

ON COOKING

A TEXTBOOK OF CULINARY FUNDAMENTALS

SEVENTH EDITION

SARAH R. LABENSKY

ALAN M. HAUSE

PRISCILLA A. MARTEL



ON COOKING

A TEXTBOOK OF CULINARY FUNDAMENTALS

SEVENTH EDITION



This page is intentionally left blank

About On Cooking, Seventh Edition

The seventh edition of *On Cooking* follows the model established in previous editions, which have prepared thousands of students for successful careers in the culinary arts by building a strong foundation based on sound fundamental techniques. Students and instructors alike have praised *On Cooking* for its comprehensive yet accessible coverage of culinary skills and cooking procedures. Chapters **focus on six areas** that are essential to a well-rounded culinary professional:

- 1 Professionalism** Background chapters introduce students to the field and feature material on food history, food safety and menu planning. Updated food safety information reflects the most recent regulations. The chapter on nutrition ties nutrition basics to principles of healthy cooking and preparing food for guests who follow special diets.
- 2 Preparation** Chapters cover the core subjects all culinary students should be familiar with before stepping into the kitchen. Equipment, basic knife skills and mise en place concepts are explained and illustrated. Staple ingredients, such as dairy products, herbs and spices as well as flavor profiles are also presented in this section.
- 3 Cooking** These chapters explain and then demonstrate fundamental cooking techniques with a wide range of recipes. Individual chapters focus on different categories of key ingredients such as meats, poultry, fish, eggs and vegetables.
- 4 Garde Manger** These chapters cover kitchen preparations including salads, sandwich making, charcuterie and hors d'oeuvre preparations. Material is of sufficient depth to support a complete unit on garde manger skills.
- 5 Baking** These chapters cover a range of classic and contemporary breads and pastries that every culinary student should know. The material is sufficient to support a stand-alone unit on breads and dessert preparation.
- 6 Presentation** Chapters on plate and buffet presentation demonstrate traditional and contemporary techniques for enhancing the visual presentation of food. The basics of buffet setup and management are also included in this section.

UPDATES

More than 325 new photographs and illustrations clearly show core techniques, equipment and foods.

A revised Nutrition and Healthy Cooking chapter now includes expanded information on health-related and vegetarian diets. A new Plant-Based Cooking chapter as well as more vegetarian and vegan recipes throughout help inspire students to refocus their food choices.

Content updates, including more than 90 new recipes, plus dozens of recipe variations, reflect current trends with a focus on international cuisines and flavor profiles. Expanded coverage of fermenting, preserving and pickling shows students modern cooking techniques widely used in professional kitchens. Expanded discussion of fabrication and yield testing helps students recognize the importance of tracking costs.

A greatly enhanced support package includes MyLab Culinary[®] with Pearson eTextbook and Pearson Kitchen Manager, our online recipe management system. An online instructors' manual featuring performance-based learning activities, an improved test bank and lecture-based PowerPoint slides are also available.

Visual Guide for the Reader

Easy to navigate, *On Cooking* is broken down into bite-size subsections as reflected in the detailed table of contents. We invite you to take the following tour to explore the flavors of *On Cooking*.

HALLMARK FEATURES

Learning Objectives

Each chapter begins with clearly stated objectives that enable you to focus on what you should achieve by the end of the chapter.

Chapter Introduction

Chapter introductions summarize the main themes in each chapter and provide an overview of topics. Learning objectives are aligned with top-level headings in each chapter, numbered so that you can easily locate information.

After studying this chapter, you will be able to:

- 1.1 name key historical figures responsible for the development of the restaurant industry and describe the contributions of each
- 1.2 list and describe characteristics of modern food service operations
- 1.3 explain the organization of classic and modern kitchens
- 1.4 identify the attributes a student needs to become a successful culinary professional
- 1.5 describe the importance of professional ethics for chefs and list specific behaviors that all culinary professionals should follow
- 1.6 describe some of the culinary careers today's student may pursue

cooking the art, practice or work of cooking

cooking (1) the transfer of energy from a heat source to a food; this energy alters the food's molecular structure, changing its texture, flavor, aroma and appearance; (2) the preparation of food for consumption

professional cooking a system of cooking based on a knowledge of and appreciation for ingredients and procedures

Like any fine art, great **cooking** requires taste and creativity, an appreciation of beauty and a mastery of technique. Like the sciences, successful cookery demands knowledge and an understanding of basic principles, and like any successful leader, today's professional chef must exercise sound judgment and be committed to achieving excellence in all endeavors.

This book describes foods and cooking equipment, explains culinary principles and **cooking** techniques and provides recipes using these principles and techniques. No book, however, can provide taste, creativity, commitment and judgment. For these, chefs and other culinary professionals must rely on themselves. This chapter explores the rich history of the restaurant industry in the West and the individuals who influenced the development of the profession. It also outlines the attributes of the professional chef. As you begin your culinary studies, we hope that you find inspiration in the history of the Western food service industry as you learn about the qualities that will guide you in your chosen career.

HISTORICAL DEVELOPMENT OF THE RESTAURANT INDUSTRY

Cooks have produced food in quantity for as long as people have eaten together. For millennia, chefs, whether they be Asian, Native American, Aboriginal, European or African, have catered to the often elaborate dining needs of the wealthy and powerful; and for centuries, vendors in China, Europe and elsewhere have sold foods to the public that they prepared themselves or bought from others.

But in the West, the history of the professional chef is of relatively recent origin. Its cast is mostly French, and it is intertwined with the history of restaurants—for only with the development of restaurants in Europe and North America during the late 18th and early 19th centuries were chefs expected to produce, efficiently and economically, different dishes at different times for different diners.

Margin Definitions

Important terms appear in the margins to help with mastery of new terminology.

A phonetic pronunciation guide assists with non-English terms.

stage [stahzh] a brief internship or training session in a professional kitchen; from the French *stagiaire*, meaning apprentice or intern; in Asia and Europe, this work is unpaid

Safety Alerts

Brief alerts remind you of safety concerns and encourage you to incorporate food safety and sanitation into your regular kitchen activities.

Safety Alert

The Temperature Danger Zone

The temperature danger zone is a broad range of temperatures in which most of the bacteria that cause food-borne illnesses multiply rapidly. The 2022 Food Code of the U.S. Food and Drug Administration (FDA), indicates that the temperature danger zone begins at 41°F (5°C) and ends at 135°F (57°C). Regulations in some localities and with some organizations may vary. This text uses the range recommended by the FDA.

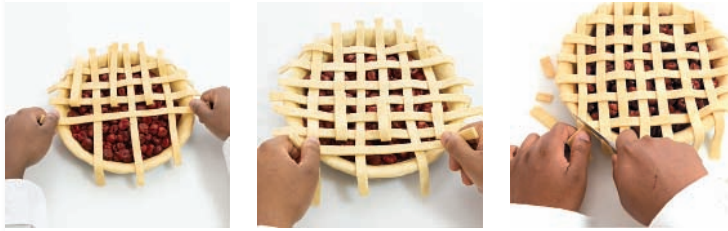
Classic Poultry Flavors

Ever versatile, chicken can be flavored with delicate herbs or robust, fiery spices. When roasted, chicken benefits from a simple grating of salt and pepper. Light sauces made from pan juices or velouté accented with tender herbs, lemon and white or black pepper are typical accompaniments that enhance the pure flavor of the poultry. But skin-on chicken pieces withstand marinating in wet or dry spice mixtures before grilling, roasting or stewing. Spice blends from adobo to garam masala can be used with any type of poultry. The versatility of poultry may account for its popularity. Dark meat from turkey legs can substitute for lamb or pork in kebabs or stews. And boneless skinless chicken or turkey breast, when sliced thinly and pounded, makes excellent cutlets.

◀ Flavor Sidebars

Green sidebars explain how flavoring ingredients may be used to change the character of a dish.

Procedure for Rolling and Shaping Dough for Lattice Crusts



- 1 Roll the dough out and line the pan as specified in the previous procedure. Spoon or pour the filling into the dough-lined pan. Using a ruler as a guide, cut even strips of the desired width, typically 1/2 inch (1.2 centimeters). Position several strips of dough across the pie in one direction. For the traditional lattice shown here, the strips of dough should all be the same width and should be spaced evenly on top of the filling.
- 2 Fold back every other strip of dough. Lay another strip of dough across the top of the pie, perpendicular to the first strips. Unfold the strips of dough, and then fold back the alternate strips. Lay another strip of dough perpendicular to the first strips. Unfold the folded strips and refold the alternate strips. Repeat the weaving process until the surface of the pie is covered with an attractive pattern of dough.
- 3 Trim any overhanging dough and crimp the lattice strips to the bottom crust to seal. A small amount of water can be used to help attach the strips to the edge of bottom crust before crimping.

Product Identification ▶

Hundreds of original color photographs help you recognize and identify ingredients. You can explore a huge variety of foodstuffs such as fruits, berries, chocolates, herbs, fish, spices, meats and fine cheeses.

◀ Procedures

Step-by-step color photographs show various stages in the preparation of ingredients and dishes to help you visualize techniques and encourage you to review classroom or kitchen activities whenever necessary.

