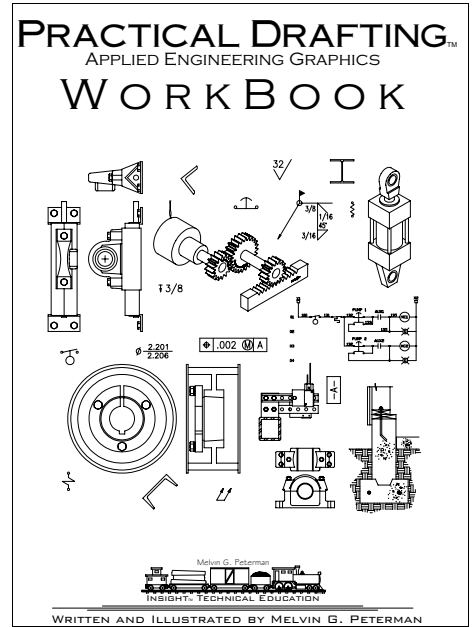


PRACTICAL DRAFTING™

Practical Drafting was created for students to learn on their own, at their pace, without outside instruction. Practical Drafting starts at the beginning with lines and sketching and quickly builds to a level that goes beyond standard high school drafting courses and even beyond the university level. It exposes the student to many types of drafting and standards.

This book of 136 pages includes over 30 pages of reference materials and focuses on the things that are important in today's engineering world. The goal of this course is to assist the student in mastering some drafting concepts and the art of drafting. Through the use of Practical Drafting, the student learns to read and understand engineering drawings and drawing concepts by reading and doing the work. The book promotes drafting as a stepping stone to other career options such as engineering, architecture, industrial design, etc. It is imperative that all participants, drafters, designers, engineers, machinists, electricians, builders, etc., understand the language of engineering. The study is built with the intent of helping to promote the use of manual and computer drafting skills. All the lessons in this book may be accomplished both by hand and with CAD.

Lessons: 101
Grade: Junior High to High School
Item: PD
Price: \$38.00



LESSON 1.02
LINES & LETTERING

INSTRUCTIONS:
 USING THE CORRECT LINE WEIGHTS, DRAW THE THREE VIEWS OF THE ABOVE OBJECT FREE HAND ON THE GRID BELOW. INSURE THAT THE THREE VIEWS ARE ALIGNED AND IN THE SAME RELATIVE LOCATION.

LESSON 3.00
GEOMETRIC SHAPES & CONSTRUCTIONS

SPECIAL NOTE: WHEN NO DIMENSIONS ARE SPECIFIED IN THIS SECTION, MAKE UP YOUR OWN.

NOTE:
 GEOMETRY IS THE BASIS OF ALL ENGINEERING DRAWINGS, DEMONSTRATED BY THE DRAWINGS BELOW.

INSTRUCTIONS:
 FREE-HAND DRAW & LETTER THE ITEMS FROM ABOVE. USING A LEAVING-LIGHT GUIDELINES FOR LETTERING IS ACCEPTABLE. REFER TO LESSON 1.04 FOR LETTERING INFORMATION.

LESSON 4.08
SKETCHING -- MULTIVIEW

NOTE:
 THE 3 NORMAL VIEWS OF ANY OBJECT ARE THE FRONT, TOP, & RIGHT SIDE. IF THE LEFT VIEW SHOWS A FEATURE MORE CLEARLY, THEN SHOW IT. IF YOU NEED THE 6 NORMAL VIEWS OF ANY OBJECT TO CLARIFY IT, THEN SHOW THEM ALL. THIS IS AN OVERVIEW OF THE 6 NORMAL VIEWS OF ANY OBJECT.

LESSON 12.06
SHEET METAL & PLANAR DEVELOPMENTS

INSTRUCTIONS:
 REPRODUCE THE FLAT PATTERN ITEM. CUT IT OUT, & ASSEMBLE FOR THE ILLUSTRATION BELOW.

NOTE:
 THE POINTS ARE EQUALLY SPACED AROUND THE CIRCLE THEN PROJECTED DOWN TO THE CONE GAUGE. THE DISTANCE BETWEEN POINTS IS THEN TRANSFERRED TO THE RADIUS OF THE FLAT PATTERN. THE SAME NUMBER OF ARC SEGMENTS WILL PRODUCE A CONE THAT IS REASONABLY ACCURATE. THE ONLY WAY TO BE MORE ACCURATE IS TO USE MATH & PRECISION MEASURING EQUIPMENT OR A CAD PROGRAM DESIGNED FOR SHEET METAL.

LESSON 14.02
PIPING

INSTRUCTIONS:
 REPRODUCE THE DRAWING BELOW TWICE THE SIZE OF THE ILLUSTRATION.

PIPING SCHEMATIC
 DOUBLE-LINE

LESSON 16.00
ELECTRICAL

NOTE:
 ELECTRICAL SYMBOLS HAVE BEEN DETERMINED BY ANSI. ELECTRICAL CODES & STANDARDS ARE DETERMINED BY THE NEC & THE IEC. REFER TO BOOKS & DOCUMENTS ON ELECTRICAL CIRCUIT DRAFTING & DESIGN. THIS SUBJECT REQUIRES A STUDY OF ITS OWN. RADIO SHACK IS A GOOD SOURCE OF HOBBY & PROFESSIONAL REFERENCE MATERIALS.

INSTRUCTIONS:
 REPRODUCE THE SCHEMATIC BELOW THE SIZE OF THE ILLUSTRATION.

LIGHTING CIRCUIT