

# Instructional Resources

## Drafting and Design Technology

CIP No. 15.1300

Please note: This list of instructional resources is provided as a tool and not an endorsement by the Arizona Department of Education. Contact information for these resources is subject to change.

### DRAFTING AND DESIGN BOOKS

#### GENERAL DRAFTING AND DESIGN:

##### **Basic Drafting Using Pencil Sketches and AutoCAD (2003)**

Author: Kirkpatrick

Prentice-Hall School <http://www.phschool.com/catalog/>

Student Edition ISBN/ISSN: 0-1309-4069-0

Instructor's Manual ISBN/ISSN: 0-1304-9347-3

Step-by-step exercises with objectives for each chapter.

##### **Basic Technical Drawing (2004)**

Glencoe

<http://www.glencoe.com/sec/catalog/linktradedrafting.html>

Student Edition ISBN/ISSN: 0-0784-5748-3

Student Workbook ISBN/ISSN: 0-0784-5749-1

Instructor Resource Guide ISBN/ISSN: 0-0784-5750-5

Introductory high school drafting text. There are two chapters on computer-aided drafting (CAD), but most of the text emphasizes board drafting. Provides problems.

##### **D30 Tech Drawing: Basic Concepts Drafting/CAD Video Package (1999)**

Bergwall Productions Inc.

Thomson Learning Delmar Publishers <http://e-catalog.thomsonlearning.com>

ISBN/ISSN: 0-8064-1716-1

D30.4 Dimension/Drawing Layout Video: Tech Drawing ISBN/ISSN: 0-8064-1720-X

D30.3 Create Multiview Drawings Video: Tech Drawing ISBN/ISSN: 0-8064-1719-6

D30.2 Freehand Sketching Video: Tech Drawing (1999) ISBN/ISSN: 0-8064-1718-8

D30.1 Lines/Scales Video: Tech Drawing ISBN/ISSN: 0-8064-1717-X

Designed to be a "fundamentals" program, this program covers basic elements of technical drawing common to both manual drafting and CAD. Examples from both architectural and mechanical.

##### **Engineering Design Graphics Sketching Workbook**

Ronald Barr, Davor Juricic, Thoms Krueger, & Theodore Aanstoos

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

Reference college text on basics from lettering to sketching, modeling etc. manual and CAD.

1-5850-3093-7

### **Engineering Drawing and Design (3<sup>rd</sup> Ed.)**

David A. Madsen

Genium Group <http://www.dz.genium.com/>

or Thomson Learning Delmar Publishers <http://e-catalog.thomsonlearning.com>

ISBN/ISSN: 0-7668-1634-6

Increased emphasis on visualization, the design process, and modern CAD technology. Approach to drafting is consistent with the National Standards Institute (NSI) and the American Society of Mechanical Engineers (ASME).

Associated Materials:

Engineering Drawing and Design CD-ROM Courseware Complete Set (2002)

Thomson Learning Delmar Publishers <http://e-catalog.thomsonlearning.com>

ISBN/ISSN: 0-7668-3917-6

Engineering Drawing & Design Video Set #1 CD

Thomson Learning Delmar Publishers <http://e-catalog.thomsonlearning.com>

ISBN/ISSN 0-7668-3914-1

Engineering Drawing & Design Video Set #2 CD

Thomson Learning Delmar Publishers <http://e-catalog.thomsonlearning.com>

ISBN/ISSN: 0-7668-3915-X

Engineering Drawing & Design Videos Set #1

Thomson Learning Delmar Publishers <http://e-catalog.thomsonlearning.com>

ISBN/ISSN: 0-7668-3903-6

Engineering Drawing & Design Videos Set #2

Thomson Learning Delmar Publishers <http://e-catalog.thomsonlearning.com>

ISBN/ISSN: 0-7668-3908-7

### **Engineering Graphics Text and Workbook**

Jerry W. Craig and Orval B. Craig

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbn0823+1070608417>

Reference college text focuses on strengthening 3D visualization skills through sketching exercises. It does not make reference to any particular computer-aided design software package.

Series 1 and 2 differ in the sketching exercises.

Series 1: 1-8875-0300-5

Series 2 : 1-8875-0388-9

### **Exploring Drafting (2003)**

John R. Walker and Bernard D. Mathis

Goodheart-Willcox Publisher <http://www.goodheartwillcox.com/products/>

Textbook ISBN/ISSN: 1-5907-0178-X

Worksheets ISBN/ISSN: 1-5907-0180-1

Solution Manual ISBN/ISSN: 1-5907-0181-X

Teacher's Resource Binder ISBN/ISSN: 1-5907-0182-8

For use in introductory courses at any instructional level in which drafting fundamentals and basic drafting techniques are stressed.

### **Fundamentals of Graphics Communication (2002)**

Bertoline, Gary Robert & Wiebe, Eric N

McGraw Hill Engineering <http://mcgrawhillengineeringcs.com/mhhe/catalog>

ISBN/ISSN: 0-0725-0260-6

Covers drawing techniques from a modern, CAD-oriented perspective, as well as a traditional perspective.

### **Fundamentals of Modern Drafting (2003)**

Paul Ross Wallach

Published by Delmar Publishers

ISBN/ISSN: 1-4018-0946-4

Exposes readers to the world of contemporary drafting, offering a direct route to understanding and applying basic technical and engineering drawing concepts such as sketching and lettering guidelines, drafting conventions and formats, multiview, development, and pictorial drawing procedures, geometric tolerancing practices, etc.

### **Introduction to Graphics Communications for Engineers (B.E.S.T. Series) (2<sup>nd</sup> Ed.) (2002)**

Bertoline, Gary Robert

McGraw Hill Engineering <http://mcgrawhillengineeringcs.com/mhhe/catalog>

ISBN/ISSN: 0-0724-3634-4

A short introductory technical drawing text intended for use in technical drawing or drafting courses at two and four year schools or other technology programs.

### **Mechanical Drawing: Board and CAD Techniques (13<sup>th</sup> Ed.) (2003)**

Glencoe

<http://www.glencoe.com/sec/catalog/linktradedrafting.html>

Student Edition ISBN/ISSN: 0-0782-5100-1

Instructor Resource Guide ISBN/ISSN: 0-0782-5103-6

Student Workbook ISBN/ISSN: 0-0782-5101-X

Student Workbook Annotated Instructor Edition (NEW) ISBN/ISSN: 0-07-825102-8

Instructor Productivity CD-ROM (NEW) ISBN/ISSN: 0-0782-5104-4

A comprehensive beginning drafting book. This text has been completely revised to include solid drafting instruction, board drafting techniques, and CAD techniques to meet the new needs of schools.

### **Modern Construction Handbook (2001)**

Andrew Watts

Princeton Architectural Press <http://www.papress.com/>

ISBN/ISSN: 3-2118-3491-5

Examines the range of construction options available in a concise, illustrated format. Using examples by well-known designers, each of the book's six chapters focus on a particular aspect of construction, from materials to structure, to walls, roofs, environmental design and internal fittings.

### **Modern Drafting Practices and Standards Manual**

Genium Group <http://www.dz.genium.com/>

Over a century of drafting standards.

