



Delmar, Cengage Learning in Partnership with the Home Builders Institute | The Workforce Development Arm of the National Association of Home Builders

The Residential Construction Academy Series

Setting the Standard for Home Building Excellence!





The Home Builders Institute (HBI), the workforce development arm of the National Association of Home Builders (NAHB) and Delmar, Cengage Learning, are breaking ground with new industrydeveloped certification protocols for instructors and students using the educational materials from the Residential Construction Academy (RCA) Series. The products and services offered through the RCA Series establish a direct link from the education and training programs to the construction industry, offering you a better way to build a residential construction program.

The RCA series is a learning system in which the whole is greater than the sum of its parts. You will be able to build a world class residential construction program – the only one of its kind – based upon the foundation of National Skill Standards for residential construction.

NATIONAL SKILL STANDARDS

The RCA Series is the only program based upon National Skill Standards for residential construction. HBI/NAHB brought together industry experts from across the U.S. to meet with an independent research and measurement organization to develop these new craft trade training standards. The guidelines from the National Skills Standards Board were used in developing these new industry-based standards. In addition, the process met or exceeded the American Psychological Association (APA) and American National Standards Institute (ANSI) standards for occupational credentialing.

THE RESIDENTIAL CONSTRUCTION ACADEMY (RCA) SERIES

Once the National Skill Standards were created, Delmar, Cengage Learning brought together an expert group of authors to create learning materials based upon the National Skill Standards. Consistent in their approach and thorough in their coverage of the National Skill Standards content and competencies, the RCA Series texts were designed first and foremost with educating students in mind. Rich in pedagogy and step-by-step procedures, using four-color

illustrations and photographs that teach in short segmented readings, these texts are designed to teach by doing. Robust instructor material support is available as well as classroom multimedia and workbooks.

CERTIFICATION FOR RESIDENTIAL CONSTRUCTION

HBI/NAHB offers certification protocols for instructors and students. HBI/NAHB has partnered with The Ohio State University (OSU) for instructor certification and the National Occupational Competency Testing Institute (NOCTI) for student certification; both are offered online. If your instructor and students become certified, your program is eligible for credentialing as well.

INSTRUCTOR CERTIFICATION

HBI/NAHB offers instructor industry certification to ensure consistency in instructor teaching/training methodologies and knowledge competency when teaching to the HBI/NAHB National Skill Standards contained throughout the RCA Series curriculum. If an instructor is teaching from the RCA Series but chooses not to take the instructor certification course work, his/her students are still eligible for HBI/NAHB student certification. Instructor Certification is valid for five years.

Certification courses are offered online in partnership with The Ohio State University and applications are reviewed by HBI/NAHB. The instructor is awarded 2 CEUs for successful completion.

Certification Details:

• Certification will be taught in 16 distinct online modules, constituting the course.

- 7 of the 10 questions must be correct to successfully complete a module.
- 13 of the 16 modules must be successfully completed for certification.
- You have 6 consecutive weeks to complete all 16 modules.

• You are given one opportunity to retest on any module for which you did not receive a passing score.

STUDENT CERTIFICATION

With the new Student Certification, students will be more marketable in the industry as they demonstrate their skill in construction procedures and competencies, allowing future employers to see these students as highly-qualified candidates. Student Certification is administered through the National Occupational Competency Testing Institute (NOCTI) in specific trade areas. All tests are based on National Industry Skills Standards as are the materials contained in the Residential Construction Academy Series. The testing areas available include Carpentry, HVAC, House Wiring, Facilities Maintenance, Basic Principles for Construction, Plumbing, and Masonry for secondary, post-secondary and industry levels.



Certification Details:

- Tests for Student Certification may be ordered through the NOCTI website at www.nocti.org. Certification assessments are based on national skill standards set by NAHB industry professionals and educators. National cut scores have been established to identify the three proficiency levels.
- Instructors are given the option of determining the testing level for their students. Certification testing is offered at three proficiency levels: entry, semi-skilled and skilled.

PROGRAM CREDENTIALING

Give your program the prestige and national recognition that comes with Program Credentialing. HBI/NAHB has instituted an enhanced credentialing process. HBI/NAHB will now consider your program for credentialing provided the instructor and students are participating in the HBI/NAHB certification process and the Residential Constructional Academy Series materials are being used in the program.