Herbs
Fragrant herbs are available fresh or dried. Because drying alters their flavors and aromas, fresh herbs are generally preferred and should be used if possible. **Micro herbs** are the first true leaves of virtually any edible herb, such as basil or chervil. Micro herbs are very fragile and must be handled and carefully packaged for delivery. They are bursting with intense flavor; chefs use them as garnishes, especially on entrees and canapés.

Basil (*Fr. basilic*) is one of the great culinary herbs. It is available in a variety of "flavors"—cinnamon, garlic, lemon, even chocolate—but the most common is sweet basil. Sweet basil has light green, tender leaves and small white flowers. Its flavor isn't actually sweet, but rather strong, warm and slightly peppery, with a hint of anise and cloves. Basil is used in Mediterranean and some Southeast Asian cuisines and has a special affinity for garlic and tomatoes. When purchasing fresh basil, look for bright green leaves; avoid flower buds and wilted or rust-colored leaves. Dried sweet basil is readily available but has a decidedly weaker flavor than fresh.

Opal basil is named for its vivid purple color. It has a tougher, crinkled leaf and a medium-strong flavor. Opal basil may be substituted for sweet basil in cooking, and its appearance makes it a distinctive garnish.

Thai sweet basil (*Th. bai borapha*) has a narrow leaf and purple stem. It has a slight licorice flavor and is used in both raw and cooked dishes in Southeast Asian cuisines.

Bay (*Fr. laurier*), also known as sweet laurel, is a small tree that produces tough, glossy leaves with a sweet balsamic aroma and peppery flavor. In cooking, dried bay leaves are often preferred over the more bitter fresh leaves. Essential in French cuisine, bay leaves are part of the traditional bouquets garnis and court bouillon. Whole dried bay leaves are usually added to a dish at the start of cooking, then removed when sufficient flavor has been extracted.

Chervil (*Fr. cerfeuil*), also known as sweet cicely, is native to Russia and the Middle East. Its lacy, fern-like leaves can be used as a garnish. Chervil's flavor is delicate, similar to parsley but with the distinctive

MISE EN PLACE

- Cut beef shank into pieces.
- Peel and chop onions, carrots and celery for mirepoix.
- Wash and peel turnips and leeks and cut into medium dice.
- Wash, peel, seed and dice tomatoes.
- Prepare herb sachet.

◀ Mise en Place

French for "put in place," this feature accompanying in-chapter recipes provides a list of what you must do before starting a recipe, such as preheating the oven, chopping nuts or melting butter.

▼ Icons

Icons identify recipes that are vegetarian, vegan or good choices for health-conscious diners.

♥ Good Choice ✓ Vegan

🌿 Vegetarian

Line Drawings ▶

Detailed line drawings illustrate tools and equipment without brand identification. Other drawings depict the skeletal structure of meat animals, fish and poultry.

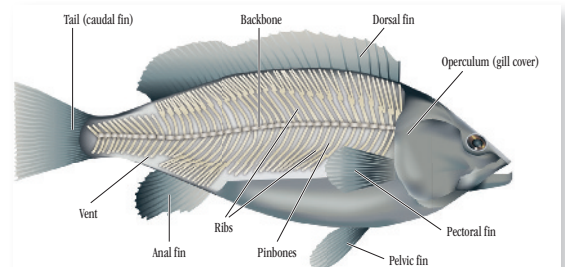


Figure 20.1 Bone structure of a round fish.

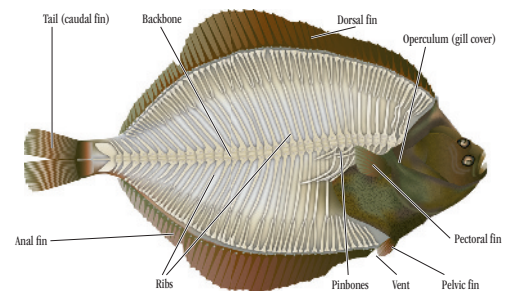


Figure 20.2 Bone structure of a flatfish.

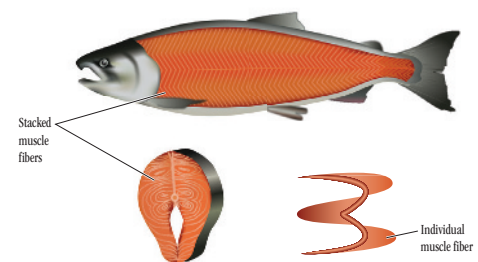


Figure 20.3 Muscle fibers in a round fish.

Recipes

Measurements

All recipes include both U.S. and metric measurements. To aid in teaching scaling and consistent baking practices, we also provide metric equivalents for all temperatures, pan sizes and measurements throughout the text. Baking recipes include measurements in baker's percentage, which is fully explained in Chapter 30, Principles of the Bakeshop.

Variations

Recipe variations show how to modify recipe ingredients to create new dishes.

Nutritional Analysis

All recipes include a nutritional analysis prepared by a registered dietician.


Illustrations

Recipes are illustrated with both sequential photos showing the preparation of dishes and many finished-dish photos that show presentation ideas.

Chocolate Cherry Scones

Houston Community College, Houston, TX
Pastry Chef Eddy Van Damme




YIELD	24 Scones, approx. 4¼ oz. (130 g) each	METHOD	Biscuit
Unsalted butter, cold	14 oz.	420 g	44%
Granulated sugar	4 oz.	120 g	12.5%
Buttermilk	8 fl. oz.	240 ml	25%
Sour cream	1 lb.	480 g	50%
Salt	0.6 oz. (1 Tbsp.)	18 g	2%
Vanilla extract	0.5 fl. oz. (1 Tbsp.)	15 ml	1.5%
All-purpose or pastry flour	2 lb.	960 g	100%
Baking powder	2 oz.	60 g	6%
Dried cherries	1 lb.	480 g	50%
Chocolate chunks	9 oz.	270 g	28%
Total dough weight:	6 lb. 6 oz.	3063 g	319%



- Chill a mixer bowl and paddle attachment in the freezer for at least 15 minutes before mixing.
- Cut the butter into 1-inch (2.5-centimeter) cubes. Set aside in the refrigerator.
- Whisk together the sugar, buttermilk, sour cream, salt and vanilla extract in a bowl until smooth. Set aside in the refrigerator.
- Put the flour and baking powder in the chilled mixer bowl. Place the butter on top. Mix on low speed using the paddle attachment until the mixture resembles coarse meal.
- Add the buttermilk mixture to the dry ingredients and mix very briefly, until just combined. Mix in the cherries and chocolate until just combined.
- Scale the dough into three uniform pieces. On a lightly floured surface, press each piece of dough out into an 8-inch (20.5-centimeter) disk using a metal torte ring or other form as a guide.
- Cut each disk of dough into eight wedges. Position the wedges of dough spaced 2 inches (5 centimeters) apart on parchment-lined baking sheets. Bake at 375°F (190°C) until light golden brown, approximately 18–24 minutes. When cool, dust with powdered sugar if desired.

Variation:
Cinnamon Orange Scones—Omit the sun-dried cherries and chocolate chunks. Add 0.5 ounce (2 tablespoons/15 grams/1.5%) ground cinnamon and 0.2 ounce (1 tablespoon/6 grams/0.6%) grated orange zest in Step 3. Yield is reduced to 4 pounds 15 ounces (2313 grams).

Approximate values per 4¼-oz. (130-g) scone: **Calories** 430, **Total fat** 21 g, **Saturated fat** 13 g, **Cholesterol** 45 mg, **Sodium** 550 mg, **Total carbohydrates** 58 g, **Protein** 6 g, **Vitamin A** 25%, **Calcium** 20%, **Iron** 15%

1 Mixing in the chilled butter. 2 Adding the chilled buttermilk mixture. 3 Placing the portioned dough on baking sheets.



Finished dish photos illustrate ways to present the recipes.

Sidebars

Sidebars present information on food history, food in culture, sustainability and the background of professional foodservice. These sidebars help you understand the culinary arts in a wider social context.

Questions for Discussion

Questions for Discussion, which appear at the end of each chapter, encourage you to integrate theory and technique into a broader understanding of the material.

Affordable Purchase Options for Students

Print: *On Cooking*, Seventh Edition is available as a hard-cover text through an affordable, rent-to-own option.

eTextbooks: This text is also available in multiple eBook formats. These are a great choice for busy students interested in saving money. As an alternative to renting or purchasing the printed textbook, students can purchase an electronic version that includes all of the same content. Pearson eTextbook is an easy-to-use digital text. It lets students customize how they study and learn with enhanced search functions and the ability to create flashcards, highlight passages, add notes and listen to the audio version all in one place. The mobile app lets students learn wherever life takes them, offline or online. For more information on Pearson eTextbooks, visit www.pearsonplus.com.

MyLab Culinary: *On Cooking*, Seventh Edition is available in the premium digital offering known as MyLab Culinary. Read on to learn more about MyLab Culinary or visit www.myculinarylab.com.

Comprehensive Learning and Teaching Package

MyLab Culinary

MyLab Culinary is a dynamic, online teaching and learning tool that supports the many ways students learn. It enables students to study and master the content online on their own time and at their own pace. Media-rich, full of assignable interactive assessments, and complete with the Pearson Kitchen Manager online recipe management system, MyLab Culinary has it all.

