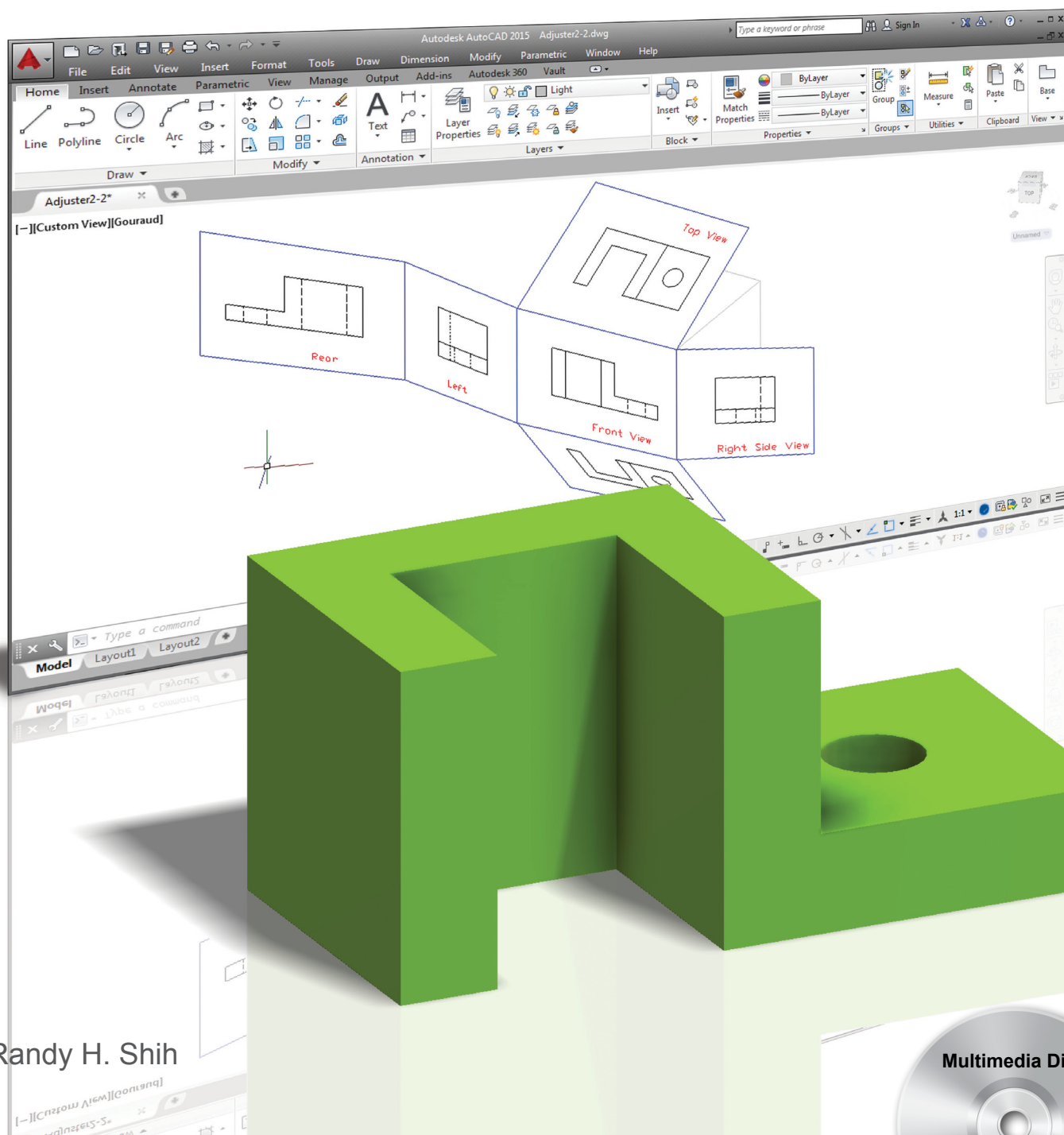


Principles and Practice:

An Integrated Approach to Engineering Graphics and AutoCAD® 2015



Randy H. Shih



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- F. METRIC FASTENERS
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**Notes on using this book to prepare for the
AutoCAD Certified User Examination**

This edition of the text can also be used as a preparation guide for the AutoCAD Certified User examination. The book's content has been expanded to include the majority of the topics covered in the examination. The reference tables beginning on the next page and located at the beginning of each chapter show the textbook's coverage of Certified User Examination performance tasks. Students taking the certification exam can use the reference tables as both a check list for topics that they need to understand and as a way of finding particular topics. The tables are provided as a reference only. It is important for the user to work through the book chapters in sequential order, as each chapter builds on the skills learned in previous chapters.

PLEASE NOTE:

Every effort has been made to cover the exam objectives included in the AutoCAD Certified User Examination. However, the format and topics covered by the examination are constantly changing, students planning to take the Certified User Examination are advised to visit the Autodesk website and obtain information regarding the format and details about the AutoCAD Certified User Examination.