A credentialed program must meet the following six criteria:

- 1) Training program utilizes NAHB's Residential Construction Skill Standards. 2) Instructors must be certified by HBI/NAHB through The Ohio
- State University online professional development program.
- 3) Students complete the industry-approved HBI/NAHB online tests administered by NOCTI.
- 4) HBI/NAHB receives and industry experts review one or more of the following for program validation: lesson plans, course description, syllabi or other official type of course outline for non-HBI Job Corps programs, copies of student test scores.
- 5) HBI/NAHB receives and approves the completed Application for Credentialing.
- 6) Training program purchases and teaches with RCA Series materials.

NATIONAL REGISTRY

Join the nation-wide construction job-bank of the leading residential construction association, the National Association of Home Builders. The registry lists all students who have successfully completed the RCA series instruction and links them via an online job-bank database to potential employers across the USA. The registry allows students to place their resume online and reach a national audience of future employers, topping off the series with real-world success. Visit the NAHB Career Center at **www.nahb.org/careers**.

RCA Series Features

BEST-SELLING FEATURES

- **From Experience** boxes highlight proven methods used by construction pros to get the job done right and on time.
- **Hands-on Procedures** located at the ends of chapters make it easy to review skills and techniques.
- **Cautions** warn beginners about potential safety hazards on the construction site and explain how to avoid them.

CHAPTER 6 Tubing and Piping Tools 23 Gandle is turned, the blade moves either are those that are used on soft drawn tubcloser to, or further from, the rollers. from experience... ing. More information can be found on soft drawn tubing and its properties in Chapter 10. Hard drawn tubing is the term used to When hard drawn tubing is used, ben SERVICE CALL DISCUSSION describe rigid pipe. n L1, his meter Most tubing cutters are equipped with a ing is not practical, so straight pipe see Hard drawn tubing is the term used to reamer that removes burrs from the inside of describe rigid pipe. The tools listed in this secthe cut section of tubing. The tubing cutter is tions are used in conjunction with fittin tion are typically used for hard drawn pipe ferred method for cutting refrigeration cated. With the disconnect switch in the OFF CAUTN Fittings are piping components that are there are no filings produced. position, John uses his multimeter, set to read resistance, to check for continuity between pre-formed into angles which turn. When **CAUTION:** Remember that capac High the power lines feeding the condensing. storing devices that can discharg practical, so straight pipe sections an system is off. CAUTION used in conjunction with fittings. CAUTION: Remember that capacitors are energy-storing devices that can discharge even when the system is off. are piping components that are d into angles which CAUTION CAUTION CAUTION: Even though the disconne in the OFF position, it is still possible ubing, we are discussin electrical shock from the system. Remember that capacitors are energy-storing devices that can discharge even when the system is off. Always scharge them property before servicing equipment electrical shock from the system. Re that are classified as soft n tubing refers to matericapacitors are energy-storing dev discharge even when the syster will be discussed in this section cally flexible and easily bent. discharge them properly before (278 psig) igid pipe. O SUCTION AIR (95°F PRESSURE (70 psig) NOTE: 278 psig CORRESPONDS

TO A CONDENSING

Source: Hard drown tubing is the term used to associate routinice, is 2009

FIGURE 6-1 Ust, quia ad modignime pratiquo salmin nis pa natur aum

TEMPERATURE OF 125°F

Going Green Bring the tops of double floor joists flush by first toenailing the edges before nailing them together.

NEW FEATURES!

local and regional codes.

on sustainability and eco-friendly construction.

as a reminder of how easy it is to "go green."

■ What's Wrong with this Picture? illustrates through photos and descriptions the incorrect versus the correct way to execute basic tool use and avoid common mistakes on the job.

Going Green highlights environmental resources and green building techniques, focusing

End-of-chapter Green Checklists review the green topics covered in the chapter and serve

Know Your Codes is an application-based feature that prompts students to research their

20 SECTION 1 Section Title

from experience...

