

Drawing Workbook for

Engineering Drawing and Design

Sixth Edition



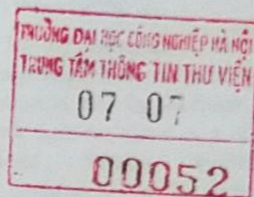
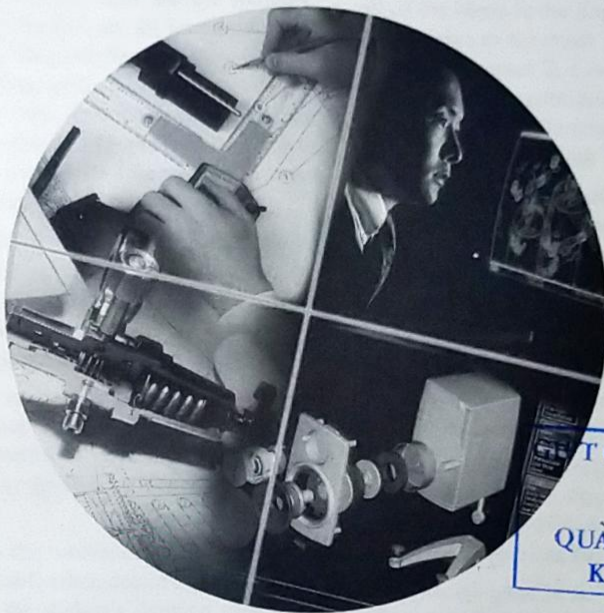
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Cecil Jensen
Jay D. Helsel

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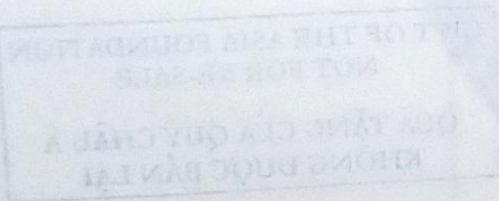
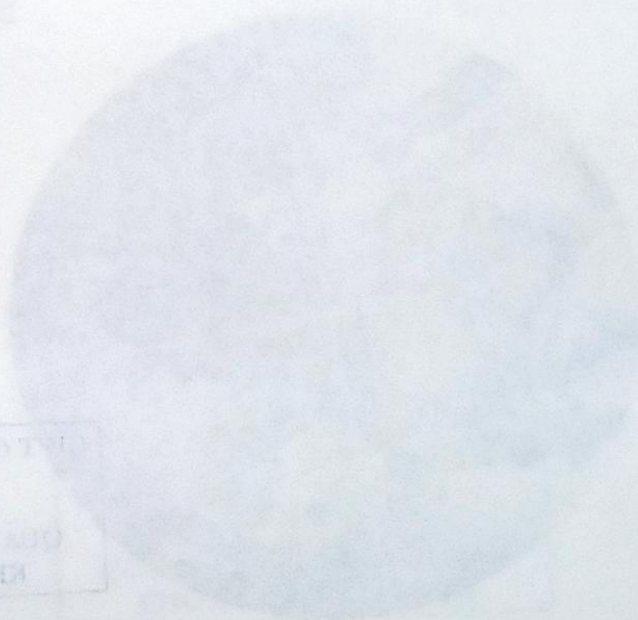
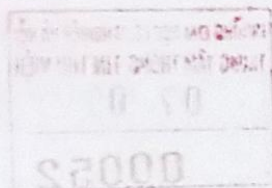
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Drawing Workbook for Engineering Drawing, and Design, Sixth Edition

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Preface

This *Drawing Workbook* contains worksheets that present a partially worked out solution for assignments in each unit of *Engineering Drawing and Design, Sixth Edition*. Each worksheet has a title block and a reference number that refer to the chapter and unit number of the text. Following the table of contents are instructions that provide an overview for each assignment, and also provide references to the appropriate units. The drawing problems contain both U.S. customary (decimal inch) and metric (millimeter) units of measurement. The worksheets are printed on high-quality white paper to simulate drawings found in actual engineering practice. They are also perforated for easy removal.

These worksheets have a number of benefits. First of all, they save drawing time for both the instructor and the students. For instance, the title blocks and borders are all preprinted, and some of the drawing assignments are partially completed or have preprinted orthographic or pictorial grids. The worksheets also help students correctly position their drawings and focus their attention on the key concepts within the teaching unit. We estimate that these worksheets save instructors time enough to cover 30 percent more teaching material.

Students enrolled in a drafting program who are pursuing other related careers will also benefit from this workbook. For these students, this *Drawing Workbook* provides the opportunity to spend added time studying the material involving the interpretation and understanding of engineering drawing practices.

Students planning a career in drafting will find these sheets especially useful. Supplementing CAD with these sheets will provide the student the opportunity of covering more drafting theory and application as well as developing essential sketching experience.

The positioning points on the worksheets are printed in a light gray that will not be noticeable when drawn over with a pencil. The final drawing will be the student's drawing despite the aids printed on the sheets. Finally, the drawing problem is also provided on the sheet. This means that the student can set up a workspace without the inconvenience of having to keep the textbook on the drawing board.

Another advantage of these worksheets is that they are keyed with the units in the textbook, thereby simplifying the task of selecting the correct problem for the learning material. There are sufficient drawing worksheets to permit the instructor flexibility in making assignments. Sufficient drawing assignments are included to thoroughly cover all basic elements of engineering

drawings and the latest drawing practices. In addition, a variety of advanced problems are provided to accommodate individual differences in both students and programs.

The drawing assignments for these worksheets are, in most cases, taken directly from the textbook. The understanding of reading assignments is enhanced by providing worksheet assignments that are closely coordinated with the text units. Because the text drawing problems were mainly designed for use on a B-size drawing sheet, changes to either the scale or some dimensions were often necessary in order to fit the drawing on the worksheet.

Once again, the authors have made a special effort to update all of the items in the *Engineering Drawing and Design* package to conform to the most current drafting standards available. In addition, Chapter 2, *Computer-Aided Drafting (CAD)*; Chapter 19, *Design Concepts*; and Chapter 27, *Electrical and Electronics Drawings* have undergone major revision to remain current with the most recent changes in these fields.

A *Solutions Manual* for the instructor is available for the workbook. Each solution is presented on a separate page for ease in grading students' assignments. For the textbook, *Engineering Drawing and Design, Sixth Edition*, there is a comprehensive *Instructor's Management System* available from Glencoe/McGraw-Hill. It contains all of the textbook drawing solutions. These solutions are also available on the *Instructor's* CD-ROM. Please contact your local Glencoe/McGraw-Hill representative or the publisher for more details.

Although this workbook is keyed to *Engineering Drawing and Design, Sixth Edition*, it can be used with any good text that follows current ANSI and ISO drawing standards. The instructor will need to provide the text references necessary.

We are grateful to Dr. Dennis Short for his contributions to the textbooks and workbooks. We also are grateful to the many instructors who have used *Engineering Drawing and Design* and/or *Fundamentals of Engineering Drawing* over their very successful history. We trust that those instructors and others will find this workbook as useful as the textbooks. As always, we appreciate your comments and suggestions.

Cecil Jensen
Jay D. Helsel

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