

# Technology

**NEW!**

**Introduction to Technology**

**NEW!**

**Wood Technology and Processes**

**NEW!**

**Hands-On AutoCAD**

**NEW!**

**Hands-On AutoCAD LT**

**NEW!**

**Applying AutoCAD 2005**

**NEW!**

**Machining and CNC Technology**

**NEW!**

**Welding: Principles and Practices**

**NEW!**

**Robot Builder's Bonanza**

# Introduction to Technology



• Pierce, Karwatka • © 2005 • Grades 6-9



**I**ntroduction to Technology helps students understand and work with technology. The seven units of *Introduction to Technology* cover: Nature of Technology — why we study technology and its important concepts; Engineering Design — how technology works including design, problem solving, drafting and modeling; Communication, Biotechnology, Manufacturing, Construction and Transportation. Students will learn about technology and do technology.

## Teacher Support Material

**Teacher Productivity CD-ROM** — includes Lesson Plans in Word, correlations to National Standards, PowerPoint® presentations, and ExamView® Pro Test Generator software.

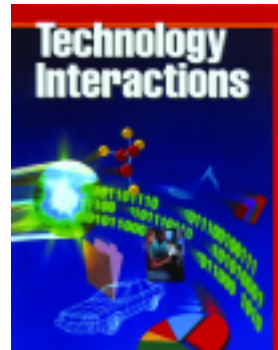


[www.glencoe.com/sec/Tech\\_Ed/index.html](http://www.glencoe.com/sec/Tech_Ed/index.html)

Student Edition	0-07-861219-5	\$63.00
Student Lab Manual	0-07-861408-2	\$14.93
Teacher Annotated Edition	0-07-861407-4	\$96.77
Lab Manual, TAE	0-07-861409-0	\$28.51
Teacher Resource Guide	0-07-861410-4	\$95.20
Teacher Productivity CD-ROM	0-07-861411-2	\$216.53

# Technology Interactions

• Harms, Swernofsky • © 2003 • Grades 7-9



**T**he only text that will support any modular technology education program!

## Table of Contents

<b>Section 1: Introduction to Technology</b>	12 Fluid Power
1 How Technology Works	<b>Section 5: Bio-Related Technologies</b>
2 Design and Problem Solving	13 Health Technologies
<b>Section 2: Communication Technologies</b>	14 Environmental Technologies
3 Computer-Aided Drafting (CAD)	<b>Section 6: Control Technologies</b>
4 Desktop Publishing	15 Electricity and Electronics
5 Computer Animation	16 Computer Control Systems
6 Internet	17 Robotics
7 Audio, Video, and Multimedia	<b>Section 7: Integrated Technologies</b>
<b>Section 3: Technical Design Systems</b>	18 Lasers and Fiber Optics
8 Manufacturing	19 Engineering
9 Structures	20 Applied Physics
<b>Section 4: Power Technologies</b>	21 Weather
10 Flight	22 Recycling
11 Land and Water Transportation	

Student Text	0-07-829726-5	\$64.56
Teacher Resource Guide	0-07-829727-3	\$93.58
Teacher Productivity CD-ROM	0-07-829728-1	\$216.53

# Technology in Action

• Thode, Thode • © 2002 • Grades 7-8

**F**illed with hands-on activities that teach design and problem solving, *Technology in Action* is an interesting and richly illustrated text that explores real-world applications of the latest technology.

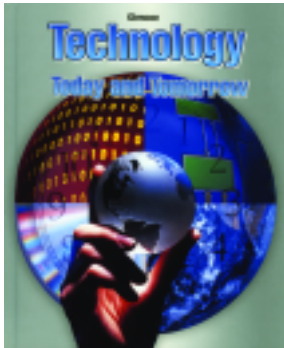
## Table of Contents

1 Getting Started in Technology	12 Building Things
2 Using Technology	13 Using Energy
3 How Technology Affects You	14 Moving Things
4 Introducing Computers	15 Finding & Using Information
5 Using Computers	16 Producing TV & Radio Programs
6 Inventing Things	17 Traveling in Space
7 Making Things	18 Living & Working in Space
8 How Things Work	19 Exploring Chemical & Bio-Related Technology
9 Designing Things	20 Technology & Your Future
10 Exploring Automation	
11 How Business Works	

Student Text	0-07-822489-6	\$55.91
Teacher's Resource Guide (320 pages)	0-07-822490-X	\$123.71
Performance-Based CD-ROM	0-07-822491-8	\$82.49

# Technology Today and Tomorrow

• Brusic, Falls, Kuetemeyer • © 2004 • Grades 8–10



Students acquire technological knowledge and skills! *Technology: Today and Tomorrow* is a technology literacy textbook for high school.