### **Technical Drawing (12th Ed.) (2002)**

Frederick E. Giesecke, Alva Mitchell, Henry C. Spencer, Ivan Leroy Hill, John T. Dygdon, James E. Novak, Ivan L. Hill

Prentice-Hall School <http://www.phschool.com/catalog/>

ISBN/ISSN: 0-1300-8183-3

All aspects of technical drawing are described and pictured, from oblique projection and tolerancing, to how to sharpen a pencil. Much attention is given to CAD, and all drawings are ANSI standard.

### **Technical Graphics Communication, 3rd edition (2003)**

Bertoline, Gary Robert & Wiebe, Eric N

McGraw Hill Engineering <http://mcgrawhillengineeringcs.com/mhhe/catalog>

ISBN/ISSN: 0-0736-5598-8

Reference text presents both traditional and modern approaches to technical graphics, providing engineering and technology students with a strong foundation in standard drafting practices and techniques.

### **Universal Design Handbook (2001)**

Preiser, Wolfgang and Ostroff, Elaine

ISBN/ISSN: 0-0713-7605-4

One-stop reference to both American and international universal design standards. CD-ROM includes new American with Disabilities Act code requirements, illustrated standards, checklists, and technical fact sheets, ready for downloading.

### **Visualization, Sketching and Freehand Drawing for Engineering Design**

Robert A. Raudebaugh and Jeffrey Newcomer

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

Reference college text to help students extend perceptual skills, which will result in improved visualization and design skills.

1-5850-3003-1

## ARCHITECTURAL DRAFTING

### **Architectural Design Portable Handbook (2001)**

Pressman, Andy

McGraw Hill Engineering <http://mcgrawhillengineeringcs.com/mhhe/catalog>

ISBN/ISSN: 0-0713-5214-7

Guides you through projects every step of the way, summarizing, synthesizing, and systematizing the core tasks of design.

### **Architectural Desktop 3.0 (2002)**

Madsen

Prentice-Hall School <http://www.phschool.com/catalog/>

For courses in Architectural Drafting and Design. This comprehensive, east-to-use and understand text aids students through all phases of construction document creation.

Student Edition ISBN/ISSN: 0-1309-3498-4

Instructor's Resource Manual ISBN/ISSN: 0130980994

### **Architectural Drafting and Design (4<sup>th</sup> Ed.) (2001)**

Alan Jefferis and David Madsen

Published by Delmar Publishers

ISBN/ISSN: 0-7668-1546-3

Details step-by-step methods for the design and layout of each type of drawing required for a complete set of architectural plans. Compatible with AutoCAD 2001.

### **Architectural Drawing: A Visual Compendium of Types and Methods (2<sup>nd</sup> Ed) (2002)**

Rendow Yee

John Wiley <http://www.wiley.com/>

ISBN/ISSN: 0-4710-5540-9

Reference with wide range of hand-rendered and computer-generated drawing styles and techniques.

### **Architectural Graphic Standards, (10<sup>th</sup> Ed. and 3.0 CD Set) (2000)**

Charles George Ramsey, Harold Reeve Sleeper, John Ray Hoke, Jr.

John Wiley <http://www.wiley.com/>

ISBN/ISSN: 0-4713-9186-7

Standard reference book for architects, designers and engineers.

Architecture: Drafting and Design (1998)

Hepler, Wallach, and Hepler

Glencoe

<http://www.glencoe.com/sec/catalog/linktradedrafting.html>

Student Text ISBN/ISSN: 0-0263-7067-0

Student Workbook ISBN/ISSN: 0-0263-7069-7

Teacher's Resource Binder ISBN/ISSN: 0-0263-7068-9

Designed to help students learn and communicate basic principles of architectural design and construction systems.

**Architecture: Residential Drafting and Design 2004 Edition (2004)**

Clois E. Kicklighter

Goodheart-Willcox Publisher <http://www.goodheartwillcox.com/products/>

Textbook ISBN/ISSN: 1-5907-0195-X

Workbook ISBN/ISSN: 1-5907-0196-8

Instructor's Manual ISBN/ISSN: 1-5907-0197-6

Instructor's Resource Binder ISBN/ISSN: 1-5907-0198-4

Instructor's Resource CD ISBN/ISSN: 1-5907-0199-2

Instruction for preparing architectural working drawings using traditional and computer based methods.

**Blueprint Reading and Drafting for Plumbers (2004)**

Michael A. Joyce

Published by Delmar Publishers

ISBN/ISSN: 1-4018-4354-9

**Blueprints and Plans for HVAC (2<sup>nd</sup> Ed.) (2004)**

Joseph Moravek, Frank Miller and Wilma Miller

Published by Delmar Publishers

ISBN/ISSN: 1-4018-1817-X

Air conditioning drawings and hands-on exercises are the main focus of this book, designed to help readers master the basics of blueprint reading and apply their new skills to work in the HVAC trade.

**Commercial Drafting And Detailing (2<sup>nd</sup> Ed.) (2002)**

Alan Jefferis

Thomson Learning Delmar Publishers <http://e-catalog.thomsonlearning.com>

ISBN/ISSN: 0-7668-3886-2

Step-by-step examples for producing each of the architectural and structural drawings required in a complete set of commercial plans - from site, floor, stairs, and roof plans, to framing and foundation plan.

**Construction Drawings and Details for Interiors: Basic Skills (2003)**

W. Otie Kilmer, Rosemary Kilmer

John Wiley <http://www.wiley.com/>

ISBN/ISSN: 0-4711-0953-3

Basic reference book.

**Metric Handbook: Planning and Design Data (3<sup>rd</sup> Ed.) (2005)**

David Adler

Architectural Press <http://books.elsevier.com/architecturalpress/>

ISBN/ISSN: 0-7506-5281-0

Primary reference for architecture.

**Residential Architecture: Design and Drafting (1999)**

Ernest R. Weidhaas and Mark D. Weidhaas

Published by Delmar Publishers

ISBN/ISSN: 0-8273-7848-3

Overview for beginning and intermediate students, with equal emphasis on design and drafting.

**Source Book of American Architecture:**

500 Notable Buildings from the 10th Century to the Present (2000)

G.E. Kidder Smith

Princeton Architectural Press <http://www.papress.com/>

ISBN/ISSN: 1-5689-8254-2

Illustrated survey of 500 of America's most distinguished buildings provides a unique overview of the thousand-year architectural development of the United States.

## MECHANICAL DRAFTING

### **Basic Blueprint Reading and Sketching (7<sup>th</sup> Ed.)**

C. Thomas Olivo and Thomas P. Olivo

Contractor Books <http://contractor-books.com/>

DE-0766808416

Develops marketable skills and a solid foundation for reading and interpreting industrial drawings (blueprints) and preparing technical sketches. Includes a completely revised introduction to CAD, CAM, NC, and CNC drawings. Updated to ANSI, AWS, and other standards.

### **Design Dimensioning and Tolerancing (2001)**

Bruce A. Wilson

Goodheart-Willcox Publisher <http://www.goodheartwillcox.com/products/>

Textbook ISBN/ISSN: 1-5663-7730-7

Study Guide ISBN/ISSN: 1-566-7731-5

Solution Manual ISBN/ISSN: 1-5663-7732-3

Reference only. Written for postsecondary and industrial programs that require a study of dimensioning and tolerancing as related to design.

