

**2012 INTERNATIONAL  
FIRE CODE®  
STUDY COMPANION**



# 2012 International Fire Code

## Study Companion

ISBN: 978-1-60983-161-5

Cover Design:	Ricky Razo
Publications Manager:	Mary Lou Luif
Project Editor:	Roger Mensink
Manager of Development:	Doug Thornburg

COPYRIGHT 2012



ALL RIGHTS RESERVED. This publication is a copyrighted work owned by the International Code Council. Without advance written permission from the copyright owner, no part of this book may be reproduced, distributed or transmitted in any form or by any means, including, without limitation, electronic, optical or mechanical means (by way of example and not limitation, photocopying, or recording by or in an information storage and retrieval system). For information on permission to copy material exceeding fair use, please contact: ICC Publications, 4051 W. Flossmoor Rd, Country Club Hills, IL 60478, Phone 888-ICC-SAFE (422-7233).

The information contained in this document is believed to be accurate; however, it is being provided for informational purposes only and is intended for use only as a guide. Publication of this document by the ICC should not be construed as the ICC engaging in or rendering engineering, legal or other professional services. Use of the information contained in this workbook should not be considered by the user as a substitute for the advice of a registered professional engineer, attorney or other professional. If such advice is required, it should be sought through the services of a registered professional engineer, licensed attorney or other professional.

Trademarks: "International Code Council" and the "ICC" logo are trademarks of International Code Council, Inc.

Errata on various ICC publications may be available at [www.iccsafe.org/errata](http://www.iccsafe.org/errata).

First Printing: January 2012

Printed in the United States of America

# TABLE OF CONTENTS

## PART I — ADMINISTRATION

### Study Session 1:

2012 IFC Chapters 1, 2, 11 and Appendix A—Administration . . . . .	1
Quiz . . . . .	23

## PART II —GENERAL SAFETY PROVISIONS

### Study Session 2:

2012 IFC Section 202—Occupancy Classification and IBC Chapters 3 and 5 . . . . .	31
Quiz . . . . .	50

### Study Session 3:

2012 IFC Chapters 3, 4 and 5—General Requirements, Emergency Planning and Preparedness, and Fire Service Features . . . . .	57
Quiz . . . . .	80

### Study Session 4:

2012 IFC Chapters 6 through 8—Building Services and Systems, Fire-Resistance-Rated Construction, and Interior Finish, Decorative Materials and Furnishings . . . . .	89
Quiz . . . . .	112

### Study Session 5:

2012 IFC Chapter 9—Fire Protection Systems, Part I . . . . .	121
Quiz . . . . .	145

### Study Session 6:

2012 IFC Chapter 9—Fire Protection Systems, Part II . . . . .	153
Quiz . . . . .	176

### Study Session 7:

2012 IFC Chapter 10—Means of Egress . . . . .	183
Quiz . . . . .	206

## PART IV – SPECIAL OCCUPANCIES AND OPERATIONS

### Study Session 8:

2012 IFC Chapters 20 through 23—Special Occupancies and Processes I: Aviation Facilities, Dry Cleaning, Combustible Dust-Producing Operations, and Motor Fuel-Dispensing Facilities and Repair Garages . . . . .	213
Quiz . . . . .	233

**Study Session 9:**

2012 IFC Chapters 24 through 27—Flammable Finishes, Fruit and Crop Ripening, Fumigation and Insecticidal Fogging, and Semiconductor Fabrication Facilities . . . . . 241  
Quiz . . . . . 262

**Study Session 10:**

2012 IFC Chapters 28 through 31—Special Occupancies and Processes, Part III: Lumber Yards and Woodworking Facilities, Manufacture of Organic Coatings, Industrial Ovens, and Tents and Membrane Structures. . . . . 271  
Quiz . . . . . 292

**Study Session 11:**

2012 IFC Chapters 32 through 36—Special Occupancies and Operations IV: High-Piled Combustible Storage, Fire Safety During Construction and Demolition, Tire Rebuilding and Tire Storage, Welding and Other Hot Work, and Marinas. . . . . 299  
Quiz . . . . . 320

**PART V – HAZARDOUS MATERIALS**

**Study Session 12:**

2012 IFC Chapter 50—Part V – Hazardous Materials. . . . . 327  
Quiz . . . . . 349

**Study Session 13:**

2012 IFC Chapters 51 through 55—Aerosols, Combustible Fibers, Compressed Gases, Corrosive Materials and Cryogenic Fluids. . . . . 357  
Quiz . . . . . 380