## Table of Contents

### Section I: Introduction to Technology

- 1 Exploring Technology
- 2 Problem Solving
- 3 Technology Systems

### Section II: Communication Technology

- 4 Communication Systems
- 5 Computers
- 6 Telecommunication
- 7 Graphic Communication

### Section III: Manufacturing Technology

- 8 Manufacturing Systems
- 9 Product Development
- 10 Production Planning
- 11 Production
- 12 Marketing
- 13 Computer-Integrated Manufacturing

### Section IV: Construction Technology

- 14 Construction Systems
- 15 Planning Construction
- 16 Managing Construction
- 17 Constructing Homes and Other Buildings
- 18 Other Construction Projects

### Section V: Transportation Technology

- 19 Transportation Systems
- 20 Types and Modes of Transportation
- 21 Intermodal Transportation
- 22 Power in Transportation

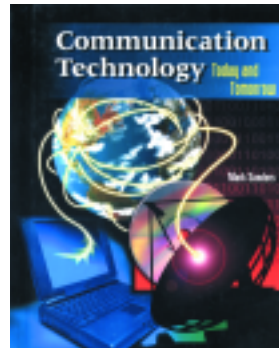
### Section VI: Bio-Related Technology

- 23 Bio-Related Systems
- 24 Applications of Bio-Related Technology

Student Text	0-07-830829-1	\$64.56
Student Workbook	0-07-830831-3	\$14.13
Teacher Annotated Edition	0-07-830830-5	\$88.82
Student Workbook, TAE	0-07-830832-1	\$43.60
Teacher Resource Guide	0-07-830833-X	\$122.95
Teacher Productivity CD-ROM	0-07-830834-8	\$216.53

# Communication Technology

• Sanders • Second Edition



also in  
French

*Communication Technology: Today and Tomorrow* provides a solid foundation in modern communications by means of the system approach. This text covers data communications, technical design, optics, graphic production, and audio and video, as well as hot topics: multimedia, the Internet and World Wide Web, commercial on-line services, and digital entertainment systems.

## Teacher Support Material

**Teacher's Resource Binder** — includes teaching strategies, lesson plans, answer keys, course outlines, section tests, activities, colour transparencies, transparency masters, worksheets, answer keys plus much more.

Student Text	0-02-838759-7	\$70.84
Teacher's Resource Binder	0-02-838761-9	\$229.24
Student Workbook	0-02-838760-0	\$14.93

\* To order French editions, see page 184

# Carpentry & Building Construction

• Feirer, Feirer • Sixth Edition, © 2004



Provides students with quality construction skills! This comprehensive carpentry textbook focuses on residential construction that is also applicable for light commercial construction.

## Features

- ▶ Completely new or rewritten chapters on tools, engineered lumber, engineered panel products, steel framing, mechanicals, decks and porches.
- ▶ Covers the entire construction process from planning, estimating, and scheduling through the finishing touches such as painting and floor coverings.
- ▶ **Safety First** emphasizes safety on the job.
- ▶ **Step-by-Step** presents the clear sequence of techniques needed to complete a given carpentry task.

## Table of Contents

Unit 1: Preparing to Build  
 Unit 2: Tools and Equipment  
 Unit 3: Building Foundations  
 Unit 4: Wood Frame Carpentry  
 Unit 5: Steel Frame Construction  
 Unit 6: Closing in the Structure  
 Unit 7: Finish Carpentry  
 Unit 8: Completing the Structure

Student Text	0-07-822702-X	\$77.98
Carpentry Applications	0-07-822703-8	\$26.75
Carpentry Math	0-07-825353-5	\$10.21
Safety Guidebook	0-07-825352-7	\$26.75
Instructor Resource Guide	0-07-822704-6	\$107.10
Instructor Productivity CD-ROM	0-07-825347-0	\$216.54

# Beginning Woodwork

• Feirer • Seventh Edition • Grades 9–12

An excellent beginning text for basic woodworking presented in an easy-to-understand manner. Step-by-step instructions introduce basic woodworking processes along with over 60 hands-on projects. Chapters on forest products, construction, and careers will teach students about the woodworking industry.

Student Text	0-02-677600-6	\$59.08
Instructor's Resource Guide	0-02-677601-4	\$40.46
Student Workbook	0-02-677602-2	\$14.93

# Wood Technology and Processes

**NEW!**

• Feirer • © 2006 • Grades 9-12

Learn to use today's woodworking techniques and tools!

## Features

- ▶ **All-new section on Advanced Woodworking Techniques.**
- ▶ *Woodworker's Handbook*, a 50-page, full-colour photo gallery, updated to include the latest woodworking tools and materials.
- ▶ **64 pages of projects from Better Homes and Gardens WOOD Magazine** contain full-colour drawings and instructions that teach students how to design and construct with the latest tools and techniques.
- ▶ **Safety First** places an even stronger emphasis on safety with appropriate precautions for woodworking procedures.
- ▶ **Real-World Problems** at the end of each chapter offer design ideas and solutions for everyday situations.

## Highlights of Content

- ▶ Woodworker's Handbook
- ▶ Working with Wood
- ▶ Basic Tools and Operations
- ▶ Joinery and Assembly
- ▶ Using Machines
- ▶ Finishing
- ▶ Construction
- ▶ Advanced Woodworking Techniques
- ▶ WOOD® Woodworking Projects

## Teacher Support Material

### Teacher Resource Guide

- ▶ Contains instructional plans for each chapter of student text, reproducible student handouts, tests, and answer keys.
- ▶ Complete with detailed, step-by-step instructions for the textbook's student projects.

### Teacher Productivity CD-ROM

- ▶ This new CD-ROM includes instructional plans, PowerPoint® presentations, and an ExamView® Pro Test Generator.

Student Text	0-07-865541-2	\$63.75
Student Workbook	0-07-865543-9	\$27.55
Teacher Resource Guide	0-07-865542-0	TBA
Teacher Productivity CD-ROM	0-07-868946-5	TBA

# Hands-On AutoCAD

NEW!