When hard drawn tubing is used, bending is not practical, so straight pipe sections are used in conjunction with fittings. Fittings are piping components that are ore-formed into angles which turn. When practical, so straight pipe sections are used in conjunction with fittings. Fittings are piping components that are preformed into angles which turn,

When we refer to tubing, we are discussing piping materials that are classified as soft als that are typically flexible and easily bent. The tools that will be discussed in this section are those that are used on soft drawn tubing. More information can be found on soft drawn tubing and its properties in Chapter describe rigid pipe. The tools listed in this section are typically not used for hard drawn pipe except where indicated.

tubing

PINCH OFF TOOLS

The tubing cutter, Figure 6-1, uses a set of rollers and a round cutting blade. This type of tubing cutter can be used to cut soft metal tubing and pipe such as soft and hard drawn copper tubing. The piping material being cut is held in place between the rollers and the blade. The position of the blade in the cutter with respect to the tubing is adjusted by the handle on the cutter.

- 1 High head pressure
- 2 High suction pressure
- 3 Low head pressure
- 4 Low suction pressure

When we refer to tubing, we are discussing piping materials that are classified as soft drawn. Soft drawn tubing refers to materials that are typically flexible and easily bent. The tools that will be discussed in this section are those that are used on soft drawn tubing. More information can be found on soft drawn tubing and its properties in Chapter 10. Hard drawn tubing is the term used to describe rigid pipe.



Y) **Going Green** Bring the tops of double floor joists flush by first toenailing the edges before nailing them together.

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ng cutter, Figure 6-1, us round cutting bl

RCA

Green Applications for Residential Construction



ISBN: 978-11110-37543

Mike Guertin, ©2011

Gain the knowledge you need for green building in Residential Construction! This book is a collection of supplemental material for the Residential Construction Academy (RCA) series textbooks that will introduce readers to trade-specific green building practices. The introduction explains general green building principles

and each trade-specific section explores how carpenters, plumbers, HVAC installers, electricians and masons can apply green building principles and jobsite practices while they plan and execute their work. This text will work for a standalone capstone course or as a supplement to any text. Accompanying slides created in Powerpoint[™] are available at www.cengage.com/community/residentialacademy.

FEATURES

- Key "green" terminology is highlighted and defined in a glossary
- Content is correlated to Residential Construction Academy textbooks
- Each application is organized around a consistent set of green building principles

CONTENTS

Introduction to Green Building. Application 1: Masonry. Application 2: Plumbing. Application 3: House Wiring. Application 4: HVAC. Application 5: Carpentry. Application 6: Facilities Maintenance.



Green construction: 7 million jobs will require "green" capabilities by 2-016

RCA

Facilities Maintenance, 3E



ISBN: 978-11332-82433

Kevin Standiford, ©2014



EMY: FACILITIES MAINTENANCE, 3E a powerful teaching tool for any facilities maintenance course. This edition uses a straightforward approach to describe common maintenance tasks in detail, topics like carpentry, wiring, groundskeeping, appliance repair, painting, plumbing,

RESIDENTIAL CONSTRUCTION ACAD-

and HVAC. Enhanced chapters on basic math and blueprint reading give students the most comprehensive training available. Three new chapters, two on Weatherization and a third on Solar, make this edition critically current as new facilities are built and others retrofitted with an aim toward maximized energy efficiency.

FEATURES

- Follows the Home Builders Institute (HBI) skill standards, which focus on apartments, nursing homes, and other types of residential living facilities.
- Clearly defines multiple task requirements with checklists for specific tasks and Job Sheets to help students monitor their progress.
- Expands skills beyond basic facilities maintenance to include important skills that will help students brush up on their customer service strategies and communication abilities, optimizing their employability.
- Ensures a practical, working knowledge on safety and OSHA regulations.

CONTENTS

Customer Service Skills. Methods of Organizing, Trouble-shooting, and Problem Solving. Applied Safety Rules. Fasteners, Tools, and Equipment. Practical Electrical Theory. Electrical Facilities Maintenance. Carpentry. Surface Treatments. Plumbing. Heating, Ventilation, and Air-Conditioning Systems. Appliance Repair and Replacement. Trash Compactors. Elevators. Pest Prevention. Landscaping and Groundskeeping. Basic Math for Facilities Maintenance Technicians. Blueprint Reading for Facility Maintenance Technicians Weatherization Concepts. Weatherization Installation, Maintenance and Repair. Solar Systems, Maintenance and Repair.