### **Elementary Blueprint Reading for Machinists (5<sup>th</sup> Ed.)**

David L. Taylor

Contractor Books <http://contractor-books.com/>

DE-140186256X

Updated to the latest ANSI standards. For beginning machine trades students and apprentices.

### **Engineering Graphics Principles with Geometric Dimensioning and Tolerancing with CD-ROM**

E. Max Raisor

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

Reference college level text. The 190-page workbook contains an overview of topics covered and problem sets for each area. The CD contains hundreds and hundreds of PowerPoint slides, including written descriptions, graphic presentations, and animations for all topics.

1-5850-3045-7

### **Geometric Dimensioning and Tolerancing (2003)**

David A. Madsen

Genium Group <http://www.dz.genium.com/>

or Goodheart-Willcox Publisher <http://www.goodheartwillcox.com/products/>

Textbook ISBN/ISSN: 1-5663-7977-6

Instructor's Guide ISBN/ISSN: 1-5663-7978-4

Coverage of the fundamentals of GD&T concepts, covers how to read and interpret prints with Geometric Dimensioning and Tolerancing symbols, and teaches how to draw using GD&T symbology. The 2003 edition is based on the ASME Y14.5M-1994 standard.

**Mechanical Design Modeling Using Pro/Engineer (2002)**

Condoor, Sridhar

McGraw Hill Engineering <http://mcgrawhillengineeringcs.com/mhhe/catalog>

ISBN/ISSN: 0-0724-4314-6

Workbook/text introduces an innovative way of teaching CAD and PRO/E methods by using actual mechanical design projects. Beginners can manage this text.

**Mechanical Desktop 6: Visual FAST START (2002)**

Stinchcomb

Prentice-Hall School <http://www.phschool.com/catalog/>

Designed For all CAD (computer aided design), Design, and Mechanical Drawing courses.

Student Edition ISBN/ISSN: 0-1309-6902-8

**Mechanical Desktop Instructor (2002)**

Tickoo, Sham

ISBN/ISSN: 0-0724-9941-9

A tutorial-based book designed for users who are familiar with AutoCAD and want to learn 3-D design.

**ProENGINEER 2001 Instructor with CD ROM (2002)**

Kelley, David S

McGraw Hill Engineering <http://mcgrawhillengineeringcs.com/mhhe/catalog>

ISBN/ISSN: 0-0725-1007-2

The textbook is designed to serve as a text, tutorial, and reference for all of the features in Pro/E.

## **ELECTRICAL/ELECTRONICS DRAFTING**

### **Electronics Drafting (2002)**

John Frostad

Goodheart-Willcox Publisher <http://www.goodheartwillcox.com/products/>

Textbook ISBN/ISSN: 1-5663-7858-3

Instructor's Guide/Answer Key ISBN/ISSN: 1-5663-7859-1

Electronics Drafting is written in concise, easy-to-read language and provides basic instruction for creating electronics drawings.

### **Fundamentals of Electric Circuits with CD-ROM (2<sup>nd</sup> Ed.) (2004)**

Alexander, Charles & Sadiku, Matthew

McGraw Hill Engineering <http://mcgrawhillengineeringcs.com/mhhe/catalog>

ISBN/ISSN: 0-0724-9350-X

Reference only for introductory circuit analysis or circuit theory.

### **CMOS IC Layout : Concepts, Methodologies, and Tools wCD ROM (1999)**

Dan Clein

Newnes (available through [amazon.com](http://amazon.com))

ISBN/ISSN: 0-7506-7194-7

Basic methodologies, review of basic electrical rules and how they apply, design rules, IC planning, detailed checklists for design review, specific layout design flows, specialized block design, interconnect design, and also additional information on design limitations due to production requirements.

### **IC Layout Basics : A Practical Guide (2001)**

Christopher Saint and Judy Saint

McGraw-Hill Professional <http://books.mcgraw-hill.com/>

ISBN/ISSN: 0071386254

Teaches the basics of IC (Integrated Circuit) layout in jargon-free, plain-English, understandable to those without an EE degree. Ideal for corporate training and two-year programs. Co-authored by one of IBM's top instructors.

### **IC Mask Design: Essential Layout Techniques**

Christopher Saint and Judy Saint

McGraw-Hill Professional <http://books.mcgraw-hill.com/>

ISBN/ISSN: 0-0713-8996-2

Teaches integrated circuit (IC) processes, mask design techniques, and fundamental device concepts in everyday language. It develops ideas from the ground up, building complex concepts out of simple ones.

### **Schaum's Outline of Electric Circuits (2003)**

Nahvi, Mahmood & Edminister, Joseph A.

McGraw Hill Engineering <http://mcgrawhillengineeringcs.com/mhhe/catalog>

ISBN/ISSN: 0-0713-9307-2

Foundation in the theory and operation of electric circuits.

## CIVIL DRAFTING

### **Basic Geological Mapping, (4<sup>th</sup> Ed.) (2004)**

John W. Barnes

John Wiley <http://www.wiley.com/>

ISBN/ISSN: 0-4708-4986-X

Reference only. Covers wide variety of topics.

### **Civil Drafting Technology (5<sup>th</sup> Ed.) (2003)**

David P. Madsen and Terence M. Shumaker

Prentice-Hall School <http://www.phschool.com/catalog/>

ISBN/ISSN: 0-1304-9879-3

Provides a broad understanding of civil drafting and a working knowledge of the basic components of mapping.

### **Structural, Civil and Pipe Drafting for CAD Technicians (2004)**

David L. Goetsch

Thomson Learning/Delmar Publishers <http://e-catalog.thomsonlearning.com>

ISBN/ISSN: 1-4018-9656-1

Introduction to structural drafting with related coverage of civil and piping drafting with complementary software.

### **Structural Steel Drafting (1998)**

David C. MacLaughlin

Thomson Learning Delmar Publishers <http://e-catalog.thomsonlearning.com>

ISBN/ISSN: 0-8273-7313-9

Lays a groundwork for beginning and intermediate students to pursue careers in architecture, construction, or civil engineering.

### **Surveying (7<sup>th</sup> Ed.) (1998)**

Anderson, James M. & Mikhail, Edward M

McGraw Hill Engineering <http://mcgrawhillengineeringcs.com/mhhe/catalog>

ISBN/ISSN: 0-0701-5914-9

Reference only.