• Looney • © 2005 • Grades 9–12



**H**ands-On AutoCAD is a comprehensive, basic CAD textbook that teaches the AutoCAD software using short, interesting projects that will capture and hold student attention. The chapters are ordered logically for CAD, rather than for traditional board drafting. In addition, each chapter has a separate “Teamwork Project” designed to allow students to pursue chapter topics in a second real-world scenario.



[www.glencoe.com/sec/catalog/linkteched.html](http://www.glencoe.com/sec/catalog/linkteched.html)

Student Text	0-07-861220-9	\$61.44
Instructor Productivity CD-ROM	0-07-861623-9	\$216.53

# Hands-On AutoCAD LT

NEW!

• Looney • © 2005 • Grades 9–12



**H**ands-On AutoCAD LT is a comprehensive, basic CAD textbook that teaches the AutoCAD LT software using short, interesting projects that will capture and hold student attention. Each chapter has a separate “Teamwork Project” designed to allow students to pursue chapter topics in a second real-world scenario.



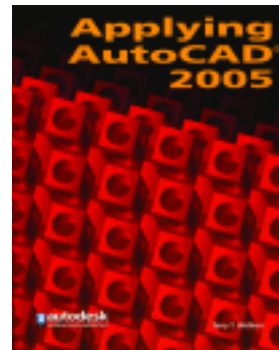
[www.glencoe.com/sec/catalog/linkteched.html](http://www.glencoe.com/sec/catalog/linkteched.html)

Student Text	0-07-861791-X	\$56.71
Instructor Productivity CD-ROM	0-07-861792-8	\$216.53

# Applying AutoCAD 2005

NEW!

• Wohlers • © 2005 • Grades 10 and up



**A**pplying AutoCAD 2005 is a comprehensive, basic CAD textbook providing step-by-step instruction for new users of the AutoCAD computer-aided drafting and design software, version 2005.

## Features

- ▶ Students retain information longer when they perform each task in a step-by-step, logical progression. This method also makes learning easier for tactile (kinesthetic) learners.
- ▶ Almost all of the Careers Using AutoCAD features have been replaced in this edition. Students learn about practical trades in which they can use their AutoCAD skills.
- ▶ Additional Problems and Advanced Projects: These two sections provide plenty of extra practice at all levels of CAD expertise: beginning, intermediate, and advanced.

## Teachers Resource Material

**Instructor Productivity CD-ROM**—Includes Instructional Plans, PowerPoint® Presentations, ExamView® Pro Test Generator, Student Practice Files, Answer Keys, Instructor Resources.



[www.glencoe.com/sec/catalog/linkteched.html](http://www.glencoe.com/sec/catalog/linkteched.html)

Student Text	0-07-868158-8	\$64.56
Instructor Productivity CD-ROM	0-07-868159-6	\$236.38

## Applying AutoCAD 2004

• © 2005



Introductory computer-aided-drafting and design instruction for high school drafting students who use AutoCAD software. *Applying AutoCAD 2004* utilizes AutoCAD software to teach students both two- and three-dimensional drafting skills utilized by industry. Students learn step-by-step the AutoCAD commands and functions to create, edit, store, and print engineering drawings.

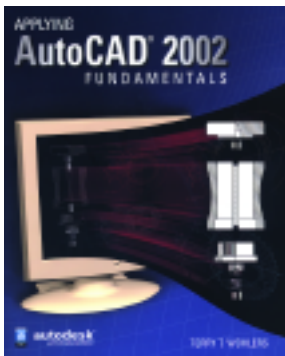
### Features

- ▶ Recombining of *Fundamentals 2003* and *Advanced 2003* Parts 1, 2 and 3 only so students have solid introduction to 2-dimensional and solid modeling (3-D).
- ▶ Maintains step-by-step instruction of the commands and functions of AutoCAD.
- ▶ Students practice design and problem-solving skills.
- ▶ Content from *Advanced* on menus, AutoLISP, and importing/exporting eliminated from new program.

Student Text	0-07-861216-0	\$64.56
Instructor Resource Guide	0-07-861217-9	\$85.63
Instructor Productivity CD-ROM	0-07-861218-7	\$216.53

## Applying AutoCAD™ 2002 Fundamentals

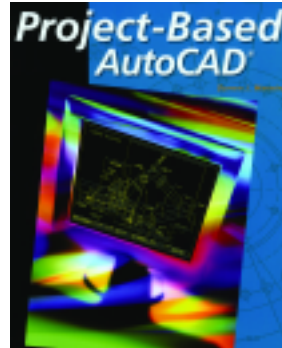
• Wohlers • © 2003



Student Text (584 pages)	0-07-828540-2	\$62.19
Instructor Resource Guide	0-07-828541-0	\$89.63
Instructor Productivity CD-ROM	0-07-829881-4	\$222.91
Fundamentals and Advanced Student Package	0-07-830414-8	\$97.64

## Project-Based AutoCAD™

• Manning • © 2004 • Grades 11 and 12



This exciting new book incorporates full-length projects from industry to teach students how to apply their AutoCAD™ skills in the real world

### Projects

- Project 1. Hydroelectric Turbine Nozzle Assembly
- Project 2. Structural Field Assembly of Tire Conveyor
- Project 3. 3D CAD/CAM: Compensator Swivel Bracket
- Project 4. Mechanical Shaft Assembly

Student Text	0-07-828732-4	\$77.98
Instructor Resource Guide	0-07-828733-2	\$34.89

# Basic Technical Drawing

© 2004



*Basic Technical Drawing* is an introductory high school drafting text.

