# 2018 International Mechanical Code® Study Companion



# 2018 International Mechanical Code® Study Companion

ISBN: 978-1-60983-796-9

Manager of Development: Doug Thornburg
Publications Manager: Mary Lou Luif
Project Editor: Daniel Mutz
Production Technician: Emily Sargent
Cover Design: Ricky Razo



## COPYRIGHT © 2018 by INTERNATIONAL CODE COUNCIL, INC.

ALL RIGHTS RESERVED. This publication is a copyrighted work owned by the International Code Council, Inc. ("ICC"). Without advance written permission from the ICC, 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 retrieval system). For information on use rights and permissions, please contact: ICC Publications, 4051 Flossmoor Road, Country Club Hills, IL 60478. Phone 1-888-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," the "International Code Council" logo, "ICC," the "ICC" logo, "International Mechanical Code," "IMC" and other names and trademarks appearing in this book are registered trademarks of the International Code Council, Inc., and/or its licensors (as applicable), and may not be used without permission.

Errata on various ICC publications may be available at www.iccsafe.org/errata.

First Printing: August 2018
PRINTED IN THE USA

# TABLE OF CONTENTS

Stu	dy Session 1:	
	2018 IMC Chapter 1—Scope and Administration	
Stu	dy Session 2:	
	2018 IMC Sections 301 through 304.5—General Regulations I	
Stu	dy Session 3:	
	2018 IMC Sections 304.6 through 312—General Regulations II	
Stu	dy Session 4:	
	2018 IMC Chapter 4—Ventilation	
Stu	dy Session 5:	
	2018 IMC Sections 501 through 506—Exhaust Systems I	
Stu	dy Session 6:	
	2018 IMC Sections 507 through 514—Exhaust Systems II	
Stu	dy Session 7:	
	2018 IMC Chapter 6—Duct Systems	
Stu	dy Session 8:	
	2018 IMC Chapter 8—Chimneys and VentsQuiz	

Study Session 9:	
2018 IMC Sections 901 through 909—Specific Appliances, Fireplaces and Solid Fuel-Burning Equipment I	
Study Session 10:	
2018 IMC Sections 910 through 929—Specific Appliances, Fireplaces and Solid Fuel-Burning Equipment II	
Study Session 11:	
2018 IMC Chapter 10—Boilers, Water Heaters and Pressure Vessels	
Study Session 12:	
2018 IMC Chapter 11 —Refrigeration	
Study Session 13:	
2018 IMC Chapter 12—Hydronic Piping	
Study Session 14:	
2018 IMC Chapter 13—Fuel Oil Piping and Storage	
Study Session 15:	
2018 IMC Chapter 14—Solar Thermal Systems	
Answer Keys	309

# INTRODUCTION

This study companion provides practical learning assignments for independent study of the provisions of the 2018 *International Mechanical Code*<sup>®</sup> (IMC<sup>®</sup>). The independent study format affords a method for the student to complete the 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 IMC can be the basis for classroom instruction.

All study sessions begin with a general learning objective specific to the session, the specific code sections or chapter under consideration and a list of questions summarizing the key points of study. Each session addresses selected topics from the IMC and includes code text, a commentary on the code provisions, illustrations representing the provisions under discussion and multiple choice questions that can be used to evaluate the student's knowledge. Before beginning the quizzes, the student should thoroughly review the IMC, focusing on the key points identified at the beginning of each study session.

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 found in the back of the workbook in the answer key.

Although this study companion is primarily focused on those subjects of specific interest to mechanical inspectors and contractors, it is a valuable resource to any individuals who would like to learn more about the IMC provisions. The information presented may be of importance to many building officials, plans examiners and combination inspectors.

This publication was originally authored by the late Brent Snyder, longtime educator and building official, and Doug Thornburg, Vice-President and Technical Director, Products and Services for the International Code Council. It has been updated by ICC staff members Jay Woodward and Steve Van Note.

The information presented in this publication is believed to be accurate; however, it is provided for informational purposes only and is intended for use only as a guide. As there is a limited discussion of selected code provisions, the code itself should always be referenced for more complete information. In addition, the commentary set forth may not necessarily represent the views of any enforcing agency, as such agencies have the sole authority to render interpretations of the IMC.

Questions or comments concerning this study companion are encouraged. Please direct your comments to ICC at *studycompanion@iccsafe.org*.

### **About the International Code Council**

The International Code Council is a member-focused association. It is dedicated to developing model codes and standards used in the design, build and compliance process to construct safe, sustainable, affordable and resilient structures. Most U.S. communities and many global markets choose the International Codes. ICC Evaluation Service (ICC-ES) is the industry leader in performing technical evaluations for code compliance fostering safe and sustainable design and construction.

**Governmental Affairs:** 500 New Jersey Avenue, NW, 6th Floor, Washington, DC 20001-2070

Regional Offices: Eastern Regional Office (BIR); Central Regional Office (CH);

Western Regional Office (LA)

888-ICC-SAFE (422-7233)

www.iccsafe.org