Whether you're looking for a complete course management system or you just want to provide your students with the ultimate study guide, MyLab Culinary is the technology that provides an experience unrivalled in the industry. Its flexibility allows instructors to create a course that best suits the needs of their curriculum and their students.

Key features of MyLab Culinary include:

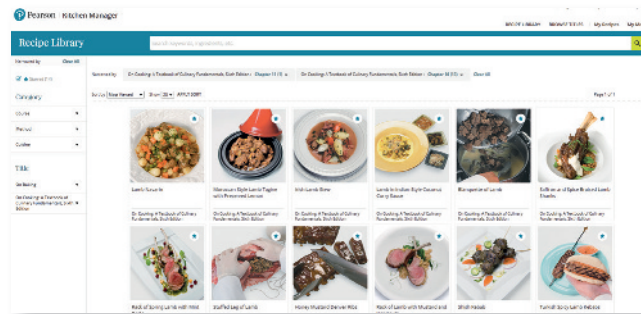
Embedded Pearson eTextbook—Every MyLab Culinary includes access to the Pearson eTextbook, so students can read and do homework in the same place. Note taking, highlighting, watching videos, creating flashcards, and listening to the audio narration of the entire book are just some of the things students love about Pearson eTextbook.

- New! MyLab Culinary features an enhanced version of Pearson eTextbook for the Seventh Edition. Additional capabilities include the ability for instructors to assign reading directly from MyLab and the integration of self-assessment questions for students.

The screenshot displays the MyLab Culinary homework interface for Chapter 14. At the top, it shows 'Chapter 14 Read & Learn' with a due date of 05/15/23 at 11:59 PM and a time limit of 4.0 minutes for 16 points. A 'Get Started' button is visible. On the right, there is a 'My Score' section showing 0/16 pts. The main content area lists tasks: 'eText 14.1: Primal and Subprimal Cuts of Beef' (Reading, 2:00 min, 0/1 pts), 'Question 1' (Question, 1:00 min, 0/1 pts), 'Question 2' (Question, 1:00 min, 0/1 pts), 'eText 14.2: Forequarter Primal Cuts of Beef' (Reading, 4:00 min, 0/1 pts), and 'Question 3' (Question, 1:00 min, 0/1 pts). A sidebar on the right indicates 'This assignment contains: 8 Readings, 8 Questions' and 'What you will learn' with bullet points: 'Identify the forequarter primal cuts of beef', 'Describe basic butchering procedures', and 'Explain appropriate cooking methods for the forequarter primal cuts of beef'.

Pearson Kitchen Manager—This online recipe management program comes pre-loaded with all of the recipes from On Cooking. The recipes can be scaled and edited, and new recipes can be added. Pearson Kitchen Manager can also be used to build menus, generate shopping lists and calculate estimated costs at the recipe or menu level.

- New for the Seventh Edition, Pearson Kitchen Manager has been enhanced with:
 - 300 bonus recipes not included in the textbook
 - A revamped recipe layout so recipes will print to as a few pages as possible
 - The ability for groups of students to share and edit a recipe

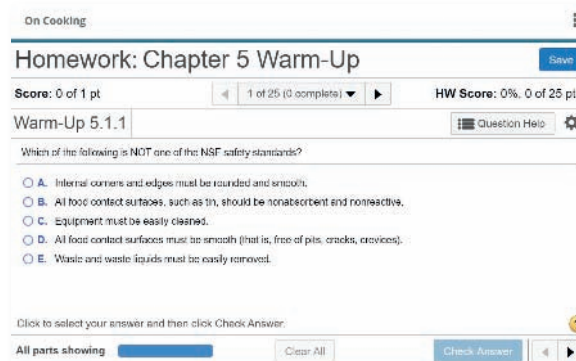


Instructional Videos—More than 140 video demonstrations reinforce fundamental culinary skills and procedures. These dynamic videos can be found embedded with the Pearson eTextbook, the MyLab Multimedia Library, and may be assigned within MyLab Culinary with provided questions as homework.

- New! Forty-three new videos have been produced for the Seventh Edition.

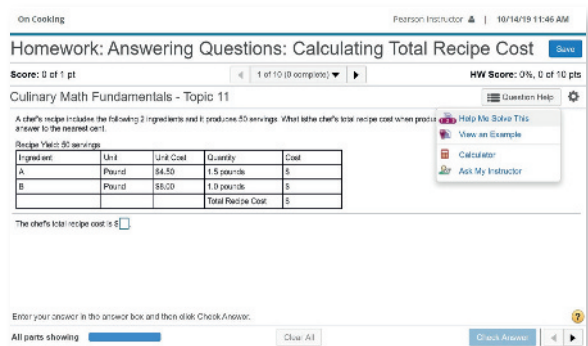


Practice Quizzes and Tests—A wealth of chapter resources provide a variety of homework options that help students master core knowledge and concepts. Exercises include Warm Up, Review, Tests and Video Quizzes.



Culinary Math Fundamentals—An entire “Chapter 0” dedicated to culinary math fosters the learning of essential math skills needed for success in the kitchen. This chapter features one model problem for 20 identified math concepts, and 10 practice problems for each concept. The Question Help feature takes a step-by-step approach to problem solving and encourages self-remediation. This is only available in MyLab Culinary.

- New culinary math problems have been added for most chapters in the text. These unique questions provide students the opportunity to apply their math skills throughout their coursework.



FOR THE STUDENT

Personalized Study Tools—Show students what they know, what they don't, and where to spend their time to fill the gaps.

Immediate Feedback—Delivers results on assignments and quizzes that helps keep students on track.

Mobile eTextbook—Allows students to read on their phone, laptop or tablet. They can pick up where they left off and learn on the go, anywhere and anytime, online and offline.

FOR THE INSTRUCTOR

Learning Management System (LMS) Integration—Instructors can link from Blackboard Learn, Brightspace by D2L, Canvas, or Moodle to MyLab Culinary allowing easy access to assignments, rosters, resources, and grades with the LMS gradebook.

Powerful Homework and Test Manager—Instructors can create, import and manage online homework assignments, quizzes and tests that are automatically graded. A wide range of assignment options, including time limits, proctoring and maximum number of attempts allowed.

Robust Gradebook Tracking—Student performance is automatically delivered to the gradebook. Item Analysis provides trends such as the number of students who answered correctly/incorrectly, time on task and more.

Flexibility—MyLab allows instructors to easily add, remove, or modify existing instructional material. You can also add your own course materials to suit the needs of your students or department.

Easily Scalable and Shareable—MyLab enables the management of multiple class sections, and lets other instructors copy settings so a standardized syllabus can be maintained across the department.

INSTRUCTOR SUPPLEMENTS

As with previous editions, a full set of instructor supplements is available to accompany the Seventh Edition of *On Cooking*. Instructors can download supplementary materials online at www.pearson.com. Simply search author, title, ISBN or key word(s). Once you have found your text, click “I’m an educator” and then “Instructor Resources”. Next, sign in to your Pearson account or, if you are a new user, create an account as directed.

Instructor’s Manual

The Instructor’s Manual includes chapter outlines, learning objectives, key terms, performance-based learning activities, lesson plans, and answers to end-of-chapter Questions for Discussion.

PowerPoint Lecture Presentations

This comprehensive set of slide decks can be used by instructors for class presentations or by students for lecture preview or review. There is a presentation for each chapter, including a selection of full-color photographs from the book.

TestGen (Computerized Test Bank)

TestGen contains text-based questions in a format that enables instructors to choose questions for creating their own examinations.