AutoCAD Certified User Examination Overview

The AutoCAD Certified User examination includes 12 sections. The following tables show where the performance tasks for each section are covered in this book.

This Reference Guide is provided to give you a checklist of performance tasks covered on the Certified User examination and to show you on which page(s) specific tasks are covered.

Section 1: Introduction to AutoCAD

Objectives: Describe and set the workspace

Certification Examination Performance Task	Covered in this book on Chapter – Page
Precision	1-21
Zoom All	1-22
Drawing Limits	1-21
Status Bar	1-25
GRID Display	1-29
PAN Realtime	1-36
Drafting Settings	2-36
Drawing Limits	2-37
UCS Icon	2-37
Use a Wizard	3-4
Zoom Realtime	3-22
Layer Visibility	3-25

Section 2: Creating Drawings

Objectives: Create and edit geometry using the *Dynamic Input* interface.

Use running *Object Snaps* and object snap overrides to select *Snap* points in the drawing.

Use *Polar Tracking* and *PolarSnap* efficiently and effectively.

Use *Object Tracking* to position geometry.

Use the *Units* command to set drawing units.

Certification Examination Performance Task	Covered in this book on Chapter – Page
Format	1-20
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LINE Command	1-24
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Hor. Construction Line	10-19

Section 3: Manipulating Objects

Objectives: Use several different *Selecting Objects* methods to select objects.

Select Objects for grip editing and identify the type of editing that can be done using grips.

Move objects in the drawing using *Object Snaps*, *Coordinate* entry, and *Object Snap Tracking* for precise placement.

Use the *Copy* command to copy objects in the drawing.

Use the *Rotate* command to rotate objects in the drawing.

Use the *Mirror* command to mirror objects in the drawing.

Use the *Array* command to pattern objects in the drawing.

Certification Examination Performance Task	Covered in this book on Chapter – Page
ERASE Command	1-28
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Rotate Command	2-25
Transfer of an Angle	2-23
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Dividing a Given Line into Equal Parts -	2-27
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Rotate, Grips	9-15
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Copy	12-17
Paste	12-17
Quick Select	12-19
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Copy with Base Point	12-25

Section 4: Drawing Organization and Inquiry Commands

- Objectives: Use *Layer tools*.
- Describe the use and effect of the *ByLayer* property.
 - Use the Match Properties command to apply the *Properties* from a source object to destination objects.
 - Use the inquiry commands (Distance, Radius, Angle, Area, List, and ID) to obtain geometric information from the drawing.

Certification Examination Performance Task	Covered in this book on Chapter – Page
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Section 5: Altering Objects

- Objectives: Use the *Offset* command to create parallel and offset geometry.
- Use the *Fillet* command to create radius geometry connecting two objects.
 - Use the *Join* command to combine multiple objects into a single object.

Certification Examination Performance Task	Covered in this book on Chapter – Page
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Section 6: Working with Layouts

Objectives: Create a new layout
 Create and manipulate *Viewports*

Certification Examination Performance Task	Covered in this book on Chapter – Page
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Section 7: Annotating the Drawing

Objectives: Use the *Multiline Text* command to create and format paragraphs of text.
 Create and use *Text Styles*

Certification Examination Performance Task	Covered in this book on Chapter – Page
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Section 8: Dimensioning

Objectives: Create different types of *Dimensions* on linear objects.
 Create and modify *Dimension Styles* to control the appearance of dimensions.
 Create and edit *Multileaders*

Certification Examination Performance Task	Covered in this book on Chapter – Page
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Section 9: Hatching Objects

Objectives: Create *Hatch* patterns and fills.

Certification Examination Performance Task	Covered in this book on Chapter – Page
Hatch	10-29

Section 10: Working with Reusable Content

Objectives: Use the *Block* command to create a block definition.
Use the *Insert* command to insert a block reference in a drawing.

Certification Examination Performance Task	Covered in this book on Chapter – Page
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Use a Template	10-12
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Section 11: Creating Additional Drawing Objects

Objectives: Work with *polylines*.
Edit *polylines*.

Certification Examination Performance Task	Covered in this book on Chapter – Page
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Section 12: Plotting

Objectives: Create and modify page setup.

Certification Examination Performance Task	Covered in this book on Chapter – Page
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The AutoCAD Certified User Examination is a performance-based exam. The examination is comprised of approximately 30 questions to be completed in one hour. The test items will require you to use the AutoCAD software to perform specific tasks and then answer questions about the tasks. Performance-based testing is defined as **testing by doing**. This means you actually perform the given task then answer the questions regarding the task. Performance-based testing is widely accepted as a better way of insuring the users have the skills needed, rather than just recalling information.

For detailed information, visit <http://www.autodesk.com/certification>.