## Table of Contents

1	The Graphic Language	15	Threads and Fasteners
2	Freehand Sketching	16	Working Drawings
3	Introduction to Computer-Aided Drafting (CAD)	17	Pictorial Drawings
4	Mechanical Drawing	18	Developments and Intersections
5	Lettering	19	Charts and Graphs
6	Geometry of Technical Drawing	20	Cams and Gears
7	Views of Objects	21	Structural Drawing
8	Techniques and Applications	22	Map Drafting
9	Using a CAD System	23	Electrical and Electronic Drafting
10	Dimensioning	24	Architectural Drafting
11	Manufacturing Processes	25	Descriptive Geometry
12	Sectional Views	26	Exploring Engineering Opportunities
13	Auxiliary Views		
14	Revolutions		

Student Text	0-07-845748-3	\$80.71
Student Workbook	0-07-845749-1	\$24.56
Instructor Resource Guide	0-07-845750-5	\$118.19

# Mechanical Drawing Board and CAD Techniques

French and Helsel • © 2003



A completely revised beginning drafting book for high school that includes solid drafting instruction, board drafting techniques, and computer-aided drafting techniques.

## Table of Contents

1	Drafting Careers	13	Pictorial Drawing
2	Sketching and Design	14	Pattern Development
3	Drafting Equipment	15	Welding Drafting
4	Basic Drafting Techniques	16	Pipe Drafting
5	Geometry for Drafting	17	Cams and Gears
6	Multiview Drawing	18	Architectural Drafting
7	Dimensioning	19	Structural Drafting
8	Sectional Views	20	Map Drafting
9	Auxiliary Views and Revolutions	21	Electricity/Electronics Drafting
10	Basic Descriptive Geometry	22	Graphs, Charts, and Diagrams
11	Fasteners	23	Media Management
12	Working Drawings	24	Desktop Publishing for Drafters

Student Text	0-07-825100-1	\$74.01
Student Workbook	0-07-825101-X	\$31.48
Instructor Resource Guide	0-07-825103-6	\$65.83
Student Workbook TAE	0-07-825102-8	\$43.60
Instructor Productivity CD-ROM	0-07-825104-4	\$216.54

# Engineering Drawing and Design

Jensen, Helsel, Short • Sixth Edition, © 2002



*Engineering, Drawing and Design* provides students with current, state of the art technical approaches to creating and providing technical drawings.

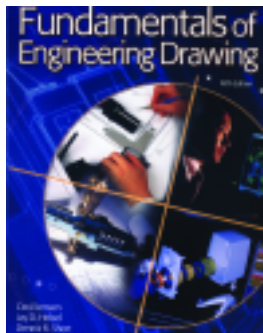
## Table of Contents

1	Engineering Graphics as a Language	14	Detail and Assembly Drawings
2	Computer Aided Drawing (CAD)	15	Pictorial Drawings
3	Drawing Media, Filing, Storage, and Reproduction	16	Geometric Dimensioning and Tolerancing
4	Basic Drafting Skills	17	Drawing for Numerical Control
5	Applied Geometry	18	Welding Drawings
6	Theory of Shape Description	19	Design Concepts
7	Auxiliary Views and Revolutions	20	Belts, Chains, and Gears
8	Basic Dimensioning	21	Couplings, Bearings, and Seals
9	Sections	22	Cams, Linkage, and Actuators
10	Threaded Fasteners	23	Developments and Intersections
11	Miscellaneous Types of Fasteners	24	Pipe Drawings
12	Manufacturing Materials	25	Structural Drafting
13	Forming Processes	26	Jigs and Fixtures
		27	Electrical and Electronics Drawings

Student Text with CD-ROM	0-07-821343-6	\$110.46
Student Text	0-07-826611-4	\$110.46
Student Workbook	0-07-824156-1	\$46.71
Instructor's Wraparound Edition	0-07-824154-5	\$142.95
Solutions Manual for Student Workbook	0-07-824152-9	\$37.95
Instructor Management System	0-07-828364-7	\$22.95
Instructor Productivity Centre	0-07-824151-0	\$176.95
A Geometric Tolerancing Work-Text	0-07-824149-9	\$43.31
Geometric Tolerancing Instructor Manual	0-07-824146-4	\$23.95

# Fundamentals of Engineering Drawing

• Jensen, Helsel, Short • Fifth Edition, © 2002



## Features

- ▶ Ideal for introductory drawing courses, this text contains sixteen chapters of *Engineering Drawing and Design, Sixth Edition*, including Geometric Dimensioning and Tolerancing.

Student Text with CD-ROM (608 pages)	0-07-824155-3	\$93.46
Student Text without CD-ROM	0-07-826612-2	\$90.06
Student Workbook	0-07-824157-X	\$42.46
Solutions Manual for Student Workbook	0-07-824152-9	\$37.95
Instructor's Wraparound Edition	0-07-824154-5	\$142.95

# Geometric Tolerancing

## A Text-Workbook

• Marrelli, McCuiston • Third Edition, © 2002



Concise, updated work-text intended for students just beginning their study of mechanical drafting, design, engineering, manufacturing, and quality control.

## Features

- ▶ Consistent with the latest revision of the ASME Y14.5M-1994 (R1999) Dimensioning and Tolerancing standard.