ON COOKING

A TEXTBOOK OF CULINARY FUNDAMENTALS

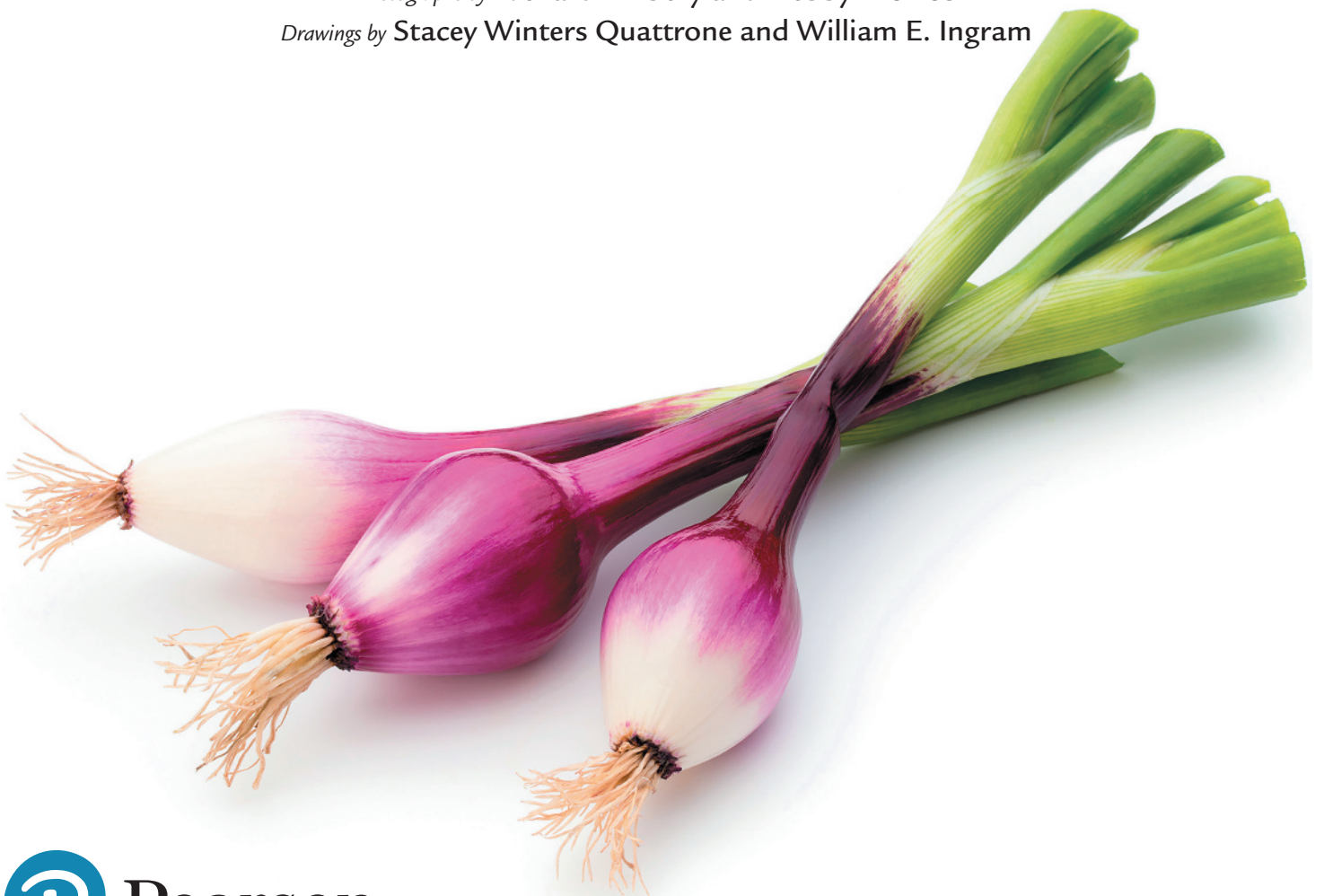
SEVENTH EDITION

SARAH R. LABENSKY

ALAN M. HAUSE

PRISCILLA A. MARTEL

Photographs by Richard Embery and Debby Wolvos
Drawings by Stacey Winters Quattrone and William E. Ingram



Content Production: Shruti Joshi
Product Management: Derril Trakalo
Rights and Permissions: Jenell Forschler

Please contact <https://support.pearson.com/getsupport/s/> with any queries on this content

Cover Image by Gita Kulinica/123rf.com

Copyright © 2025, 2019, 2015 by Pearson Education, Inc. or its affiliates. All Rights Reserved.

Manufactured in the United States of America. This publication is protected by copyright, and permission should be obtained from the publisher prior to any prohibited reproduction, storage in a retrieval system, or transmission in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise. For information regarding permissions, request forms, and the appropriate contacts within the Pearson Education Global Rights and Permissions department, please visit www.pearsoned.com/permissions/.

Acknowledgments of third-party content appear on page 1205, which constitutes an extension of this copyright page.

PEARSON, ALWAYS LEARNING, and MyLab Culinary are exclusive trademarks owned by Pearson Education, Inc. or its affiliates in the U.S. and/or other countries.

Unless otherwise indicated herein, any third-party trademarks, logos, or icons that may appear in this work are the property of their respective owners, and any references to third-party trademarks, logos, icons or other trade dress are for demonstrative or descriptive purposes only. Such references are not intended to imply any sponsorship, endorsement, authorization or promotion of Pearson's products by the owners of such marks, or any relationship between the owner and Pearson Education, Inc., or its affiliates, authors, licensees or distributors.

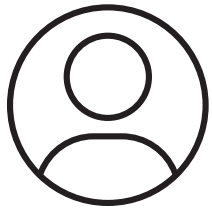
Library of Congress Cataloging-in-Publication Data

Names: Labensky, Sarah R., author. | Hause, Alan M., author. | Martel, Priscilla A., author.
Title: On cooking: A textbook of culinary fundamentals / Labensky Sarah R, Hause Alan M., Priscilla A. Martel.
Other titles: Textbook of culinary fundamentals
Description: Seventh edition. | NY, NY : Pearson, [2025] | Includes index.
Identifiers: LCCN 2023027396 | ISBN 9780138091163 (casebound) | ISBN 9780138091255 (ebook) | ISBN 9780138091248 (ebook other)
Subjects: LCSH: Cooking—Textbooks.
Classification: LCC TX651 .L328 2023 | DDC 641.5—dc23/eng/20230710
LC record available at <https://lccn.loc.gov/2023027396>

ScoutAutomatedPrintCode



ISBN 10: 0-13-809116-1
ISBN 13: 978-0-13-809116-3



Pearson's Commitment to Diversity, Equity, and Inclusion

Pearson is dedicated to creating bias-free content that reflects the diversity, depth, and breadth of all learners' lived experiences.

We embrace the many dimensions of diversity, including but not limited to race, ethnicity, gender, sex, sexual orientation, socioeconomic status, ability, age, and religious or political beliefs.

Education is a powerful force for equity and change in our world. It has the potential to deliver opportunities that improve lives and enable economic mobility. As we work with authors to create content for every product and service, we acknowledge our responsibility to demonstrate inclusivity and incorporate diverse scholarship so that everyone can achieve their potential through learning. As the world's leading learning company, we have a duty to help drive change and live up to our purpose to help more people create a better life for themselves and to create a better world.

Our ambition is to purposefully contribute to a world where:

- Everyone has an equitable and lifelong opportunity to succeed through learning.
- Our educational content accurately reflects the histories and lived experiences of the learners we serve.
- Our educational products and services are inclusive and represent the rich diversity of learners.
- Our educational content prompts deeper discussions with students and motivates them to expand their own learning (and worldview).

Accessibility

We are also committed to providing products that are fully accessible to all learners. As per Pearson's guidelines for accessible educational Web media, we test and retest the capabilities of our products against the highest standards for every release, following the WCAG guidelines in developing new products for copyright year 2022 and beyond.



You can learn more about Pearson's commitment to accessibility at

<https://www.pearson.com/us/accessibility.html>

Contact Us

While we work hard to present unbiased, fully accessible content, we want to hear from you about any concerns or needs with this Pearson product so that we can investigate and address them.



Please contact us with concerns about any potential bias at

<https://www.pearson.com/report-bias.html>



For accessibility-related issues, such as using assistive technology with Pearson products, alternative text requests, or accessibility

documentation, email the Pearson Disability Support team at disability.support@pearson.com



Pearson

About the Authors



SARAH R. LABENSKY

Chef Sarah is a culinary educator and academic administrator with an extensive background as a restaurateur and caterer, textbook author and dedicated advocate for culinary professionalism. She was a professor at Woosong University's Sol International Culinary Arts School in Daejeon, Korea and Founding Director of the Culinary Arts Institute at Mississippi University for Women (MUW) in Columbus, Mississippi. While living in Mississippi, she owned two restaurants and worked as food and beverage director for a country club. Chef Sarah has also taught culinary arts at Scottsdale (Arizona) Community College, Piedmont Virginia Community College (Charlottesville) and spent many years as a working pastry cook and caterer before teaching.

In addition to *On Cooking*, Sarah Labensky is also co-author of *On Baking*, *Webster's New World Dictionary of Culinary Arts* and *Applied Math for Food Service*. She is a past president of the International Association of Culinary Professionals (IACP) and a member of the Southern Foodways Alliance and Les Dames d'Escoffier.

Sarah's passions include travel and mentoring young culinarians to help develop their own professional paths.



ALAN M. (SKIP) HAUSE

Chef Skip is a graduate of the Culinary Institute of America in Hyde Park, New York. Upon graduation, Chef Skip worked in both restaurants and hotels before settling in Arizona. For the past 27 years, he has owned and operated Fabulous Food Fine Catering and Events. He also launched and operates Gertrude's restaurant at the Desert Botanical Garden in Phoenix, Arizona. Chef Skip is involved in day-to-day food production, planning and execution of catered events as well as overseeing restaurant operations. A long-time member of the American Culinary Federation, Chef Skip is passionate about all aspects of food and cooking. He enjoys mentoring students and cooks, is active in the Careers through Culinary Arts Program (C-Cap) and is a board member of the East Valley Institute of Technology Culinary Program.

When not working in the kitchen, Chef Skip pursues his passions entertaining friends, traveling, hiking, biking (both motor and pedal) and, of course, anything to do with food. Chef Skip lives in Scottsdale, Arizona and summers in Kalispell, Montana, with his wife, Chantal, and sons, Logan and Grayson.



PRISCILLA A. MARTEL

Priscilla Martel is a professional chef, educator and food writer with a special interest in Mediterranean cuisines and artisan baking. She honed her cooking skills at Restaurant du Village, a country French restaurant she owned in Chester, Connecticut. Today she operates All About Food, which holds baking patents and collaborates with food manufacturers and restaurants to create innovative products and marketing programs.