## CAD/CAM/CAE SOFTWARE TEXTS, TUTORIALS AND WORKBOOKS

### **Autodesk: AutoCAD**

#### **AutoCAD 2004 SPV (2004)**

Autodesk Press (<http://www.autodeskpress.com>) available through Thomson Learning/Delmar Publishers <http://e-catalog.thomsonlearning.com>  
Academic Career License (Perpetual) ISBN/ISSN: 1-4018-6066-4  
One Year License ISBN/ISSN: 1-4018-6067-2

#### **AutoCAD LT 2004 SPV (2004)**

Autodesk Press (<http://www.autodeskpress.com>) available through Thomson Learning/Delmar Publishers <http://e-catalog.thomsonlearning.com>  
Academic Career License (Perpetual) ISBN/ISSN: 1-4018-6068-0

#### **AutoCAD 2004: A Problem-Solving Approach (2004)**

Sham Tickoo  
Autodesk Press <http://www.autodeskpress.com> available through Delmar Learning <http://www.delmarlearning.com>  
ISBN/ISSN: 1-4018-5133-9

#### **AutoCAD LT 2004: A Problem-Solving Approach (2004)**

Sham Tickoo  
Autodesk Press <http://www.autodeskpress.com> available through Delmar Learning <http://www.delmarlearning.com>  
ISBN/ISSN: 1-4018-5134-7  
Essential drafting skills necessary for solving real-world drawing problems.

#### **AutoCAD 2004 for Architecture (2004)**

Alan Jefferis  
Autodesk Press <http://www.autodeskpress.com> available through Delmar Learning <http://www.delmarlearning.com>  
ISBN/ISSN: 1-4018-5131-2  
Workbook to explore efficiencies and skills needed to apply AutoCAD in the architectural environment.

#### **AutoCAD LT 2004 Fundamentals: Drafting and Applications (2004)**

Ted Saufley and Paul B. Schreiner  
Goodheart-Willcox Publisher <http://www.goodheartwillcox.com/products/>  
Textbook ISBN/ISSN: 1-5907-0318-9  
Instructor's CD ISBN/ISSN: 1-5907-0319-7  
Easy-to-understand instruction for mastering AutoCAD LT drawing and dimensioning techniques.

**AutoCAD and its Applications: Basics-AutoCAD (2004)**

David A. Madsen and Terence M. Shumaker

Goodheart-Willcox Publisher <http://www.goodheartwillcox.com/products/>

Textbook ISBN/ISSN: 1-5907-0289-1

Instructor's CD ISBN/ISSN: 1-5907-0290-5

Instruction for mastering AutoCAD commands, tools, and drawing and dimensioning techniques.

**AutoCAD 2004 Tutorial - First Level: 2D Fundamentals with CD-ROM**

Randy Shih and Jack Zecher

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

1-5850-3126-7

**AutoCAD 2004 Tutorial - Second Level: 3D Modeling**

Randy Shih

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

1-5850-3127-5

**AutoCAD LT 2004: MultiMedia Tutorial**

Randy Shih and Jack Zecher

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

1-5850-3143-7

**Introducing AutoCAD 2004 (2004)**

Thomas Stellman; G.V. Krishnan

Autodesk Press <http://www.autodeskpress.com> available through Delmar Learning <http://www.delmarlearning.com>

ISBN/ISSN: 1-4018-5059-6

Book w/CD ROM (multimedia/audio)

**MP AutoCAD 2004 Instructor w/bind in sub card (2004)**

Leach, James A

McGraw Hill Engineering <http://mcgrawhillengineeringcs.com/mhhe/catalog>

ISBN/ISSN: 0-0729-5640-2

Intended for instructor-lead instruction and self-instruction in AutoCAD software.

**Project-Based AutoCAD (2004)**

Glencoe <http://www.glencoe.com/sec/catalog/linktradedrafting.html>

Student Edition ISBN/ISSN: 0-0782-8732-4

Instructor Manual ISBN/ISSN: 0-0782-8733-2

Designed for students who want a more sophisticated, industry-based experience with design/drafting projects. It assumes knowledge of basic drafting principles and a limited knowledge of AutoCAD.

**The Illustrated AutoCAD 2004 Quick Reference (2004)**

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**Career Preparation**

Instructional Resources

Drafting and Design Technology 2006

Ralph Grabowski

Autodesk Press <http://www.autodeskpress.com> available through Delmar Learning <http://www.delmarlearning.com>

ISBN/ISSN: 1-4018-5014-6

### **Using AutoCAD 2004: Basics (2004)**

Ralph Grabowski

Autodesk Press <http://www.autodeskpress.com> available through Delmar Learning <http://www.delmarlearning.com>

ISBN/ISSN: 1-4018-5060-X

### **Autodesk: AutoCAD 2002 (also earlier versions)**

#### **Discovering AutoCAD 2002**

Dix

Prentice-Hall School <http://www.phschool.com/catalog/>

Student Edition ISBN/ISSN: 0-1308-4264-8

Instructor's CD ISBN/ISSN: 0-1308-6475-7

High school level introduction to AutoCAD 2002. Activity based.

#### **Applying AutoCAD 2002 Fundamentals (2003)**

Applying AutoCAD 2002 Advanced (2003)

<http://www.glencoe.com/sec/catalog/linktrade.html>

Student Edition (Fundamentals) ISBN/ISSN: 0-07-828540-2

Student Edition (Advanced) ISBN/ISSN: 0-07-828542-9

Instructor Resource Guide ISBN/ISSN: 0-07-828541-0

Applying AutoCAD® Fundamentals Instructor Productivity CD-ROM ISBN/ISSN: 07-829881-4 Materials

#### **AutoCAD 2002: A Building Approach Book 1,2 and 3: Learning the Basics (2003)**

Metz

Prentice-Hall School <http://www.phschool.com/catalog/>

Step-by-step approach. One simple method for operating AutoCAD.

Book 1, Book 2, Book 3 Packaged Together ISBN/ISSN: 0-1311-2263-0

Student Edition, Book 1 ISBN/ISSN: 0-1304-8058-4

Student Edition, Book 2 ISBN/ISSN: 0-1304-8050-9

Student Edition, Book 3 ISBN/ISSN: 0-1304-8061-4

Instructor's Manual ISBN/ISSN: 0-1304-8062-2

#### **Engineering Graphics with AutoCAD 2002**

Bethune

Prentice-Hall School <http://www.phschool.com/catalog/>

Easy-to-follow, step-by-step system of teaching with many exercise problems included throughout the text.

Student Edition ISBN/ISSN: 0-1306-1026-7

Instructor's Manual ISBN/ISSN: 0-1309-8405-1

**Instant AutoCAD Architectural Residential Drawing for AutoCAD 2000 and 2000i and AutoCAD LT 2000 and 2000i (2002)**

Ethier

Prentice-Hall School <http://www.phschool.com/catalog/>

Hands-on labs throughout each chapter.

Student Edition ISBN/ISSN: 0-1301-6231-0

Instructor's Manual ISBN/ISSN: 0-1301-6232-9

## **AUTODESK: other**

### **Autodesk Architectural Desktop 3.3 from the Autodesk Student Portfolio (2002)**

Autodesk Press <http://www.autodeskpress.com> available through Delmar Learning <http://www.delmarlearning.com>

Web Box 1 Year

ISBN/ISSN: 0-7668-5276-8

Web Box 2 Year

ISBN/ISSN: 0-7668-5270-9

Autodesk Architectural Desktop 3.3 gives you the ability to increase your design productivity by ensuring that your documents are well coordinated through its use of standardization tools and construction documentation routines.