SUPPLEMENTS

Workbook ISBN: 978-11332-82464 Instructor Resources CD ISBN: 978-11332-82440 Instructor's Guide ISBN: 978-11332-82457

RCA

Basic Principles for Construction, 3E

88 ISBN: 978-11113-07189

New Edition March 2015

Mark Huth, ©2012



The new 3rd Edition includes a full-color design with new and updated photos and figures. Coverage of building codes and safe materials handling ensures that the reader will stay current with industry standards and trends. In addition, a new chapter on green building practices will introduce readers to jobsite practices

while they plan and execute. This book is ideal for those beginning a career in the building trades industry and provides thorough, up-to-date coverage of the core academic areas that are necessary for success in the field. Topics include work ethic, math, communications, print reading, safety, and common tools.

FEATURES

- Comprehensive coverage of a solid range of topics makes this a must-have guide for readers beginning in the industry
- New, up-to-date, full-color photos and clear, detailed illustrations focus on the most current equipment, tools, and procedures
- Coverage of basic math concepts and work ethic guidelines teach readers skills that are often overlooked in traditional building trades books
- New end-of-chapter summaries facilitate understanding and provide a built-in study guide highlighting key concepts from the chapter

CONTENTS

Organization of the Industry. Working in the Industry. Introduction to Green Building. Jobsite Safety. Safety with Ladders, Scaffolds, and Machines. Construction Math. Whole Numbers. Decimals. Fractions. Linear Measure. Percent (Percentage). Area and Volume. Right Angles. Combined Operations. Hand Tools-Selection, Use and Care. Power Tools-Selection, Use, and Care. Fasteners. Rigging. Views. Scales. Alphabet of Lines. Use of Symbols. Plan Views. Elevations. Sections and Details.

SUPPLEMENTS

Workbook ISBN: 978-11113-07219 Instructor Resources CD ISBN: 978-11113-07202 Instructor's Guide ISBN: 978-11113-07196 **DVD** ISBN: 978-11113-07226 Topics covered:

Safety

- Construction Math
- Tools and Fasteners

• Construction Drawings

DVD Demo ISBN: 978-11113-07233 **Building Trades/Construction CourseMate with eBook** Instant Access Code ISBN: 978-11336-09421







ISBN: 978-13050-86180

Floyd Vogt, ©2016

RESIDENTIAL CONSTRUCTION ACAD-EMY: CARPENTRY, 4E is constructed within a modular design, with current and concise information crafted logically to facilitate learning.From start to finish, the book systematically steps students through the construction industry, and the carpentry techniques, code require-

ments, and best practices associated with constructing a residential building, including coverage of tools and materials, rough carpentry, exterior and interior finishes and more.

FEATURES

- "Know Your Codes" features prompt students to research building codes that will impact each job, providing excellent practice for this critical on-the-job skill.
- Green Tips and Green Checklists highlight advice and current topics related to "green" construction methods.
- A strong emphasis on safety. Readers learn from insightful tips and precautions that are integrated throughout the book to help them develop careful practices.
- "From Experience" features offer practical advice from an expert carpenter. Integrated throughout the book, these tricks of the trade simplify complex techniques to help improve successful completion of procedures.

CONTENTS

Hand Tools. Power Tools. Stationary Power Tools. Wood and Wood Products. Fasteners. Jobsite Safety and Construction Aids. Building Plans and Codes. Building Layout. Concrete Form Construction. Floor Framing. Wall and Ceiling Framing. Roof Framing. Roofing. Windows and Doors. Siding and Decks. Insulation and Ventilation. Wall Finish. Interior Finish. Stair Framing and Finish. Cabinets and Countertops.

SUPPLEMENTS

Workbook ISBN: 978-13050-86210 Instructor Resources CD ISBN: 978-13050-86203 Instructor's Guide ISBN: 978-13050-86197 DVD1 ISBN: 978-13050-86227 DVD 2 ISBN: 978-13050-86234 Cengage Learning Testing, powered by Cognero Instant Access ISBN: 9781305258419 CourseMate Instant Access ISBN: 9781305258389

RCA

Electrical Principles, 2E



ISBN: 978-11113-06472

Stephen L. Herman, ©2012

Through the use of a lively writing style and frequent examples, this newly-revised book covers the important topics that readers need to know to become residential electricians. The author, Stephen L. Herman, logically presents the basic electrical principles from safety to motors and discusses how to go from theory to

application. This text helps users learn the work skills, functions and activities included in the Residential Electrician Skill Standards developed by industry leaders for the National Association of Home Builders (NAHB).