She is a visiting instructor at Boston University's certificate program in the culinary arts and in the Hospitality Management Program at Gateway Community College in New Haven, Connecticut. She is also a contributing writer for food trade publications and a consultant to the almond industry. To honor her commitment to help young people prepare for their culinary careers, Priscilla Martel volunteers with the Jacques Pépin Foundation, which provides culinary training for those with barriers to employment. She is co-author of *On Baking* and *Math for Bakers* (DVD).

Brief Contents

Professionalism

1 Professionalism	1
2 Food Safety and Sanitation	17
3 Nutrition and Healthy Cooking	39
4 Menus and Recipes	65

Preparation

5 Tools and Equipment	87
6 Knife Skills	111
7 Flavors and Flavorings	125
8 Dairy Products	165
9 Mise en Place	183

Cooking

10 Principles of Cooking	195
11 Stocks and Sauces	223
12 Soups	279
13 Principles of Meat Cookery	317
14 Beef	353
15 Veal	381
16 Lamb	403
17 Pork	423
18 Poultry	447
19 Game	499

20 Fish and Shellfish	511
21 Eggs and Breakfast	583
22 Vegetables	617
23 Potatoes, Grains and Pasta	689

Garde Manger

24 Salads and Salad Dressings	741
25 Fruits	781
26 Plant-Based Cooking	817
27 Sandwiches	837
28 Charcuterie	859
29 Hors d'Oeuvre	893

Baking

30 Principles of the Bakeshop	923
31 Quick Breads	951
32 Yeast Breads	969
33 Pies, Pastries and Cookies	1003
34 Cakes and Frostings	1049
35 Custards, Creams, Frozen Desserts and Dessert Sauces	1089

Presentation

36 Plate Presentation	1119
37 Buffets	1137

Contents

Professionalism

1 Professionalism _____ 1

HISTORICAL DEVELOPMENT OF THE RESTAURANT INDUSTRY 2

- The 18th Century—The First Restaurants 2
- The Early 19th Century—Carême and *Grande Cuisine* 3
- The Late 19th Century—Escoffier and *Cuisine Classique* 4
- The Mid-20th Century—Point and *Nouvelle Cuisine* 5
- The Late 20th and Early 21st Centuries—An American Culinary Revolution 5
- Global Foods, Local Ingredients 6
- Modernist Cuisine 7

CHARACTERISTICS OF THE MODERN FOOD SERVICE OPERATION 7

- Culinary Technologies 8
- Food Supplies 8
- Consumer Concerns 9

ORGANIZATION OF CLASSIC AND MODERN KITCHENS 12

ATTRIBUTES OF SUCCESSFUL CULINARY PROFESSIONALS 12

- Knowledge 13
- Skill 13
- Taste 13
- Judgment 13
- Dedication 13
- Pride 14

PROFESSIONAL ETHICS 14

CULINARY CAREERS 15

- Hospitality Groups 15
- Alternative Careers 15

2 Food Safety and Sanitation _____ 17

SANITATION 18

DIRECT BIOLOGICAL CONTAMINANTS 18

- Bacteria 19
- Parasites 23
- Viruses 23
- Fungi 24

DIRECT CHEMICAL CONTAMINANTS 25

- Residual Chemicals 25
- Food Service Chemicals 25
- Toxic Metals 26

PHYSICAL CONTAMINANTS 26

PROCEDURES TO PREVENT CROSS-CONTAMINATION 26

- Personal Cleanliness 27
- Dish and Equipment Cleanliness 28
- Proper Food Storage 30
- Food Labeling 31
- Pest Management 31

HAZARD ANALYSIS CRITICAL CONTROL POINTS (HACCP) SYSTEMS 32

FOOD ALLERGIES AND INTOLERANCES 35

GUIDELINES FOR PROTECTING HYPERSENSITIVE GUESTS 35

THE SAFE AND SANITARY WORK ENVIRONMENT 36

- Personal Safety 36
- Fire Safety 37
- First Aid 37

3 Nutrition and Healthy Cooking _____ 39

NUTRITION BASICS 40

ESSENTIAL NUTRIENTS 41

- Carbohydrates 41
- Lipids 42
- Proteins 43
- Vitamins 43
- Minerals 45
- Water 45
- Phytochemicals 46
- Controlling the Concentration and Retention of Vitamins, Minerals and Phytochemicals 47

DIET-PLANNING TOOLS FOR HEALTHY EATING 47

- Dietary Guidelines for Americans 47
- MyPlate 48
- Nutrition Labeling 48
- Menu Labeling 49
- Government Oversight 49

PRINCIPLES OF HEALTHY COOKING 50

- Portion Size 50
- Rethinking the Center of the Plate 51
- Healthful Cooking Techniques and Menu Planning 52

RECIPE MODIFICATION TO ACHIEVE DIETARY GOALS 53

- Reduce, Replace or Eliminate 53
- Modifying Recipes 54

ACCOMMODATING SPECIAL DIETS 56

- Low-Sodium Diets 57
- Low-Sugar Diets 57
- Low-Fat Diets 59
- Dairy-Free Diets 60
- Gluten-Free Diets 61
- Allergen-Free Diets 62
- Nutritional Analysis of Recipes 63

4 Menus and Recipes _____ 65

TYPES AND STYLES OF MENUS 66

- Types of Menus 66
- Menu Language 67

STANDARDIZED RECIPES 68

MEASUREMENTS AND CONVERSIONS 68

- Measurement Formats 68
- Measurement Systems 70
- Converting Grams and Ounces 70

CONVERTING RECIPE YIELDS AND PORTION SIZES 72

- Converting Total Yield 72
- Converting Portion Size 73
- Additional Conversion Problems 74

CALCULATING UNIT COSTS AND PERFORMING YIELD TESTS 74

Unit Costs 75
 Yield Tests 75
 Using Yield Percentages 78
 Cooked Yield Tests 79

RECIPE COSTS AND SELLING PRICES 79

Recipe Cost 79
 Selling Price 81

CONTROLLING FOOD COSTS 82

Menu 83
 Purchasing and Ordering 83
 Receiving 83
 Storing 83
 Issuing 83
 Kitchen Procedures: Establishing Standard Portions 84
 Kitchen Procedures: Managing Waste 84
 Sales and Service 84

WRITING RECIPES FOR PUBLICATION 85

Elements of a Recipe Written for Publication 85
 Other Considerations When Crafting a Recipe for Publication 86

Preparation

5 Tools and Equipment 87

KNIVES 88

Knife Construction 88
 Knife Shapes and Sharpening Equipment 89
 Japanese Knives 90

HAND TOOLS 91**MEASURING AND PORTIONING DEVICES 92****COOKWARE 94**

Cookware Metals and Heat Conduction 94
 Other Cookware Materials 95
 Nonstick Coatings 96
 Common Cookware 96

STRAINERS AND SIEVES 97**PROCESSING EQUIPMENT 99****HEAVY EQUIPMENT 101****STORAGE AND BUFFET EQUIPMENT 106**

Storage Equipment 106
 Buffet Equipment 106

SAFETY EQUIPMENT AND STANDARDS 107

Safety Equipment 107
 Standards for Tools and Equipment 108

CONSERVING ENERGY IN THE PROFESSIONAL KITCHEN 109

6 Knife Skills 111

USING KNIVES SAFELY 112**CARING FOR AND SHARPENING YOUR KNIVES 112****GRIPPING YOUR KNIFE 114****CONTROLLING YOUR KNIFE 114****USING YOUR KNIFE 115**

Slicing 115
 Chopping 117
 Cutting Sticks and Dicing 118

Mincing 122
 Turning Vegetables 122
 Making Parisiennes 123

USING SPECIALIZED CUTTING TOOLS 123

Using a Spiral Slicer 123
 Using a Mandoline 123

7 Flavors and Flavorings 125

THE SCIENCE OF FLAVOR AND TASTE 126

Tastes: Sweet, Sour, Salty, Bitter and Umami 126
 Factors Affecting Perception of Flavors 128

THE PRINCIPLES OF FLAVORING FOOD 130

Flavor Profiles 130
 Describing Aromas and Flavors in Food 131
 Classic Flavor Combinations 131
 Amplifying Flavors 133
 Experimenting with Flavor 133

IDENTIFYING AND USING HERBS AND SPICES 134

Herbs 134
 Spices 137
 Storing Herbs and Spices 143
 Using Herbs and Spices 143

IDENTIFYING AND USING SALTS 144**IDENTIFYING AND USING OILS 145****IDENTIFYING AND USING VINEGARS 147****IDENTIFYING AND USING CONDIMENTS 148****IDENTIFYING AND COOKING WITH WINES, BEERS AND DISTILLED SPIRITS 150**

Wines 150
 Beers 153
 Distilled Spirits 153
 Guidelines for Cooking with Alcoholic Beverages 156

FLAVOR PRINCIPLES OF INTERNATIONAL CUISINES 156

Culinary Migrations and Authenticity 161
 International Seasoning Blends 162

8 Dairy Products 165

MILK AND MILK PRODUCTS 166

Milk-Processing Techniques 166
 Concentrated Milks 167
 Cream 167
 Cultured Dairy Products 168
 Storage of Milk and Milk Products 170