## Table of Contents

- Introduction to Geometric Tolerancing
- Symbols
- Terms
- Datums
- Inspection of Geometric Tolerances
- General Rules
- Straightness
- Flatness
- Circularity
- Cylindricity
- Parallelism
- Perpendicularity
- Angularity
- Runout
- Profile
- Position Tolerance – General
- Position Tolerance – Location Applications
- Position – Coaxial Applications
- Concentricity
- Symmetry
- Appendix A: Summary of Nonstandard Practices
- Appendix B: Conversion Table – Position Tolerance to Coordinate Tolerance
- Index

Text-Workbook	0-07-824149-9	\$43.31
Instructor Manual	0-07-824146-4	\$23.95
Student Workbook	0-07-845749-1	\$24.56
Instructor Resource Guide	0-07-845750-5	\$118.19

# Architecture

## Drafting and Design

• Hepler, Wallach, Hepler • Seventh Edition



This colourful text provides students with cutting-edge information on computer-aided drafting, energy efficient design, structural calculations, solar planning, and site development. Its logical organizational structure permits flexibility to present information in a variety of sequences.

### Features

- ▶ More emphasis on math and science concepts as applied in architecture.
- ▶ Focus on structural systems: wood-frame, masonry, steel, and reinforced concrete, with expanded information on roof design and construction and cabinetry.

### Teachers Support Material

**Teacher's Resource Binder** — Contains strategies, procedures, course options, and much more and a wide variety of resource materials (CAD tutorials, additional exercises, colour transparencies, blackline masters, etc.).

Student Text	0-02-637067-0	\$80.29
Teacher's Resource Binder	0-02-637068-9	\$130.09
Workbook	0-02-637069-7	\$28.31

# Digital Electronics

## Principles and Applications

• Tokheim • Sixth Edition, © 2003



This practical, field-tested text prepares students for entry-level electronics jobs. This introductory text is designed for use as an introduction text for students who are new to the field of electronics. Prerequisites are general mathematics and basic dc circuits. *Digital Electronics* can be studied before or concurrently with a course in basic electronics, since knowledge of active discrete components is not a prerequisite. Changes in this edition reflect input from reviewers and instructors.

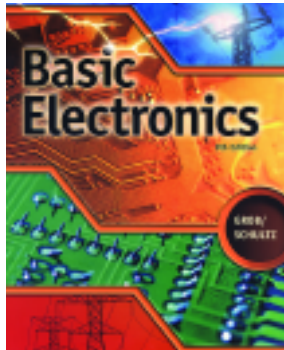
### Table of Contents

- 1 Digital Electronics
  - 2 Numbers We Use in Digital Electronics
  - 3 Logic Gates
  - 4 Combining Logic Gates
  - 5 IC Specifications and Simple Interfacing
  - 6 Encoding, Decoding, and Seven-Segment Displays
  - 7 Flip-Flops
  - 8 Counters
  - 9 Shift Registers
  - 10 Arithmetic Circuits
  - 11 Memories
  - 12 Digital Systems
  - 13 Connecting with Analog Devices
- Appendix A Soldering  
Appendix B Formulas and Conversions

Student Text with MultiSIM CD-ROM	0-07-830981-6	\$86.66
Student text with MultiSIM and Student Tutorial CD-ROM	0-07-830982-4	\$86.66
Experiments Manual with MultiSIM	0-07-830983-2	\$60.31
Instructor Annotated Edition	0-07-828906-8	\$157.95
Instructor Solutions Manual	0-07-828904-1	\$51.95
Instructor Productivity CD-ROM	0-07-828905-X	\$280.95

## Grob Basic Electronics

• Grob, Schultz • Ninth Edition, © 2003



**B**asic Electronics is intended for students taking their first course in the fundamentals of electricity and electronics. New questions, problems and applications exercises have been added to the end-of-chapter materials.

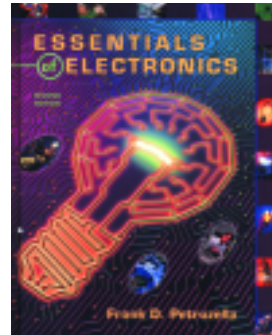
### Table of Contents

<b>Survey of Electronics</b>		
1	Electricity	17
2	Resistors	18
3	Ohm's Law	19
4	Series Circuits	20
5	Parallel Circuits	21
6	Series-Parallel Circuits	22
7	Voltage Dividers and Current Dividers	23
8	Direct-Current Meters	24
9	Kirchhoff's Laws	25
10	Network Theorems	26
11	Conductors and Insulators	27
12	Batteries	28
13	Magnetism	29
14	Magnetic Units	30
15	Electromagnetic Induction	31
16	Alternating Voltage and Current	32
		Capacitance
		Capacitive Reactance
		Capacitive Circuits
		Inductance
		Inductive Reactance
		Inductive Circuits
		RC and L/R Time Constants
		Alternating Current Circuits
		Complex Numbers for AC Circuits
		Resonance
		Filters
		Electronic Devices
		Electronic Circuits
		Transistor Amplifiers
		Digital Electronics
		Integrated Circuits

Student Text with MultiSIM CD-ROM	0-07-827124-X	\$114.71
Student Text with MultiSIM and Student Tutorial CD-ROM	0-07-830627-2	\$107.06
Experiments Manual with MultiSIM	0-07-830628-0	\$70.51
Problems Manual	0-07-827127-4	\$64.56
Math Manual	0-07-827128-2	\$47.56
Instructor Annotated Edition	0-07-827129-0	\$175.95
Instructor Solutions Manual	0-07-827130-4	\$50.00