FEATURES

- New and updated full-color art throughout the book highlights important concepts and brings them to life for students
- Separate chapter on safety emphasizes the importance of on the job safety
- Glossary of Terms opens each chapter to give easy access to terminology when needed
- End-of-chapter activities and review questions engage students and encourage their application of key principles

CONTENTS

Safety. Basic Electrical Theory. Electrical Quantities and Ohm's Law. Resistors. Series Circuits. Parallel Circuits. Combination Circuits. Measuring Instruments. Using Wire Tables and Determining Conductor Sizes. Magnetic Induction. Alternating Current. Inductance in Alternating Current Circuits. Resistive-Inductive Series Circuits. Resistive-Inductive Parallel Circuits. Capacitors. Single-Phase Transformers. Single-Phase Motors.

SUPPLEMENTS

Workbook/Lab Manual ISBN: 978-11113-06502 Instructor Resources CD ISBN: 978-11113-06496 Instructor's Guide ISBN: 978-11113-06489 DVD 1 ISBN: 978-11113-06519 Topics covered:

- Basic Electricity and Ohm's Law
- Series and Parallel Circuits
- Series and Parallel Circl
 Combination Circuits
- Combination Circuits
- Basic Alternating Current **DVD 2** ISBN: 978-11113-06526 Topics covered:
- Inductance in AC Circuits
- Capacitors
- Capacitors in AC Circuits
- Single Phase Motors Supplements
- DVD Demo ISBN: 978-11113-06533
- Construction CourseMate with eBook Instant Access Code ISBN: 978-11336-09544



Available February 2015

House Wiring, 4E

🛤 🚔 🛛 ISBN: 978-12858-52225

Greg Fletcher, ©2016



Completely up to date with the 2014 edition of the National Electrical Code, RESI-DENTIAL CONSTRUCTION ACADEMY: HOUSE WIRING, 4e delivers a concrete approach to teaching the latest and best practices in residential electrical wiring. This vividly illustrated, full-color text is

based on the HBI National Skill Standards that cover the skill sets necessary to achieve a first job in construction or as an electrician. The text provides thorough coverage of "green" topics, sustainable building practices, alternative energy systems, and much more. "From Experience" sections address common residential wiring practices and scenarios, while "Caution" boxes emphasize the ongoing importance of safety.

FEATURES

- Reflecting the latest practices from the field, all material is updated to the 2014 edition of the National Electrical Code.
- Comprehensive coverage in Ch. 22 Alternative Energy System Installation includes photovoltaics and small wind turbines.
- A wealth of end-of-chapter review questions reinforce material covered and improve student critical thinking skills—helping students maximize their study time and course success.

CONTENTS

Residential Workplace Safety. Hardware and Materials Used in Residential Wiring. Tools Used in Residential Wiring. Test and Measurement Instruments Used in Residential Wiring. Understanding Residential Building Plans. Determining Branch Circuit, Feeder Circuit, and Service Entrance Requirements. Introduction to Residential Service Entrances. Service Entrance Equipment and Installation. General Requirements for Rough-In Wiring. Electrical Box Installation Cable Installation. Raceway Installation. Switching Circuit Installation. Branch-Circuit Installation. Special Residential Wiring Situations. Video, Voice and Data Wiring Installation. Lighting Fixture Installation. Device Installation. Service Panel Trim-Out. Checking Out and Troubleshooting Electrical Wiring Systems. Green Wiring Practices. Alternative Energy System Installation.

SUPPLEMENTS

Workbook/Lab Manual ISBN: 978-12858-61623 Instructor Resources CD ISBN: 978-12858-61616 Instructor's Guide ISBN: 978-12858-61609 CourseMate with interactive ebook ISBN: 978-12858-61524 Delmar Online Training Simulation: Residential Wiring, 2 year Instant Access ISBN: 978-12858-53208 Sampler Delmar Online Training Simulation: Residential Wiring Instant Access ISBN: 978-12858-53215

RCA

Plumbing, 2E

🔊 🚔 🛛 ISBN: 978-11113-07776

Michael Joyce, ©2012



With a step-by-step approach to residential plumbing installations based on National Skill Standards, this newly-revised book focuses on "Green" advancement in the plumbing trades and thoroughly explains the process of installing residential plumbing systems. Topics such as tools of the trade and proper safety measures

are covered as well as various tips to increase readers' on-the-job productivity. Logically organized to build a foundation of knowledge, this book progresses from the installation of common fixtures to troubleshooting techniques that will aid readers. An emphasis on creative layout and the importance of understanding code variations will foster readers' understanding of plumbing system installation that is based on typical situations as well as unique jobsite conditions.