CHEESE AND THE CHEESE-MAKING PROCESS 170**CHEESE VARIETIES AND CATEGORIES 171**

Fresh or Unripened Cheeses 171
 Soft Cheeses 174
 Semisoft Cheeses 174
 Firm Cheeses 176
 Hard Cheeses 177
 Goat's-Milk Cheeses 178

PROCESSED CHEESE 180**SERVING, STORING AND COOKING WITH CHEESE 180**

Serving Cheeses 180
 Storing Cheeses 181
 Cooking with Cheese 181

ANALOG MILK PRODUCTS 182

9 Mise en Place 183**MISE EN PLACE AND HOW TO USE PREP LISTS 184**

Creating a Prep List 185

Quantity Planning 186

SELECTING TOOLS AND EQUIPMENT 187**MEASURING INGREDIENTS 187****PREPARING INGREDIENTS NEEDED FOR COOKING 188**

Clarifying Butter 188

Toasting Nuts and Spices 189

Making Bread Crumbs 189

PREPARING SEASONING MIXTURES AND USING FLAVORING TECHNIQUES 189

Bouquets Garnis and Sachets 190

Marinades 190

Brines 191

Rubs and Pastes 191

Steeping 191

BREADING, BATTERING, BLANCHING AND PARBOILING 192

Breading 192

Battering 193

Blanching and Parboiling 193

Making an Ice Bath 194

Cooking**10 Principles of Cooking** 195**HEAT TRANSFER THROUGH CONDUCTION, CONVECTION AND RADIATION 196**

Conduction 196

Convection 197

Radiation 197

HOW HEAT AFFECTS FOOD 198

Proteins Coagulate 198

Starches Gelatinize 199

Sugars Caramelize 200

Water Evaporates 200

Fats Melt 200

DETERMINING DONENESS 200**INTRODUCTION TO THE BASIC COOKING METHODS 201****DRY-HEAT COOKING METHODS 201**

Broiling 203

Grilling 204

Roasting and Baking 205

Barbecue 206

Smoking 206

Sautéing 206

Stir-Frying 208

Pan-Frying 209

Deep-Frying 210

MOIST-HEAT COOKING METHODS 213

Poaching 213

Simmering 215

Boiling 215

Steaming 216

COMBINATION COOKING METHODS 217

Braising 218

Stewing 218

Sous Vide 219**11 Stocks and Sauces** 223**CLASSIFICATIONS OF STOCKS 224****INGREDIENTS FOR STOCKS 225**

Bones 225

Mirepoix 225

Seasonings 226

PRINCIPLES OF STOCK MAKING 227

White Stock 229

Brown Stock 231

Remouillage 233

Fish Stock and Fish Fumet 233

Vegetable Stock 234

Court Bouillon 235

Nage 236

Glaze 236

Infusion 237

PREPARING SAUCES USING THICKENING AND FINISHING TECHNIQUES 237

Thickening Agents for Sauces 238

Finishing Techniques for Sauces 242

CLASSIC FRENCH MOTHER SAUCES 243

The Béchamel Family 244

The Velouté Family 246

The Espagnole Family 248

The Tomato Sauce Family 251

The Hollandaise Family 253

TRADITIONAL SAUCES 255

Compound Butters 255

Beurre Blanc and Beurre Rouge 256

Pan Gravy 258

Pan Sauces 258

Broths 259

VEGETABLE AND FRUIT SAUCES 259

Salsa and Relish 259

Green Sauces 260

Coulis 261

Vegetable Juice Sauces 262

Foams 264

Flavored Oils 265

USING SAUCES 267**12 Soups** 279**CLASSIFICATIONS OF SOUP 280****BROTHS 281**

Broth-Based Soups 283

CONSOMMÉS 284

Clarifying Consommés 285

Correcting a Poorly Clarified Consommé 287

CREAM SOUPS 287**PURÉE SOUPS 289****BISQUES AND CHOWDERS 291****COLD SOUPS 293**

Cooked Cold Soups 294

Uncooked Cold Soups 295

GARNISHING SOUPS 296

Guidelines for Garnishing Soups 296

Garnishing Suggestions 296

SERVING SOUP 296

Reheating Soups for Service 297
 Temperatures 297
 Portion Sizes 298

13 Principles of Meat Cookery 317**MUSCLE COMPOSITION OF MEATS 318****MEAT INSPECTION AND GRADING PRACTICES 319****AGING MEATS 320**

Wet Aging 320
 Dry Aging 321

PURCHASING MEATS 321

IMPS/NAMP 321
 Grass-Fed Meats 322

STORING MEATS 322**PREPARING MEATS FOR COOKING 323**

Tying and Trussing 323
 Barding 324
 Larding 324

DRY-HEAT COOKING METHODS FOR MEATS 324

Broiling and Grilling 324
 Roasting 327
 Barbecue 333
 Sautéing 336
 Pan-Frying 338
 Deep-Frying 340

MOIST-HEAT COOKING METHODS FOR MEAT 340

Simmering 340

COMBINATION COOKING METHODS FOR MEATS 342

Braising 342
 Stewing 344
 Cooking *Sous Vide* 349

14 Beef 353**PRIMAL AND SUBPRIMAL CUTS OF BEEF 354****FOREQUARTER PRIMAL CUTS OF BEEF 354**

Chuck 354
 Brisket and Shank 356
 Rib 356
 Short Plate 356

HINDQUARTER PRIMAL CUTS OF BEEF 357

Short Loin 357
 Sirloin 357
 Flank 358
 Round 358

BEEF ORGAN MEATS 359**NUTRITIONAL INFORMATION FOR BEEF 359****BASIC BUTCHERING PROCEDURES FOR BEEF 359****COOKING METHODS FOR COMMON CUTS OF BEEF 362****15 Veal** 381**PRIMAL AND SUBPRIMAL CUTS OF VEAL 382****FORESADDLE PRIMAL CUTS OF VEAL 382**

Veal Shoulder 382
 Veal Foreshank and Breast 382
 Veal Rib 383

HINDSADDLE PRIMAL CUTS OF VEAL 384

Veal Loin 384
 Veal Leg 384

VEAL ORGAN MEATS 385

Sweetbreads 385
 Calves' Liver 385
 Veal Kidneys 385

PURCHASING VEAL 385**NUTRITIONAL INFORMATION FOR VEAL 385****BASIC BUTCHERING PROCEDURES FOR VEAL 386****COOKING METHODS FOR COMMON CUTS OF VEAL 391****16 Lamb** 403**PRIMAL AND SUBPRIMAL CUTS OF LAMB 404**

Lamb Shoulder 404
 Lamb Breast 404
 Lamb Rack 404
 Lamb Loin 405
 Lamb Leg 405

PURCHASING LAMB 406

Domestic vs. Imported Lamb 406
 Goat 406

NUTRITIONAL INFORMATION FOR LAMB 407**BUTCHERING PROCEDURES FOR LAMB 407****COOKING METHODS FOR COMMON CUTS OF LAMB 411****17 Pork** 423**PRIMAL AND SUBPRIMAL CUTS OF PORK 424**

Pork Shoulder 424
 Boston Butt 424
 Pork Belly 425
 Pork Loin 426
 Fresh Ham 427
 Hocks and Trotters 427

PURCHASING PORK 427**NUTRITIONAL INFORMATION FOR PORK 428****BUTCHERING PROCEDURES FOR PORK 428****COOKING METHODS FOR COMMON CUTS OF PORK 432****18 Poultry** 447**MUSCLE COMPOSITION AND STRUCTURE OF POULTRY 448****IDENTIFYING CATEGORIES AND CLASSES OF POULTRY 450**

Chicken 450
 Duck 452
 Goose 452
 Guinea Fowl 452
 Pigeon 452
 Turkey 452
 Ratites 452
 Livers, Gizzards, Hearts and Necks 453
 Foie Gras 453

NUTRITIONAL INFORMATION FOR POULTRY 453**INSPECTION AND GRADING OF POULTRY 453**

PURCHASING AND STORING POULTRY 454

Free-Range Poultry 454
 Air-Chilled Poultry 455
 Storing Poultry 455

BUTCHERING PROCEDURES FOR POULTRY 455**DRY-HEAT COOKING METHODS FOR POULTRY 460**

Marinating Poultry 460
 Broiling and Grilling Poultry 461
 Roasting Poultry 463
 Poêléing Poultry 470
 Sautéing Poultry 471
 Pan-Frying Poultry 474
 Deep-Frying Poultry 476

MOIST-HEAT AND COMBINATION COOKING METHODS FOR POULTRY 477

Moist-Heat Cooking Methods: Poaching and Simmering Poultry 477
 Combination Cooking Methods: Braising and Stewing Poultry 479

19 Game _____ 499**FURRED OR GROUND GAME 500**

Antelope 500
 Bison (American Buffalo) 500
 Deer 501
 Wild Boar 501
 Rabbit 501

FEATHERED OR WINGED GAME 502

Partridge 502
 Pheasant 503
 Quail 503

NUTRITIONAL INFORMATION FOR GAME 503**PURCHASING AND STORING GAME 503****MARINATING FURRED GAME 503****COOKING METHODS FOR DIFFERENT TYPES AND CUTS OF GAME 504****20 Fish and Shellfish** _____ 511**STRUCTURE AND MUSCLE COMPOSITION OF FISH AND SHELLFISH 512****IDENTIFYING FISH 514**