### **Autodesk Architectural Desktop 2004 Fundamentals**

Elise Moss

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

1-5850-3135-6

### **Autodesk Land Development Suite 3 from the Autodesk Student Portfolio (2002)**

Autodesk Press <http://www.autodeskpress.com> available through Delmar Learning <http://www.delmarlearning.com>

Web Box 1 Year

ISBN/ISSN: 0-7668-5280-6

Web Box 2 Year

1st Edition

ISBN/ISSN: 0-7668-5274-1

Autodesk Land Development Suites, built on the AutoCAD 2002 and Autodesk Map foundation, delivers specialized land planning features such as COGO and map creation, terrain modeling, alignments, and parcels.

### **Designing Mechanical Systems Using Autodesk Building Systems (2003)**

Mary Ellen Pennisi-Vazzana and David Driver

Autodesk Press <http://www.autodeskpress.com> available through Delmar Learning <http://www.delmarlearning.com>

ISBN/ISSN: 1-4018-3413-2

Design a complete mechanical system for a residential, commercial, or industrial building by learning how to integrate Autodesk® Building Systems functionality with Autodesk Architectural Desktop.

### **Mechanical Drafting for Beginners: AutoCAD 2004**

Elise Moss

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-5850-3144-5

### **Residential Design Using AutoCAD 2004**

Daniel John Stine

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-5850-3149-6

### **3D Studio VIZ Tutorial: Materials and Rendering**

Release 3 and 3i

Jay Zirbel and Todd Duff

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-5850-0370-8

### **Autodesk VIZ 4 for Beginners**

Elise Moss

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-5850-3101-1

### **Introduction to Autodesk Revit 5**

Daniel John Stine

ISBN/ISSN: Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

1-5850-3123-2

### **Autodesk Revit 5 Basics: Architectural Modeling and Documentation**

Elise Moss, Scott Brown & Chris Fox

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-5850-3111-9

### **CATIA V5 Workbook**

Richard Cozzens

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

Releases 10 & 11: ISBN: 1-5850-3095-3

### **Pro/ENGINEER Tutorial and MultiMedia CD**

A Click-by-Click Primer

Roger Toogood and Jack Zecher

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

Release WILDFIRE with MultiMedia CD ISBN: 1-5850-3113-5

Release 2001 with MultiMedia CD ISBN: 1-5850-3029-5

### **Design Modeling with Pro/ENGINEER**

James Bolluyt

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

Release 2001 ISBN: 1-5850-3032-5

### **Mechanical Engineering Design with Pro/ENGINEER Release 2001**

Mark Archibald

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-58503-033-3

### **MicroStation V8: An Introduction to Computer-Aided Design**

Andrew Anderson

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-5850-3080-5

### **Engineering and Technical Drawing using Solid Edge**

Jerry Craig

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

Version 14 ISBN: 1-58503-145-3

### **Engineering Design with SolidWorks 2003**

Marie P. Planchard & David C. Planchard

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-5850-3128-3

### **Drawing and Detailing with SolidWorks 2003**

Marie P. Planchard & David C. Planchard

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-5850-3129-1

### **Engineering & Computer Graphics Workbook Using SolidWorks 2003**

Ronald E. Barr, Thomas J. Krueger, Theodore A. Aanstoos & Davor Juricic

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-5850-3130-5

### **SolidWorks Tutorial 2003**

Marie P. Planchard & David C. Planchard

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-5850-3131-3

## **Assembly Modeling with SolidWorks 2003**

Marie P. Planchard & David C. Planchard

Schroff Development Corporation <http://www.schroff.com/cgi-bin/SoftCart.exe/sdcpublications/index.htm?L+scstore+vbng0823+1070608417>

ISBN/ISSN: 1-5850-3134-8

## CAREER DEVELOPMENT

### **Arizona Career Resource Network (AzCRN).**

Arizona's career resource network for career exploration, college information, employability skills, job opportunities, Arizona labor market information, post secondary options, career advice. [www.ade.az.gov/cte/azcrn](http://www.ade.az.gov/cte/azcrn)

### **Careers in Architecture (2001)**

Blythe Camenson

McGraw-Hill/Contemporary Books <http://www.mhcontemporary.com/>

ISBN/ISSN: 0-6580-0460-3

### **Career Information System**

Provides information on careers, occupations, job search, self-employment, financial aid, programs of study, IDEAS Assessment, assessment link, O\*NET Interest Profiler, etc. <http://www.ade.az.gov/cte/azcrn/azcis>

### **Great Jobs for Engineering Majors (2<sup>nd</sup> Ed.) (2002)**

Geraldine Garner

McGraw-Hill/Contemporary Books <http://www.mhcontemporary.com/>

ISBN/ISSN: 0-0713-8732-3

### **Careers in Engineering (2<sup>nd</sup> Ed.)(2002)**

Geraldine Garner

McGraw-Hill/Contemporary Books <http://www.mhcontemporary.com/>

ISBN/ISSN: 0-0713-9041-3

### **Is There an Engineer Inside You?**

A Comprehensive Guide to Career Decisions in Engineering (2<sup>nd</sup> Ed.) (2001)

Celeste Baine

Bonamy Publishing <http://www.engineeringedu.com/store/>

ISBN/ISSN: 0-9711-6139-9

### **Human Relations at Work.**

Eggland, Steven A. and Williams, John W. Cincinnati, OH:

Southwestern Publishing Company, 1993.

ISBN 0-538-61092-1.

### **Strategies: Getting and Keeping the Job You Want.**

Ferrett, Sharon K.

New York, NY: Glencoe McGraw-Hill.

ISBN 0256-14229-7.

### **You're Hired!**

Clark, Marilyn; Mchalley, John; St. John, Michael; and Weihmann, Jan Hart.

**Lakeshore Basics and Beyond Catalog**

A variety of academic information related to the world of work and job ready skill information.  
[www.lakeshorelearning.org](http://www.lakeshorelearning.org)

**Real Games Series**

A complete job readiness program. Select the level appropriate for your students. 1-888-700-8940. [www.realgame.com](http://www.realgame.com) or [www.ade.az.gov/cte/azcrn/realgamebrochure](http://www.ade.az.gov/cte/azcrn/realgamebrochure)

## ARIZONA RESOURCES

### **ADDA CERTIFICATION PREPARATION**

Arizona is fortunate to have local connections to the ADDA. Alex Devereux and Scott Thomas can help teachers prepare for the Drafter Certification exam and prepare for ADDA Certification of their school's drafting curriculum. They also are available to give presentations in districts and schools. For further information, contact:

#### **Vice President of Curriculum Certification**

Alexander Devereux, CD, MASCE

Instructor

ITT Technical Institute

5005 South Wendler

Tempe, AZ 85282

Phone: 602-437-7554

Fax: 602-437-7505

Email: adevx@aol.com

#### **Vice President of Conference**

W. Scott Thomas, CD

Instructor

Deer Valley Unified School District

Phoenix College

5727 West Happy Valley Road

Glendale, AZ, 85310

Phone: 623 845-4068

Fax: 623 845-4059

Email: sthomas@vt.dvusd.org

## **GUEST SPEAKERS/FIELD TRIP OPPORTUNITIES**

### **Boeing Company**

<http://www.boeing.com>

The Boeing Mesa Station supports the Integrated Defense Systems group and its 4,700 employees. The complex includes 2 million square feet of floor space for light manufacturing and R&D. Boeing Engineers and Design Experts are available to visit your classes to discuss drafting/design-related careers in the aerospace industry as well as describe examples of what is being accomplished in their industry today. They also can provide real world examples for student project ideas. Phoenix-area schools may wish to arrange a field trip to visit the Boeing site in East Mesa to experience first hand the role of drafting and design professionals in this industry. For further information, contact:

Joseph Tidwell  
Coordinator, Engineering, Education and Training  
Coordinator of University Relations for the Southwest Region  
Boeing Company  
5000 East McDowell Road  
Mesa, AZ 85215  
(480) 891-3825  
[joseph.p.tidwell@boeing.com](mailto:joseph.p.tidwell@boeing.com)

### **General Dynamics Decision Systems (GDDS)**

<http://www.gdds.com/>

General Dynamics Decision Systems is a leader in developing and integrating technologies, products and systems for government, defense and industrial customers worldwide. Their products and services include: Information assurance and security enabled systems, situational awareness tools, advanced integrated communications systems and products, and decision systems. Teachers are welcome to contact GDDS to arrange for field trips to their headquarters in Scottsdale or to have a GDDS engineer or designer visit their classroom to discuss drafting careers in high tech manufacturing/R&D. GDDS also donates equipment and can provide design problems. To contact GDDS, call:

Larry Gauthier  
Engineering Associate  
General Dynamics Decision Systems  
8201 E. McDowell Rd.  
Scottsdale, AZ 85257  
(480) 441-6691  
larry.gauthier@gdds.com  
**Nicklaus Engineering, Inc.**  
<http://www.neiaw.com/>

NEI is a multi-disciplinary A&E firm offering professional design services in civil engineering, water system design, wastewater system design, road and bridge design, surveying and construction staking services. They also support an architectural division, Architecture West, a geotechnical division, NEI Geotechnical, and the NEI Environmental division, which offers environmental engineering and biological services. NEI engineers are available to schools in Yuma and surrounding communities for field trips, guest speakers and job shadowing experiences. Your NEI contact is:

Roberta Orman  
Engineer  
Nicklaus Engineering, Inc.  
PO Box 6029  
Yuma, AZ 85366  
(928) 344-8374  
rorman@neiaw.com

**Stichler Group, Inc.**  
<http://www.stichler.com/default.htm>

The Stichler Group, Inc. is a comprehensive architectural, engineering, and interior design firm comprised of architects, planners, engineers, interior designers, construction managers, and other professionals. The firm is widely recognized for employing innovative strategies and sensitive design solutions for the renovation of new construction or commercial, industrial, healthcare, educational, and other complex facilities across the United States and internationally. Scott Beck, Principal, and the Phoenix staff have offered to help Arizona drafting/design teachers as guest speakers as well as providing sample problems for student projects. Field trip opportunities also can be arranged to visit their offices in downtown Phoenix. In the Phoenix office, contact:

Scott Beck  
Principal  
Architect, Educational Marketing Sector  
Stichler Group, Inc.  
2800 North 44<sup>th</sup> Street  
Phoenix, AZ 85008  
(602) 956-8844  
sbeck@stichler.com

## ARIZONA ORGANIZATIONS

### **American Institute of Architects-Arizona Chapter**

<http://www.aia-arizona.org/>

Offers an annual conference, as well as information on architecture and architecture schools.

### **American Society of Mechanical Engineers**

Arizona Section

<http://www.asme.org/sections/AZ/>

Arizona State University Section

<http://www.eas.asu.edu/~asme/>

### **Arizona Society of Civil Engineers**

[http://www.asce.org/inside/dsp\\_sections.cfm?pageID=11](http://www.asce.org/inside/dsp_sections.cfm?pageID=11)

Southern Arizona Branch

Northern Arizona Branch

Phoenix Branch

Yuma Branch

### **Arizona Catia® Exchange (ACE) COE Regional User Group (COE = CATIA Operators Exchange, Chicago, Illinois [www.coe.org](http://www.coe.org) internal CATIA user organization)**

Contacts:

Larry Gauthier, General Dynamics Decision Systems

[larry.gauthier@gdds.com](mailto:larry.gauthier@gdds.com)

Colleen Kennedy, Krebs Engineers

[ckennedy@krebs.com](mailto:ckennedy@krebs.com)

### **National Association of Women in Construction (NAWIC)**

<http://www.nawic.org/>

Arizona Chapters in Phoenix, East Valley and Tucson

### **The CAD Store**

<http://thecadstore.com>

Products, service, training and user groups.

### **The Reference Library**

[www.thereferencelibrary.com](http://www.thereferencelibrary.com)

Offers product and code information for the construction industry. Free box lunches and breakfast seminars at Tempe, Phoenix and Taliesin locations.

### **National Association of Women in Construction (NAWIC)**

<http://www.nawic.org/>

Arizona Region 8: Chapters in Phoenix, East Valley and Tucson

## WEB RESOURCES

### **TEACHING/LEARNING RESOURCES:**

#### **AEC Café (Architecture, Engineering, & Construction)**

<http://www.aeccafe.com/>

Portal to industry news, resources, jobs, books, etc.

#### **AEC Info (Architecture, Engineering, & Construction)**

<http://www.aecinfo.com/>

Fast and easy access to over 300,000 pages of building material information, including specs and CAD details

#### **AIA e-Architect**

<http://www.e-architect.com/home2.asp>

News, information, jobs, etc.

#### **Amatrol Learning Systems**

<http://www.amatrol.com>

Commercial project-based learning systems with integrated multimedia technology for high school students in CAD/CAM, electronics, surveying, mechanical design.

#### **American Society for Engineering Education (ASEE) Engineering K12 Center**

<http://www.engineeringk12.org/teachers/lessonplans.htm>

Lots of information for teachers, students and parents about education and careers in engineering.

#### **Architecture-Engineering-Construction Information Resource Center**

<http://www.aecdaily.com/>

Access to a variety of free online tutorials. Also source for downloadable CAD details by company or product.

#### **CAD-Portal.com**

<http://www.cad-portal.com/>

CAD information in all drafting areas.

#### **CAD Software**

<http://www.cadsoftware.us/index.htm>

CAD Software Reviews

#### **Design Community**

<http://www.designcommunity.com/>

Free public forums on drafting, design, architecture, CAD.

## **earth.google.com**

Want to know more about a specific location? Dive right in — Google Earth combines satellite imagery, maps and the power of Google Search to put the world’s geographic information at your fingertips.

## **eFunda**

<http://www.efunda.com/home.cfm>

eFunda stands for engineering fundamentals. It offers a subscription-based online destination for the engineering community, where working professionals can quickly find a variety of information to aid in the solution of complex design problems. Inexpensive, and loads of resources.

## **Epinions**

[http://www.epinions.com/creativity\\_applications-cad\\_cam/\\_redir\\_att\\_\\_~1](http://www.epinions.com/creativity_applications-cad_cam/_redir_att__~1)  
CAD Software Reviews

## **Joel Orr’s History of CADD and PLM**

<http://www.joelorr.com/id55.htm>  
Simple timeline of who and what.

## **Machine Design**

<http://www.machinedesign.com/>  
Information on various topics related to drafting and design.