## Essentials of Electronics

• Petruzella • Second Edition, © 2001 • Grades 10-12



### Table of Contents

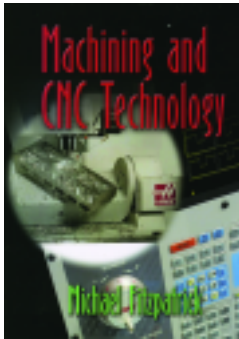
Safety	Residential Wiring Requirements and Devices
Instruments, Tools, and Fasteners	Residential Branch Circuit Wiring
Conductors, Semiconductors, and Insulators	Appliance Cords and Connections
Sources and Characteristics of Electricity	Lighting Equipment
Basic Electrical Units	Electric Motors
Electric Connections	Relays
Simple, Series, and Parallel Circuits	Motor Controls
Measuring Voltage, Current, and Resistance	Inductance and Capacitance
Circuit Conductors and Wire Sizes	Transformers
Resistors	Signal Sources
Ohm's Law	Printed Circuits
Solving the Series Circuit	Electronic Test Instruments
Solving the Parallel Circuit	Semiconductor Diodes
Solving the Series-Parallel Circuit	Power Supplies; Transistors
Magnetism	Transistor Switching, Amplification, and Oscillation Circuits
Electromagnetism; Batteries	Thyristors: the SCR and Triac
Circuit Protection Devices	Integrated Circuits (ICs)
Electric Power; Electric Energy	Digital Fundamentals
Direct Current and Alternating Current	The Microcomputer
Low Voltage Signal Systems	Circuit Theorems
	Principles of AC Circuits

Student Text	0-07-821048-8	\$89.21
Student Text with CD-ROM, MultiSIM and Activities	0-07-827696-9	\$89.71
Activities Manual with CD-ROM and MultiSIM and Activities	0-07-821049-6	\$44.16
Instructor's Manual w/IPC	0-07-821050-X	\$68.95

# Machining and CNC Technology

**NEW!**

• Fitzpatrick • © 2005 • Grades 10-12

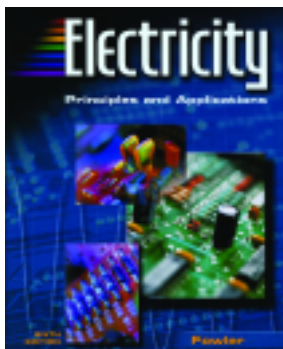


**M**achining and CNC Technology is the first text written to fully integrate CNC concepts throughout. Beginning in the first chapter, the differences between manually-operated and CNC equipment are shown. This is an introductory machine tools text that assumes students have had no previous machining instruction. Part I discusses the basics of stepping into an integrated manufacturing world. In Part II students learn to safely set up and run manually operated equipment, always with the goal of transferring their skills to CNC. In Part III students learn the complete management of CNC machines including setups, safe operation, faultless program tryout and program writing, both with command codes and using CAM. CAD/CAM exercises are provided on CD, using Mastercam® software (student version). Finally Part IV focuses on the future highlighting technologies that have changed, and will continue to change, our manufacturing world.

Student Edition	0-07-829860-1	\$97.71
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## Electricity Principles and Applications

• Fowler • Sixth Edition, © 2003



**T**his practical, field-tested text prepares students for entry-level electronics jobs. No prior knowledge of electricity is assumed; the only prerequisites are arithmetic and basic algebra. This edition retains the previous edition's logical, sequential presentation of topics in an easy-to-understand style. Strict

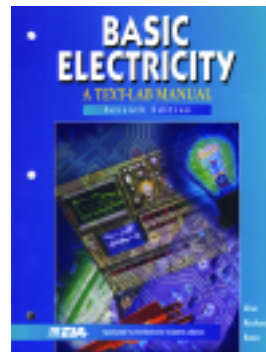
technical definitions are provided throughout to help students create a firm foundation upon which they will build their knowledge of electricity and electronics.

Student Text with MultiSIM CD-ROM	0-07-830973-5	\$94.31
Student Text with MultiSIM and Student Tutorial CD-ROM	0-07-830974-3	\$97.71
Experiments Manual with MultiSIM	0-07-830975-1	\$53.51
Instructor Annotated Edition	0-07-828883-5	\$138.95
Instructor Solutions Manual	0-07-828884-3	\$46.95
Instructor Productivity CD-ROM	0-07-828885-1	\$27.00

## Basic Electricity

### A Text-Lab Manual

• Zbar, Rockmaker, Bates • Seventh Edition, © 2001



This introductory lab manual works with any traditional DC/AC text!

#### Features

- ▶ Prepared with assistance from the Electronic Industries Association, guaranteeing consistency with industry competencies.
- ▶ 58 single concept experiments introduce and reinforce concepts with practical hands-on learning experiences. Review questions encourage analysis.

#### Teacher Support Material

**Instructor's Manual** — Contains a parts and materials list, answers to questions, and data for each of the 58 experiments. Includes Web addresses for various electronics-related career agencies.