Round Fish 514
 Flatfish 519

IDENTIFYING SHELLFISH 520

Mollusks 521
 Crustaceans 523

NUTRITIONAL INFORMATION FOR FISH AND SHELLFISH 526**PURCHASING AND STORING FISH AND SHELLFISH 527**

Purchasing Fish and Shellfish 527
 Storing Fish and Shellfish 530

FABRICATING PROCEDURES FOR FISH AND SHELLFISH 531**COOKING METHODS FOR FISH AND SHELLFISH 540**

Determining Doneness 541

DRY-HEAT COOKING METHODS FOR FISH AND SHELLFISH 541

Broiling and Grilling 541
 Baking 543
 Sautéing 545

Pan-Frying 547
 Deep-Frying 548

MOIST-HEAT COOKING METHODS FOR FISH AND SHELLFISH 550

Steaming 550
 Combination Cooking Methods 557
Sous Vide 557

SERVING RAW FISH AND SHELLFISH 558

Raw Fish and Shellfish Dishes 559
 Sushi and Sashimi 559

21 Eggs and Breakfast _____ 583**COMPOSITION OF EGGS 584****PURCHASING AND STORING EGGS 585**

Egg Products 586

NUTRITIONAL INFORMATION FOR EGGS 587**WHIPPED EGG WHITES 587****COOKING METHODS FOR EGGS 587****DRY-HEAT COOKING METHODS FOR EGGS 588**

Baking 588
 Sautéing 589
 Pan-Frying 593
 Griddling 594

MOIST-HEAT COOKING METHODS FOR EGGS 595

In-Shell Cooking (Simmering) 595
 Poaching 595

BREAKFAST AND BRUNCH 596

Breakfast Meats 597
 Griddlecakes 597
 Crêpes 598
 Cereals and Grains 600

IDENTIFY AND PREPARE COFFEE, TEA AND TISANES 602

Coffee 602
 Tea and Tisanes 605

22 Vegetables _____ 617**IDENTIFYING VEGETABLES 618**

Cabbages 618
 Fruit Vegetables 622
 Gourds and Squashes 627
 Greens 629
 Mushrooms and Truffles 630
 Onions 632
 Pods and Seeds 634
 Roots and Tubers 637
 Stalk Vegetables 640
 Baby Vegetables 643

NUTRITIONAL INFORMATION FOR VEGETABLES 643**PURCHASING AND STORING FRESH VEGETABLES 643**

Grading Vegetables 644
 Purchasing Vegetables 644
 Ripening Vegetables 644
 Storing Vegetables 644

PURCHASING AND STORING PRESERVED VEGETABLES 645

Irradiated Vegetables 645
 Canned Vegetables 645
 Frozen Vegetables 646
 Dried Vegetables 646

COOKING METHODS FOR VEGETABLES 646

Fiber Content and Vegetable Cookery 646
 Acid/Alkali Reactions and Vegetable Cookery 647
 Guidelines for Vegetable Cookery 648
 Determining Doneness of Vegetables 648
 Preserving Nutritional Qualities in Vegetables 649

DRY-HEAT COOKING METHODS FOR VEGETABLES 649

Broiling and Grilling 649
 Roasting and Baking 651
 Sautéing 652
 Stir-Frying 654
 Pan-Frying 654
 Pan-Roasting 655
 Deep-Frying 656

MOIST-HEAT COOKING METHODS FOR VEGETABLES 658

Blanching, Parboiling and Boiling 658
 Steaming 661
 Microwaving 663
 Combination Cooking Methods: Braising and Stewing Vegetables 664
 Puréeing Vegetables 665

PRESERVING VEGETABLES 667

Drying 667
 Pickling 667
 Fermenting 668

23 Potatoes, Grains and Pasta _____ 689**IDENTIFYING, PURCHASING AND STORING POTATOES 690**

Identifying Potatoes 690
 Nutritional Information for Potatoes 692
 Purchasing and Storing Potatoes 692

COOKING METHODS FOR POTATOES 693

Roasting and Baking 693
 Sautéing and Pan-Frying 696
 Deep-Frying 697
 Boiling 699

IDENTIFYING, PURCHASING AND STORING GRAINS 701

Identifying Grains 701
 Nutritional Information for Grains 706
 Purchasing and Storing Grains 706

COOKING METHODS FOR GRAINS 706

Simmering 707
 Risotto Method 708
 Pilaf Method 710
 Stir-Fried Rice 711

IDENTIFYING, PURCHASING AND STORING PASTA 713

Identifying Pasta 713
 Nutritional Information for Pasta 716
 Purchasing and Storing Pasta 716

MAKING FRESH PASTA 716

Filling Pasta 719

COOKING METHODS FOR PASTA 720

Boiling 720
 Accompaniments to Pasta 721

Garde Manger**24 Salads and Salad Dressings** _____ 741**IDENTIFYING SALAD GREENS 742**

Lettuce 742
 Chicory 743
 Other Salad Greens and Ingredients 744

NUTRITIONAL INFORMATION FOR SALADS 746**PURCHASING AND STORING SALAD GREENS 746****PREPARING SALAD GREENS 747**

Tearing and Cutting Salad Greens 747
 Washing Salad Greens 748
 Drying Salad Greens 748

SALAD DRESSINGS 748

Vinaigrette Dressings 749
 Mayonnaise-Based Dressings 750
 Emulsified Vinaigrette Dressings 753

TOSSED AND COMPOSED SALADS 754

Tossed Green Salads 755
 Composed Green Salads 756
 Garnishing Salads 757

BOUND SALADS 758

Bean, Grain and Pasta Salads 759
 Vegetable Salads 760

FRUIT AND GELATIN SALADS 761

Fruit Salads 761
 Gelatin Salads 761

25 Fruits _____ 781**IDENTIFYING FRUITS 782**

Berries 782
 Citrus 784
 Specialty Fruits 786
 Grapes 789
 Melons 789
 Pomes 791
 Stone Fruits 793
 Tropical Fruits 794

NUTRITIONAL INFORMATION FOR FRUITS 798**PURCHASING AND STORING FRESH FRUITS 798**

Grading 798
 Ripening 799
 Purchasing 799
 Storing 799

PRESERVING FRUITS 800

Irradiation 800
 Acidulation 800
 Canning 800
 Freezing 800
 Drying 801

JUICING FRUITS 801**COOKING METHODS FOR FRUITS 802**

Determining Doneness 802
 Dry-Heat Cooking Methods for Fruits 802
 Moist-Heat Cooking Methods for Fruits 806
 Making Fruit Preserves 808

26 Plant-Based Cooking _____ 817**PLANT-BASED EATING 818****INGREDIENTS FOR PLANT-BASED COOKING 819**

Soybean-Based Ingredients 819
 Other Popular Ingredients in Plant-Based Cooking 822
 Analog Foods 822

PRINCIPLES OF PLANT-BASED COOKING 823

Suggestions for Preparing Plant-Based Dishes 823
 Modifying a Recipe for Vegetarian and Vegan Diets 824

PLANT-FORWARD COOKING 826

27 Sandwiches _____ 837**SANDWICH INGREDIENTS 838**

Sandwich Breads 838

Sandwich Spreads 838

Sandwich Fillings 839

HOT AND COLD SANDWICHES 840

Hot Sandwiches 841

Cold Sandwiches 842

MISE EN PLACE FOR ASSEMBLING SANDWICHES MADE TO ORDER 844**PRESENTING AND GARNISHING SANDWICHES 845****28 Charcuterie** _____ 859**FORCEMEATS 860****EQUIPMENT FOR PREPARING FORCEMEATS 860****FORCEMEAT INGREDIENTS 861**

Meats 861

Fats 861

Binders 861

Seasonings 862

Garnishes 862

PREPARING FORCEMEATS 863

Country-Style Forcemeats 863

Basic Forcemeats 865

Mousseline Forcemeats 867

Quenelles 869

USING FORCEMEATS TO PREPARE TERRINES, PÂTÉS AND GALENTINES 869

Aspic Jelly 869

Terrines 870

Pâtés en Croûte 873

Galantines 875

USING FORCEMEATS TO PREPARE SAUSAGES 877

Sausage Meats 877

Sausage Casings 877

Equipment for Making Sausages 878

SALT CURING, BRINING AND SMOKING MEATS AND FISH 880

Salt Curing 880

Brining 880

Smoking 880

CURED PORK AND BEEF PRODUCTS 883**29 Hors d'Oeuvre** _____ 893**COLD HORS D'OEUVRE 894**

Canapés 894

Crudités 897

Dips 898

Caviar 899

Other Cold Hors d'Oeuvre 900

HOT HORS D'OEUVRE 900

Filled Pastry Shells 900

Skewers 900

Meatballs 901

Hors d'Oeuvre Wrapped in Cheese, Meat or Vegetables 902

Hors d'Oeuvre Wrapped in Dough 902

Other Hot Hors d'Oeuvre 905

ANTIPASTI, MEZZE, TAPAS AND ZAKUSKI 905**SERVING HORS D'OEUVRE 906**

Passed Hors d'Oeuvre 906

Buffet Service 907

Buffet Platters 907

Baking**30 Principles of the Bakeshop** _____ 923**BAKESHOP TOOLS AND EQUIPMENT 924****BAKESHOP INGREDIENTS 925**

