that need to be developed with auxiliary views. The student will also be able to explain how to find the true size of an oblique surface (3.5B)
- Be able to identify the common types of threads and fasteners and their uses and make drawings of threads using any of the ANSI types of thread representation (3.5B)
- (13) Be able to make detail, assembly and working drawings and prepare materials and parts lists (3.5C)



## Drafting Technology II – 11<sup>th</sup> – 12<sup>th</sup> Grade Level

Course Contents By Units: 90 Days (85 min. period)	Learning Strategies including Enrichments/Adaptations	Assessment Measures/Expected Levels of Achievement
Letters (2 days)  Lettering styles Guidelines and spacing Techniques Instruments Sketching (3 days) Classes Materials Line technique Proportions Multiview Pictorial Steps in preparing a sketch Tools and Techniques (2 days) Fastening paper to board Drawing board, T-square and triangles Pencils Scales (English and Metric) Instruments Horizontal lines Vertical lines Inclined, parallel and perpendicular lines	<ul> <li>Lecture</li> <li>Discussion</li> <li>Question / Answer</li> <li>Cooperation Learning</li> <li>Demonstration</li> <li>Drawings</li> <li>Guest Speakers</li> <li>Individually Guided Instruction</li> <li>Exams</li> <li>Note Taking</li> <li>CD-ROM</li> </ul>	<ul> <li>Exams: Teacher Made – Standardized</li> <li>Performance Tests (Drawing)</li> <li>Teacher Observation</li> <li>Class Participation</li> <li>Instructional Materials</li> <li>Text: Mechanical Drawing – 12<sup>th</sup> Edition, Glencoe, ©1997</li> <li>Student Workbook: Mechanical Drawing – 12<sup>th</sup> Edition, Glencoe, ©1997</li> <li>Reference Books</li> <li>Video Tapes</li> <li>Transparencies</li> <li>CD-ROM</li> <li>Worksheets</li> <li>Instruction Sheets</li> <li>Models</li> </ul>



Course Contents By Units:	Learning Strategies including	Assessment Measures/Expected Levels of Achievement	
90 Days (85 min. period)	Enrichments/Adaptations	Levels of Achievement	
Geometry (3 days)			
Bisecting figures			
Dividing lines			
Perpendiculars			
Parallel lines			
Triangle construction	-		
Tangent construction			
Ellipse construction	, · . <u> </u>	Instructional Materials	
Dimensioning (15 days)			
Lines and symbols			
Placement			
Theory			
General rules			
• Tolerances			
Detail and Assembly Drawings (20 days)			
Detail drawings	·		
Assembly drawings			
• Choice of scales			
Placement of views			
Material lists			
Pictorial Drawing (25 days)			
Uses of pictorial drawings			
Axonometric			
Oblique			
Perspective			
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Course Contents By Units: 90 Days (85 min. period)	Learning Strategies including Enrichments/Adaptations	Assessment Measures/Expected Levels of Achievement	
Fasteners (10 days)			
<ul> <li>Screws and screw threads</li> </ul>			
Classifications			
Bolts and nuts			
Other fasteners			
Surface Developments (10 days)			
<ul> <li>Drafting for sheet metal</li> </ul>			
Development	·.	Instructional Materials	
Parallel line development		Instructional Materials	
Radial line development			
Triangulation			
Computer Assisted Drafting – "CAD"			
(incorporated throughout the course)			
• CAD concepts			
Start-up and shut-down of a CAD			
system			
• Grouping		en e	
Demonstration	**		
<ul> <li>Project making-drawings</li> </ul>			
Resource speakers			
<ul> <li>Individual guided instruction</li> </ul>			
Test-various kinds			
Note taking			
110te taking			