FEATURES

- "Green Tip" boxes and "Green Checklists" highlighting tips and topics on new "green" plumbing methods
- A new Introduction chapter covering industry-related topics such as business practices, ethical and legal issues, career goals, customer service, and construction trends, as well as trade-specific career goals and career profiles of fellow professionals working in the field
- The "What's Wrong with this Picture?" feature highlights basic tool use and common mistakes
- A new end-of-chapter feature called "Know Your Codes" an application-based feature that prompts students to research their local and regional codes

CONTENTS

Introduction to the Plumbing Profession. Plumbing Safety. Plumbing Tools. Introduction to Plumbing Math. Introduction to Plumbing Drawings. Plastic Pipe and Fittings. Copper Pipe and Fittings. Cast-Iron Pipe and Fittings. Carbon Steel Pipe and Fittings. Corrugated Stainless Steel Tubing. Fixtures and Faucets. Introduction to Drain, Waste, and Vent (DWV) Systems. Introduction to Water Distribution Systems.

SUPPLEMENTS

Workbook/Lab Manual ISBN: 978-11113-07806 Instructor Resources CD ISBN: 978-11113-07790 Instructor's Guide ISBN: 978-11113-07783 DVD ISBN: 978-11113-07813 Topics covered:

- Personal Safety and Power tools
- Working with Copper
- Working with Plastic Pipe
- Installing Toilets, Faucets and Tubs
- DVD Demo ISBN: 978-11113-07820 Plumbing Coursemate with eBook

Instant Access Code ISBN: 978-11336-10786





ISBN: 978-14390-56349

Eugene Silberstein, ©2012

This full-color, comprehensive book delivers HVAC training materials with a hands-on practical approach. This new edition continues to present material as a theory then explains with how-to instructions while at the same time adhering to the Home Builders Institute's Skills Standards for HVAC. Instructions contain step-by-

step procedures with illustrations side by side with the description, giving clarity to the instructions. The first section explores matter, energy, heat and the basics of refrigeration with a view toward building a working knowledge of the behavior of heat and how it is transferred. Next, the start up and service section illustrates the steps that must be followed to make certain that airflow through the system is correct and the amount of refrigerant in the system is within the acceptable range. Finally the installation and service of oil, gas, electric and geothermal heating systems is covered as well as boilers, hydronic heating and radiant heating.

FEATURES

- "Green Tip" boxes and "Green Checklists" highlight tips and topics for you and your students on new "green" construction methods
- Delivers hands on practical approach using proven methods by HVAC professionals to get the job done right the first time, on time
- A new Introduction chapter covers industry-related topics such as business practices, ethical and legal issues, career goals, customer service, and construction trends, as well as trade-specific career goals and career profiles of fellow professionals working in the field
- "What's Wrong with this Picture?" highlights through photos and descriptions the incorrect versus the correct way to execute basic tool use and avoid common mistakes

CONTENTS

Matter, Energy and Heat Basics. The Refrigeration Process. General Safety Practices. Refrigerant Management. Hand Tools. Tubing and Piping Tools. Specialized HVAC/R Tools. Location. Duct Systems. System Connections. Leak Testing. System Evacuation. System Start-up and Charging. Electric Fundamentals. Electric Motors. Electric Controls. Wiring Diagrams. Electric Codes. Testing and Balancing. Indoor Air Quality. Mechanical Troubleshooting. Electrical Troubleshooting. Electric Heat. Gas Heat. Oil Heat. Hydronic Heat. Heat Pumps.

