Conneaut School District

Planned Course for: 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.

COURSE OBJECTIVES:

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)

(11) 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)

(12) 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 – 11th – 12th 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 • Circles, arcs and tangents	• Lecture • Discussion • Question / Answer • Cooperation Learning • Demonstration • Drawings • Guest Speakers • Individually Guided Instruction • Exams • Note Taking • CD-ROM	• Exams: Teacher Made – Standardized • Performance Tests (Drawing) • Teacher Observation • Class Participation **Instructional Materials** • Text: Mechanical Drawing – 12th Edition, Glencoe, ©1997 • Student Workbook: Mechanical Drawing – 12th Edition, Glencoe, ©1997 • Reference Books • Video Tapes • Transparencies • CD-ROM • Worksheets • Instruction Sheets • Models

Drafting ...nology II – 11th – 12th Grade Level

Course Contents By Units: 90 Days (85 min. period)	Learning Strategies including Enrichments/Adaptations	Assessment Measures/Expected Levels of Achievement
Geometry (3 days) • Bisecting figures • Dividing lines • Perpendiculars • Parallel lines • Triangle construction • Tangent construction • Ellipse construction **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		**Instructional Materials**

Drafting ...nology II – 11th – 12th Grade Level

Course Contents By Units: 90 Days (85 min. period)	Learning Strategies including Enrichments/Adaptations	Assessment Measures/Expected Levels of Achievement
Fasteners (10 days) • Screws and screw threads • Classifications • Bolts and nuts • Other fasteners **Surface Developments (10 days)** • Drafting for sheet metal • Development • Parallel line development • Radial line development • Triangulation **Computer Assisted Drafting – "CAD" (incorporated throughout the course)** • CAD concepts • Start-up and shut-down of a CAD system • Grouping • Demonstration • Project making-drawings • Resource speakers • Individual guided instruction • Test-various kinds • Note taking		**Instructional Materials**