## **nationalatlas.gov**

**Welcome to the National Atlas of the United States of America®**

The pages in this atlas are here on the Internet whenever you need them. This is a new portrayal of America in maps. We use new technologies, but we honor traditions of accuracy, reliability, and innovation. You’ve found the single best Federal source for national maps and geographic information on the Web. The people and places of the United States are here.

## **MCAD café**

<http://www.mcadcafe.com/>  
Commercial portal to variety of industry news, products, etc.

## **Project Lead the Way**

National Alliance for Pre-Engineering Programs

<http://www.pltw.org/aindex.asp>

A fully-developed curriculum for high schools and middle schools. Extensive professional development for teachers. School counselor professional development conferences

## **Spacestars**

<http://digitalquest.com/spacestars/>

A series of education programs (middle school-adult) that use GIS software and data to understand and solve locally based planning and environmental problems. Regional Contact: Elizabeth (520) 579-7432 [matlackej@comcast.net](mailto:matlackej@comcast.net).

**TenLinks.com**

<http://www.tenlinks.com/news/subscribe.htm>.

“Ultimate” technology directories for CAD, CAE, CE, GIS MCAD and more.

**The Drafting Zone**

<http://www.dz.genium.com/>

Home of the Modern Drafting Practices and Standards Manual as well as subscription to newsletter. Posters on GDT available.

**teraserver-usa.com**

The TerraServer-USA Web site is one of the world’s largest online databases, providing free public access to a vast data store of maps and aerial photographs of the United States.

TerraServer is designed to work with commonly available computer systems and Web browsers over slow speed communications links. The TerraServer name is a play on words, with ‘Terra’ referring to the ‘earth’ or ‘land’ and also to the terabytes of images stored on the site.

**US Geological Survey**

<http://www.usgs.gov/>

## STANDARDS

### **American National Standards Institute (ANSI)**

<http://www.ansi.org/>

ANSI coordinates the efforts of standards developers. This site provides information about those efforts and the standards. Source for ANSI/ASME standards.

### **CAD/GIS Technology Center**

<http://tsc.wes.army.mil/>

A multi-agency vehicle to coordinate facilities, infrastructure, and environmental use of Computer-Aided Design and Drafting and Geographic Information Systems (CADD/GIS) activities within the Department of Defense (DoD) and with other participating governmental (federal, state and local) agencies, and the private sector.

### **Computer Aided Drafting and Design (CADD) Skill Standards**

National Coalition for Advanced Manufacturing (NACFAM)

<http://www.nacfam.org/>

### **Construction Specification Institute**

[http://www.csinet.org/s\\_csi/index.asp](http://www.csinet.org/s_csi/index.asp)

### **4 Specs**

<http://www.4specs.com/>

Search engine to access over 11,500 manufacturer's websites for the construction product specifications, CAD details and CSI-formatted specs you need for your project.

### **National Institute for Certification in the Engineering Technologies (NICET)**

<http://www.nicet.org/about/index.html>

Offers certification exams for wide variety of technician and technologist positions in engineering professions, including architecture, construction, mechanical, civil, etc. Meant for students with 4-year degree.

### **National Skill Standards Board**

<http://www.nssb.org/>

The NSSB provides information about CAD skill standards and certification.

### **National Standards Systems Network**

<http://www.nssn.org/>

Source for national and international standards information.

## JOURNALS AND MAGAZINES

### **Architecture Magazine**

<http://www.architecturemag.com/architecture/index.jsp>

Covers architectural design, projects & products, industry news and trends, building technology, computing, practice issues and professional development.

### **Architectural Review**

<http://www.arplus.com/home.htm>

Variety of topics covered, including book reviews, jobs and competitions.

### **Cadence Magaazine**

<http://www.cadalyst.com/>

Popular online magazine for CAD-related news and other types of information. Now owned by Cadalyst

### **Cadalyst**

<http://www.cadonline.com/>

A popular magazine focusing on AutoCAD

### **Computer Graphics World**

<http://cgw.pennnet.com/home.cfm>

This online graphics magazine contains many useful articles about CAD and solid modeling.

### **Tech Directions**

<http://www.techdirections.com/>

Tech Directions magazine provides information for trade and technology educators. You can subscribe at the site and explore the links to other resources.

## WOMEN IN DRAFTING

(Nontraditional occupations (NTOs) are jobs in which women comprise 25% or less of the workforce (U.S. Department of Labor).

### **ArchVoices**

<http://www.archvoices.org/>

Independent information exchange among interns or interns-to-be in architecture. Excellent section for young women.

### **Association for Women in Architecture**

<http://www.awa-la.org/>

California based organization has variety of resources for everyone.

### **Celebration of Women in Engineering**

National Academy of Engineering (NAE)

<http://www.nae.edu/nae/cwe/cwemain.nsf/>

This project at the NAE brings national attention to the opportunities that engineering represents to all people at any age, but particularly to women and girls. Offers information for parents, teachers and students.

### **Design Your Future**

AutoDesk

<http://usa.autodesk.com/adsk/servlet/index?siteID=123112&id=863472>

“Design Your Future: Math, Science, and Technology for Girls” is an initiative that was launched by Autodesk in 1997 and is managed by Alice Ostrovsky along with the support of 4-6 High School interns and a volunteer task force from throughout the company. Provides “Design Your Future” Website: This site, designed and maintained by female High School interns, provides links to other sites that share the DYF vision and introduces girls to role models and other resources. Also offers “Design Your Future Toolkit” for helping to start a program for girls or any other group underrepresented in the technology professions.

### **EngineerGirl**

National Academy of Engineering (NAE)

<http://www.engineergirl.org/nae/cwe/egmain.nsf/?Opendatabase>

This project at NAE offers lots of information in a kid-friendly format. Sponsors essay contest for students in grades 6-12.

### **International Archive of Women in Architecture**

<http://spec.lib.vt.edu/IAWA/>

A joint program of the College of Architecture and Urban Studies and the University Libraries at Virginia Polytechnic Institute and State University (Virginia Tech). The purpose of the archive is to document the history of women’s involvement in architecture

### **Miss Archy.com**<http://www.missarchy.com/>

Website devoted to supporting and celebrating young women who are studying architecture or working in the profession.

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### **Career Preparation**

Instructional Resources

Drafting and Design Technology 2006

### **National Association of Women in Construction (NAWIC)**

<http://www.nawic.org/>

Arizona Region 8: Chapters in Phoenix, East Valley and Tucson

NAWIC sponsors a nationwide CAD/Design/Drafting Competition for high school drafting and design students. School must be sponsored by a local chapter to enter. Contact Misty Overman, [mistyo@nawic.org](mailto:misty@nawic.org)

For more information about contacting your local chapter.

### **Organization of Women Architects and Design Professionals**

<http://www.owa-usa.org/>

Out of the San Francisco Bay area, this site offers excellent resources.