SUPPLEMENTS

Workbook/Lab Manual ISBN: 978-14390-56035 Instructor Resources CD ISBN: 978-14390-56172 Instructor's Guide ISBN: 978-14390-56202 DVD ISBN: 978-14390-55984 *Topics covered*:

- The Science of HVAC
- New Systems Installation
- Basic Electricity and Troubleshooting
- Introduction to Heating and Air
- DVD Demo ISBN: 978-14390-55847

Coursemate with eBook Instant Access Code ISBN: 978-11336-10830

RCA

Masonry: Brick & Block Construction



ISBN: 978-14180-52843 Robert Ham, ©2008

A valuable addition to the popular Residential Construction Academy series, this book introduces and explains modern residential masonry construction procedures, as well as current building and construction industry safety regulations relevant to the field. Beginning masons, designers, homebuilders, students, and

apprentices alike will benefit from the clear diagrams and stepby-step procedures. With technical information from nationally recognized trade associations like the National Association of Home Builders, *Masonry: Brick & Block Construction* is a "must-have" for the aspiring mason.

FEATURES

- The Home Builders Institute (HBI) skill standards drive this book, focusing coverage on the core topics for masonry
- Detailed illustrations clearly spell out procedures, instead of simply explaining them, so readers can learn and replicate important skills with ease
- Factual information from the International Residential Code is incorporated where applicable so readers are getting the most accurate, most reliable information available to the industry

CONTENTS

Brick Positions and Sizes. Brick Bonds and Patterns. Masonry Hand Tools. Masonry Construction Equipment. Laying Brick to the Line. Constructing Brick Leads. Masonry Spacing Scales. Masonry Mortars. Concrete Masonry Units. Laying Block to the Line. Constructing Block Leads. Estimating Masonry Materials. Residential Footings and Foundations. Constructing Water-Resistant Walls. Brick Veneer Construction. Composite and Cavity Walls. Brick Paving. Steps, Stoops, and Porches. Piers, Columns, Pilasters, and Chases. Appliance Chimneys. Masonry Fireplaces. Brick Masonry Arches. Cleaning Brick and Concrete Masonry. Safety for Masons. Reading Drawings and Plans.

SUPPLEMENTS

Workbook ISBN: 978-14283-23667 Instructor Resources CD ISBN: 978-14180-52867 Instructor's Guide ISBN: 978-14180-52850 DVD ISBN: 978-14180-52881 Topics covered: • Safety and Organization

- Laying Brick and Block to the Line
- Building Brick Leads
- Building Block Leads

DVD Demo ISBN: 978-14180-52874 Masonry CourseMate with eBook Instant Access Code ISBN: 978-11339-35261

The RCA Series: Covering all of Your Curriculum Needs













HBI 🖮







Spend Less Time Planning And More Time Teaching!

INSTRUCTOR RESOURCES CD-ROM

With Delmar's Instructor Resources to accompany many books, preparing for class and evaluating students has never been easier!

This valuable Instructor CD-ROM contains:

- An electronic version of the Instructor's Guide.
- Various resources and answers for each chapter of the book.
- A Computerized Testbank in ExamView[®] which makes generating tests and quizzes a snap. With hundreds of questions and different styles to choose from, you can create customized assessments for your students with the click of a button.
- Customizable presentations in PowerPoint® format.
- Image Library to enhance your presentations in PowerPoint[™] format, insert into test questions or add visuals wherever you need them.

INSTRUCTOR'S GUIDE

Available for each Residential Construction Academy topic is an accompanying printed Instructor's Resource Guide. This resource includes:

- Answers to review questions in the book
- Lecture outlines
- Lab exercises (when applicable)

DVDS

This DVD series provides step-by-step instruction of important concepts for the topics discussed in each book. The videos are:

- Easy to follow
- Include full color graphics and animations from all regions of the country
- Accompanied by an Instructor Manual to facilitate classroom integration





COURSEMATE

Cengage Learning's CourseMate brings course concepts to life with interactive learning, study, and exam preparation tools that support the textbook. Access an integrated eBook, learning tools including flashcards, quizzes, and more, all designed specifically to work with RESIDENTIAL CONSTRUCTION ACADEMY programs.





Looking for Math Skills specific to a trade?



Practical Problems in Mathematics for Electricians 9E Steven Herman ISBN : 978-11113-13470



Practical Problems in Mathematics for Heating and Cooling Technicians, 6E Russell DeVore ISBN: 978-11115-41354



Mathematics for Plumbing and Pipefitters, 8E Lee Smith ISBN 978-11116-42600

Download the Applied Mathematics Course Guide for a listing of all applied mathematics titles. NGL.Cengage.com/CTEcourseguides