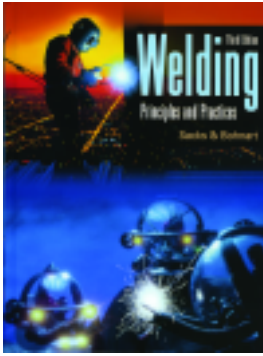
Text-Lab Manual (460 pages)	0-07-821275-8	\$53.51
Instructor's Manual	0-07-821276-6	\$31.95

# Welding

## Principles & Practices

• Sacks, Bohnart • © 2004

**NEW!**



**W**elding: *Principles & Practices* is an easily understood text that will give students solid background in the basic principles and practices of welding. It introduces the fundamental theory of the welding process (gas, arc, semi-automatic, automatic, and robotic welding) and then provides practice jobs so students develop manipulative skills. Metals and their welding characteristics, safety practices, welding symbols, and the fundamentals of print reading are all covered.

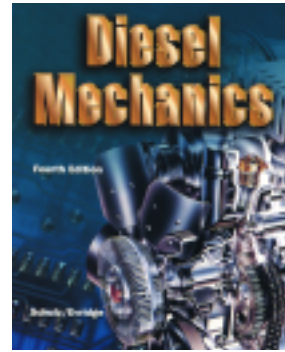
### Features

- ▶ Comprehensive content meets up-to-date American Welding Society (AWS) Standards for AWS Certification.
- ▶ Students learn fundamental welding theory, then practice their skills in JOBS provided in the text.
- ▶ Includes updated technology, codes and specifications.
- ▶ Includes Internet Activities in each Chapter Review.
- ▶ NEW! Instructor Productivity CD-ROM includes Instruction Plans in Microsoft Word®, PowerPoint® slides for each chapter and ExamView Pro® Test Generator.

Student Text	0-07-825060-9	\$100.26
Instructor Manual	0-07-825061-7	\$22.95

# Diesel Mechanics

• Schulz, Evridge • Fourth Edition, © 1999



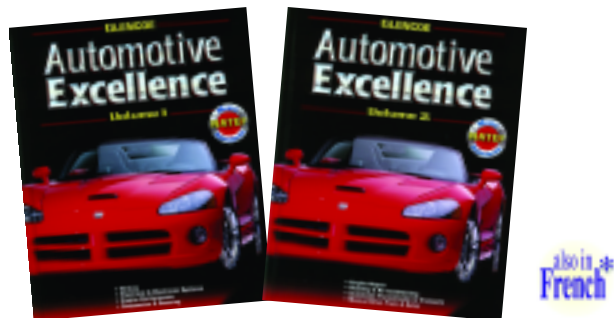
**T**his text strikes an excellent balance between hands-on practice and theory of diesel operation and maintenance requirements of manufacturers. *Diesel Mechanics* equips students with the state-of-the-art procedures and techniques needed to diagnose, repair, troubleshoot, and maintain diesel engines in the real world.

Student Text	0-02-803462-7	\$98.56
Workbook	0-02-803463-5	\$41.61
Instructor's Planning Guide	0-02-803464-3	\$36.95

# Automotive Excellence

## Volumes 1 and 2

• Glencoe/McGraw-Hill • Second Edition, © 2004



**A**utomotive Excellence is an automotive technology text designed to meet both the technical and academic standards as defined by the National Automotive Technicians Education Foundation (NATEF), the organization that oversees ASE (Automotive Service Excellence) Certification. *Automotive Excellence* focuses students' education and training on the necessary technical skills and correlated communication, mathematics and science knowledge necessary to pass the ASE Certification tests.

### Features

#### Student Edition, Vols. 1 & 2

- ▶ Technology Forecast at the end of each chapter has been replaced with a new feature, titled Workplace Know-How. These focus on the development of interpersonal and workplace skills.

#### Academic Applications

- ▶ Formerly two volumes, this is now one volume.

#### Technical Applications

- ▶ Volume 1 contains 13 new Job Sheets.
- ▶ Volume 2 has 1 new Job Sheet.

#### Instructor Resource Guide with CD-ROM

### Table of Contents, Volume 1

#### Automotive Technician's Handbook

- 1 The Automotive Industry
- 2 Automotive Safety Practices
- 3 Automotive Tools & Equipment

#### Brakes

- 1 Brake System Operation
- 2 Diagnosing & Repairing the Hydraulic System
- 3 Diagnosing & Repairing Drum Brakes
- 4 Diagnosing & Repairing Disc Brakes
- 5 Diagnosing & Repairing Power Boosters
- 6 Diagnosing & Repairing Parking Brakes
- 7 Diagnosing & Repairing Anti-Lock Brakes

#### Electrical & Electronic Systems

- 1 Electrical System Operation
- 2 Diagnosing & Servicing the Battery
- 3 Diagnosing & Repairing the Starting System
- 4 Diagnosing & Repairing the Charging System
- 5 Diagnosing & Repairing Lighting Systems
- 6 Diagnosing & Repairing Accessory and Safety Systems

#### Engine Performance

- 1 Piston Engine Performance
- 2 Diagnosing Engine Problems
- 3 Inspecting & Testing Sensors and Actuators
- 4 Diagnosing & Repairing Air Induction Systems
- 5 Diagnosing & Repairing Fuel Systems
- 6 Diagnosing & Repairing Ignition Systems
- 7 Using Computer Diagnostics: OBD-I