### **Society of Women Engineers**

<http://www.SocietyOfWomenEngineers.org/>

See K-12 Section and Region B-Sonora Region

### **STEPS Program**

Society of Manufacturing Engineers Education Foundation

<http://www.sme.org/cgi-bin/smeefhtml.pl?/foundation/youth/steps.html&&SME&>

Science Technology and Engineering Preview Summer camp for girls (STEPS) is a model program initiated at the University of Wisconsin - Stout and replicated in Minnesota and Michigan. It is a one-week introduction to the world of technology and engineering! Participants live on-campus during the camp and participate in a variety of workshops that will give them hands-on experience with high-tech equipment and processes.

### **Women in Technology International**

<http://www.witi.com/>

Since 1989, WITI has been the first and only global association dedicated to advancing women

through technology. Offers worldwide networking structure, educational and leadership programs, and outreach to women at all levels, from girls to executives.

### **Work4Women**

<http://www.work4women.org/userguides/forwomeninntos.cfm>

Site offers strategies and tools to help women working in nontraditional occupations remain and advance in their careers. Resources for young women entering drafting/engineering careers.

## ASSOCIATIONS: STUDENT

### **SkillsUSA-VICA**

<http://www.skillsusa.org/>

### **Technology Student Association (TSA)**

<http://www.tsawww.org/>

## ASSOCIATIONS: PROFESSIONAL

### **American Institute of Architects (AIA)**

<http://www.aiaonline.com/>

Variety of resources and CAD information.

### **American Institute of Architects-Arizona Chapter**

<http://www.aia-arizona.org/>

Offers an annual conference, as well as information on architecture and architecture schools.

### **American Institute of Architecture Students (AIAS)**

<http://www.aiasnatl.org/>

### **American Society of Civil Engineers**

<http://www.asce.org/>

See Kids and Careers link for career information.

### **American Society of Mechanical Engineers**

<http://www.asme.org/>

ASME is a resource for career information, products, and drafting-related education and training. Foundation offers pre-college information services and scholarships for high-school seniors to enter college in ME.

### **Association for Computer Aided Design in Architecture (ACADIA)**

<http://www.acadia.org/>

Small organization consisting of 200 educators, professionals, and students dedicated to the promotion of communication and critical thinking regarding the use of computers in architecture, planning and building science.

### **Institute of Electrical and Electronics Engineers (IEEE)**

<http://www.ieee.org/portal/index.jsp>

IEEE is a leading authority in technical areas ranging from computer engineering, biomedical technology and telecommunications, to electric power, aerospace and consumer electronics, among others. Loads of books, research and technical reports. Search under "CAD" for more information.

### **National Council of Architectural Registration Boards (NCARB)**

<http://www.ncarb.org/>

NCARB members are the architectural registration boards of the 50 states, the District of Columbia, and four U.S. territories.

### **Sematech**

<http://www.sematech.org/public/index.htm>

Global consortium of leading semiconductor manufacturers. Find IC layout information.

**Society of Manufacturing Engineers (SME)**

[http://www.sme.org/cgi-bin/eduhtml.pl?/html/stud\\_zone.htm&&SME&](http://www.sme.org/cgi-bin/eduhtml.pl?/html/stud_zone.htm&&SME&)

SME provides information about industry events, as well as other services for members only.

Student memberships are available. SME also provides information, resources, and opportunities for K-12 students to learn about manufacturing and the career opportunities it offers.

## CURRICULUM PRODUCTS

### **Autodesk Design Academy**

#### **A Pre-engineering and Pre-architecture Program Exclusively for Secondary Schools**

Autodesk® Design Academy is a comprehensive pre-engineering, pre-architecture, and cross-discipline program developed specifically for secondary schools by experienced educators and technical experts. The academy's curriculum meets national standards and provides classroom materials that ensure students master the fundamentals of the design process while learning to use the same Autodesk® software that professionals use around the world.

The comprehensive, project-based curriculum includes a ready-to-use course syllabus, student exercises and projects, online learning resources, and cross-curricular projects for physics, science, and chemistry along with the following Autodesk software:

- Autodesk® Architectural Desktop
- Autodesk® AutoCAD® Revit® Series
- Autodesk Inventor® Professional
- Autodesk® Civil 3D®
- Autodesk® VIZ
- Autodesk® DWF™ Composer

For added value, a faculty software license for curriculum and professional development is also included.

Beginning with project-based design processes and ending with the final team presentation, the Autodesk Design Academy engages educators and students in real-world projects. The academy ensures that students develop teamwork skills, while establishing a solid understanding of science, technology, engineering, and mathematics principles that will serve them well in their future professions.

## COMMERCIAL VENDERS OF CAD/CAM/CAE SOFTWARE

### **Adobe**

<http://www.adobe.com>  
Photoshop®

### **Autodesk, Inc.**

<http://www.autodesk.com/siteselect.htm>  
AutoCAD 2004®  
AutoCAD LT 2004®  
Mechanical Desktop®  
Architectural Desktop®  
Land Development Desktop®  
Civil Design®  
Map®  
Electrical®

### **Autodesk Education Site**

<http://usa.autodesk.com/adsk/servlet/index?siteID=123112&id=3268472>  
Products, newsletter, links, etc.

### **Autodesk User Group**

AUGI is a professional organization of Autodesk users. This site provides information about the services provided by AUGI and about how to join.  
<http://www.augi.com/login/default.asp>

### **Baystate Technologies**

<http://www.baystate.com>  
CADKEY®

### **Bentley Systems**

<http://www.bentley.com/products/>  
MicroStation®

### **The CAD Store**

URL: [ <http://www.thecadstore.com/> ] [www.thecadstore.com](http://www.thecadstore.com)  
The CAD Store's Autodesk Training Center won the Instructional Quality & Facilities/Staff award from Autodesk in 2004.  
The CAD Store is a Hewlett Packard Designjet Authorized Dispatch Partner, KIP & Océ Large-Format Authorized Service Provider.  
Alan Cox, Director of Educational Software Sales  
The CAD Store  
4494 W. Peoria Ave, Suite 105  
Glendale, AZ 85302  
Tel: 800.576.6789 ext 123  
Fax: 623.435.9028

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### **Career Preparation**

Instructional Resources  
Drafting and Design Technology 2006

**Corel**

[http:// www.corel.com/](http://www.corel.com/)  
Designer®  
Bryce®

**Dassault Systemes/IBM**

<http://www.catia.ibm.com>  
Catia®  
SolidWorks®

**Discreet**

<http://www.discreet.com/3dsmax/>  
3D Studio Max®  
3D Studio Vis®

**Micrografx**

<http://www.micrografx.com/>  
IGrafx Designer®

**Graphisoft**

<http://www.graphisoft.com/>  
ArchiCAD®

**Parametric Technology Corporation (PTC)**

<http://www.ptc.com>  
Pro/Engineer®

**Softplan**

<http://www.softplan.com/>  
SoftPlan®

**SofTech**

[http://www.softech.com/\\_html/products/cadra/index.htm](http://www.softech.com/_html/products/cadra/index.htm)  
CADRA

**Solidworks**

<http://www.solidworks.com/>  
SolidWorks®

**Tanner Research**

<http://www.tanner.com>  
L-edit Pro®

**Total Training**

<http://www.totaltraining.com/home.asp?mscsid=>  
Provides video training courses for creative software packages.

**Unigraphics Solutions**

<http://www.ugsolutions.com>

Unigraphics®

Solid Edge®