**Study Session 14:**

2012 IFC Chapter 56—Explosives and Fireworks. . . . . 387  
Quiz . . . . . 408

**Study Session 15:**

2012 IFC Chapter 57—Flammable and Combustible Liquids—Part I . . . . . 415  
Quiz . . . . . 436

**Study Session 16:**

2012 IFC Chapter 57—Flammable and Combustible Liquids—Part II. . . . . 443  
Quiz . . . . . 464

**Study Session 17:**

2012 IFC Chapters 58 through 61—Flammable Gases and Flammable Cryogenic Fluids, Flammable Solids, Highly Toxic and Toxic Materials, and Liquefied Petroleum Gases. . . . 473  
Quiz . . . . . 494

**Study Session 18:**

2012 IFC Chapters 62 through 67—Organic Peroxides, Oxidizers, Pyrophoric Materials, Pyroxylin Plastics, Unstable (Reactive) Materials, and Water-Reactive Solids and Liquids. . 501  
Quiz . . . . . 521

**Answer Keys . . . . . 529**

# INTRODUCTION

This study companion provides practical learning assignments for independent study of the provisions of the 2012 *International Fire Code*<sup>®</sup> (IFC<sup>®</sup>). The independent study format affords a method for the student to complete the study program in an unregulated time period. Progressing through the workbook, the learner can measure his or her level of knowledge by using the exercises and quizzes provided for each study session.

The workbook is also valuable for instructor-led programs. In jurisdictional training sessions, community college classes, vocational training programs and other structured educational offerings, the study guide and the IFC can be the basis for code instruction.

All study sessions begin with a general learning objective, the specific sections or chapters of the code under consideration, and a list of questions summarizing the key points of study. Each session addresses selected topics from the IFC and includes code text, a commentary on the code provisions, and illustrations representing the provisions under discussion. Quizzes are provided at the end of each study session. Before beginning the quizzes, the student should thoroughly review the referenced IFC provisions—particularly the key points.

The workbook is structured so that after every question the student has an opportunity to record his or her response and the corresponding code reference. The correct answers are located in the back of the workbook in the answer key.

This study companion was developed by Scott Stookey, Senior Technical Staff with the International Code Council. Scott is a Fire Protection Engineer and a graduate of the Fire Protection and Safety Engineering Technology Program at Oklahoma State University. He has over 20 years of emergency response and fire code enforcement experience, and has published 14 articles on various subjects, including alternative fuels, aboveground storage tanks for flammable and combustible liquids, dust deflagrations, fire protection designs using early suppression-fast response sprinklers, and hazardous materials packaging.

Questions or comments concerning this workbook are encouraged. Please direct your comments to ICC at [studycompanion@iccsafe.org](mailto:studycompanion@iccsafe.org).

## **About the International Code Council**

The International Code Council® (ICC®) is a member-focused association dedicated to helping the building safety community and construction industry provide safe, sustainable and affordable construction through the development of codes and standards used in the design, build and compliance processes. Most U.S. communities and many global markets choose the International Codes®. ICC Evaluation Service (ICC-ES), a subsidiary of the International Code Council, has been the industry leader in performing technical evaluations for code compliance fostering safe and sustainable design and construction.

**Headquarters: 500 New Jersey Avenue, NW, 6<sup>th</sup> Floor, Washington, DC 20001-2070**

**District offices: Birmingham, AL; Chicago, IL; Los Angeles, CA**

**1-888-422-7233**

**[www.iccsafe.org](http://www.iccsafe.org)**

## Enhance Your Study Experience

**ICC's Bonus Online Quiz is a new practice tool just right for you.**

Your 2012 *International Fire Code Study Companion* includes a helpful online practice quiz developed to help you retain information and prepare for exams. Features of the 60-question online practice quiz:

- Includes many new questions to supplement those in the study companion;
- Format similar to computer based exams, with point and click convenience;
- Review of the quiz available upon completion, including code references;
- Questions cover topics from all study sessions of the Study Companion; and.
- Ability to repeat the quiz multiple times.



The Study Companion Online Quiz is beneficial when studying for the following 2012 Certification exams:

- Fire Inspector I
- Fire Inspector II
- Fire Plans Examiner