- 8 Using Computer Diagnostics: OBD-II
  - 9 Diagnosing & Repairing Emission Control Systems
- #### Suspension & Steering
- 1 Diagnosing & Repairing Steering Systems
  - 2 Diagnosing & Repairing Suspension Systems
  - 3 Diagnosing, Adjusting, & Repairing Wheel Alignment
  - 4 Diagnosing & Repairing Tires and Wheels

### Table of Contents, Volume 2

#### Automotive Technician's Handbook

- 1 The Automotive Industry
- 2 Automotive Safety Practices
- 3 Automotive Tools & Equipment

#### Engine Repair

- 1 Piston Engine Operation
- 2 Diagnosing & Repairing Cooling and Lubricating Systems
- 3 Diagnosing Engine Problems
- 4 Engine Removal, Disassembly, and Cleaning
- 5 Inspecting & Measuring Engine Components
- 6 Servicing Cylinder Head
- 7 Servicing the Block Assembly
- 8 Engine Assembly and Installation

#### Heating & Air Conditioning

- 1 Heating and Air Conditioning Operation
- 2 Diagnosing & Repairing Heating and Engine Cooling Systems
- 3 Basic Air Conditioning Systems
- 4 Diagnosing Air Conditioning Systems
- 5 Recovery & Recharging Air Conditioning Systems
- 6 Repairing Air Conditioning Systems
- 7 Diagnosing & Repairing Compressors and Clutches
- 8 Diagnosing & Repairing Control Systems

#### Automatic Transmission & Transaxle

- 1 Transmission and Transaxle Fundamentals
- 2 Diagnosing & Repairing Torque Converters and Gear Trains
- 3 Hydraulic Principles
- 4 Diagnosing & Repairing Hydraulic Control Systems
- 5 Diagnosing & Repairing Apply Components
- 6 Diagnosing & Repairing Electronic Controls
- 7 Rebuilding an Automatic Transmission or Transaxle

#### Manual Drive Train & Axles

- 1 Diagnosing & Repairing Clutch Systems
- 2 Diagnosing & Repairing Rear-Wheel-Drive Manual Transmissions
- 3 Diagnosing & Repairing Rear-Wheel-Drive Drivelines
- 4 Diagnosing & Repairing Manual Transaxles
- 5 Diagnosing & Repairing Front-Wheel-Drive Drivelines
- 6 Diagnosing & Repairing Four-Wheel-Drive Drivelines

#### Volume 1

Student Text	0-07-860015-4	\$48.82
Technical Applications	0-07-860008-1	\$21.22
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Instructor Resource Guide with CD-ROM	0-07-860014-6	\$130.09
Instructor Productivity CD-ROM	0-07-860016-2	\$164.98
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#### Volume 2

Student Edition	0-07-860010-3	\$48.82
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Instructor Resource Guide with CD-ROM	0-07-860014-6	\$130.09
Instructor Productivity CD-ROM	0-07-860012-X	\$164.98
Transparency Package	0-07-821216-2	\$130.09

\* To order French editions, see page 184.

# Robot Builder's Bonanza

**NEW!**

• McComb • Third Edition, © 2005



## Table of Contents

- 1 The Robot Experimenter
- 2 Anatomy of a Robot
- 3 Tools and Supplies
- 4 Getting Parts
- 5 Building Robots of Plastic
- 6 Building a Basic Wooden Robot Platform
- 7 Building a Metal Platform
- 8 Constructing High Tech Robots from Toys
- 9 Build a Robotix-based Robot
- 10 Build a Lego Technic-based Robot
- 11 Building a Functionoid with Lego Mindstorms
- 12 All About Batteries
- 13 Choosing the Right Motor for the Job
- 14 Locomotion with DC Motors
- 15 Locomotion with Stepper Motors
- 16 Locomotion with Servo Motors
- 17 Build a RoverBot
- 18 Build a Six-Legged Walking Robot
- 19 Build the HydraBot: Walk 'n Roll!
- 20 Advanced Locomotion Systems
- 21 An Overview of Arm Systems
- 22 Build a Revolute Coordinate Arm
- 23 Build a Servo Motor-based Robotic Arm
- 24 Build a Polar Coordinate Arm
- 25 Experimenting with Gripper Designs
- 26 Adding the Sense of Touch
- 27 Speech Synthesis and Voice Recognition
- 28 Fire Detection Systems
- 29 Robotic Eyes
- 30 Collision Detection and Avoidance
- 31 Navigating Through Space
- 32 Remote Control Systems
- 33 Robot Control via PC Parallel Port
- 34 An Overview of Robot "Brains"
- 35 Using the BASIC Stamp and Other Microcontrollers
- 36 Robot Control with the 8051 Single Board Computer
- 37 Creating Your Own PIC-based "RoboBug"



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# Robots, Androids and Animatrons

• Iovine • Second Edition, © 2002



## Table of Contents

- Introduction  
Acknowledgements
- 1 In the Beginning
  - 2 Artificial Life and Artificial Intelligence
  - 3 Power
  - 4 Movement and Drive Systems
  - 5 Sensors
  - 6 Intelligence
  - 7 Speech-Controlled Mobile Robot
  - 8 Behavioral-Based Robotics, Neural Networks, Nervous Nets, and Subsumption Architecture
  - 9 Telepresence Robot
  - 10 Mobile Platforms
  - 11 Walker Robots
  - 12 Solar-Ball Robot
  - 13 Underwater Bots
  - 14 Aerobots
  - 15 Robotic Arm and IBM PC Interface and Speech Control
  - 16 Android Hand
- Suppliers/Index



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