Flours 925

Sugar and Sweeteners 929

Fats 933

Chemical Leavening Agents 934

Thickening Agents 935

Flavorings 936

Nuts 940

MEASURING INGREDIENTS IN THE BAKESHOP 943

Baker's Percentage 944

Calculating Baker's Percentage 945

MIXING METHODS 947**THE BAKING PROCESS 948**

Gases Form 948

Gases Are Trapped 948

Starches Gelatinize 949

Proteins Coagulate 949

Fats Melt 949

Water Evaporates 949

Sugars Caramelize 949

Carryover Baking 949

Staling 949

31 Quick Breads _____ 951**MIXING METHODS FOR QUICK BREADS 952**

Biscuit Method 953

Muffin Method 955

Creaming Method 957

FRYING QUICK BREADS 959**QUALITIES OF QUICK BREADS 960****32 Yeast Breads** _____ 969**YEAST 970**

Types of Yeast 970

Substituting Yeasts 971

Natural Yeast Leaveners: Sourdough Starter 972

PRODUCTION STEPS FOR YEAST BREADS 974

Step 1: Scaling the Ingredients 974

Step 2: Mixing and Kneading the Dough 974

Step 3: Fermenting the Dough 975

Step 4: Punching Down the Dough 976

Step 5: Portioning the Dough 976

Step 6: Rounding the Portions 976

Step 7: Make-Up: Shaping the Portions 976

Step 8: Proofing the Products 978

Step 9: Baking the Products 978

Step 10: Cooling and Storing the Finished Products 979

ROLLED-IN DOUGHS 983**QUALITIES OF YEAST BREAD 985**

33 Pies, Pastries and Cookies _____ 1003**PIES AND TARTS 1004**

Crusts 1004
 Fillings 1011
 Assembling Pies and Tarts 1017
 Storing Pies and Tarts 1017

CLASSIC PASTRIES 1017

Puff Pastry 1017
 Éclair Paste 1021
 Meringue 1023

COOKIES 1025

Mixing Methods for Cookie Dough 1025
 Make-Up Methods for Cookies 1026
 Storing Cookies 1028

34 Cakes and Frostings _____ 1049**CAKE INGREDIENTS 1050****MIXING METHODS FOR CAKES 1051**

High-Fat Cakes 1051
 Whipped-Egg Cakes 1053

PANNING, BAKING AND COOLING CAKES 1060

Preparing Cake Pans 1060
 Filling Cake Pans 1060
 Baking Temperatures 1061
 Altitude Adjustments for Baking 1061
 Determining Doneness of Cakes 1062
 Cooling Cakes 1062

FROSTINGS 1063

Buttercream 1064
 Foam Frosting 1067
 Fudge Frosting 1068
 Fondant 1069
 Glaze 1069
 Royal Icing 1070
 Ganache 1070

ASSEMBLING AND DECORATING CAKES 1072

Assembling Cakes 1073
 Simple Decorating Techniques 1073
 Piping Techniques 1074

STORING CAKES 1078**35 Custards, Creams, Frozen Desserts and Dessert Sauces** _____ 1089**CUSTARDS 1090**

Stirred Custards 1090
 Baked Custards 1094
 Soufflés 1097

CREAMS 1099

Crème Chantilly 1099
 Bavarian Cream 1100
 Chiffon 1101
 Mousse 1102

FROZEN DESSERTS 1103

Ice Cream and Gelato 1104
 Sorbet and Sherbet 1106
 Still-Frozen Desserts 1106

DESSERT SAUCES 1107

Fruit Purées 1107

Caramel Sauce 1108
 Chocolate Syrup 1108

ASSEMBLING DESSERTS 1109**Presentation****36 Plate Presentation** _____ 1119**PRESENTATION TECHNIQUES FOR FOODS 1120**

Preparing Foods Properly 1120
 Cutting Foods 1121
 Molding Foods 1122

PRESENTATION TECHNIQUES FOR THE PLATE 1123

Choosing Plates 1123
 Arranging Foods on Plates 1124
 Decorating Plates 1128

PRESENTATION TECHNIQUES FOR BUFFETS 1131

Arranging Food on Serving Pieces 1131

SMALL PLATES 1132**37 Buffets** _____ 1137**UNDERSTANDING BUFFETS 1138**

Planning the Buffet 1138
 Communicating the Plan 1140

DESIGNING BUFFETS 1141

Arranging the Tables 1142
 Arranging Items on the Buffet Table 1144

PRESENTING AND MAINTAINING BUFFETS 1145

Controlling Costs 1145
 Keeping Hot Foods Hot 1146
 Keeping Cold Foods Cold 1147
 Replenishing Foods 1147
 Serving the Guests 1147

Appendix I _____ 1149**TOP CAUSES OF FOOD-BORNE ILLNESS 1149****Appendix II** _____ 1150**MEASUREMENT AND CONVERSION CHARTS 1150****Appendix III** _____ 1152**TYPICAL YIELD PERCENTAGES FOR COMMON PRODUCE ITEMS 1152****Glossary** _____ 1153**Recipe Index** _____ 1173**Subject Index** _____ 1186**Credits** _____ 1205

Recipes

3 Nutrition and Healthy Cooking

Modified Beef Stroganoff
(Low-Calorie, Low-Fat) 56

8 Dairy Products

Crème Fraîche 168
Herb Cheese Spread 172
Ricotta Cheese 173
Fromage Fort 178
Classic Cheese Fondue 181

11 Stocks and Sauces

White Stock 230
Brown Stock 232
Fish Stock 233
Fish Fumet 234
Vegetable Stock 235
Court Bouillon 235
Dashi 237
 Vegan Dashi 237
Béchamel 245
 Vegan Béchamel 245
Small Béchamel Sauces
 Cheese 245
 Cream Sauce 245
 Mornay 245
 Nantua 246
 Soubise (Modern) 246
Velouté 246
Small Fish Velouté Sauces
 Bercy 247
 Cardinal 247
 Normandy 247
Allemande Sauce 247
Small Allemande Sauces
 Aurora 247
 Horseradish 248
 Mushroom 248
 Poulette 248
Suprême Sauce 248
Small Suprême Sauces
 Albufera 248
 Hungarian 248
 Ivory 248
Espagnole (Brown Sauce) 249
Demi-Glace 249
Vegetable Jus Lié 250

Small Brown Sauces
 Bordelaise 250
 Chasseur (Hunter's Sauce) 251
 Châteaubriand 251
 Chevreuil 251
 Madeira or Port 251
 Marchand de Vin 251
 Mushroom 251
 Périgieux 251
 Piquant 251
 Poivrade 251
 Robert 251
Tomato Sauce 252
Small Tomato Sauces
 Creole 253
 Spanish 253
 Milanaise 253
Hollandaise 254
Small Hollandaise Sauces
 Bèarnaise 254
 Choron 255
 Foyot 255
 Grimrod 255
 Maltaise 255
 Mousseline (Chantilly Sauce) 255
Recipes for Compound Butters
 Basil Butter 256
 Herb Butter 256
 Chile Lime Butter 256
 Lobster or Crayfish Butter 256
 Maître d'Hôtel Butter 256
 Red Pepper Butter 256
 Shallot Butter 256
Beurre Blanc 257
 Beurre Rouge 257
 Lemon-Dill 257
 Herb Butter Sauce 257
Pico de Gallo (Tomato Salsa) 260
 Pebre (Chilean Salsa) 260
Basil Pesto Sauce 261
 Walnut Pesto 261
 Sun-Dried Tomato Pesto 261
 Arugula and Pecan Pesto 261
Red Pepper Coulis 262
Carrot Juice Sauce 263
Thyme-Scented Celery Essence Online 264
Wild Mushroom Foam 266
Basil Oil 266
Shallot Curry Oil Online 269
Rich Brown Vegetable Stock 269
Hollandaise, Blender Method 269

Red-Wine Thyme Sauce Online 270
Horseradish Cream Sauce Online 270
Orange GASTRIQUE 270
 Citrus GASTRIQUE 270
 Orange Butter Sauce 270
Duxelles Sauce 270
Fresh Tomato Sauce for Pasta 271
Fresh Uncooked Tomato
 Sauce for Pasta 271
Mole 272
Bolognese Sauce 273
Citrus Beurre Blanc 274
Beer Beurre Blanc Sauce Online 274
Sorrel Sauce Online 274
Barbecue Sauce 274
Southeast Asian-Style
 Peanut Sauce 275
 Vegetarian Peanut Sauce 275
Coconut Sauce 275
Thai-Style Melon Salsa Online 276
Avocado Salsa Online 276
Tomatillo Salsa Verde 276
Chermoula (Moroccan-Style
 Herb Sauce) 276
Chimichurri Sauce 277
Spanish-Style Romesco Sauce 277
Mignonette Sauce 278
Nuoc Cham (Vietnamese-Style
 Dipping Sauce) 278
Persillade 278

12 Soups

Beef Broth 282
Hearty Vegetable Beef Soup 284
Beef Consommé 286
Cream of Broccoli Soup 288
Purée of Split Pea Soup 290
Shrimp Bisque 292
New England-Style Clam Chowder 293
Vichyssoise (Cold Potato-Leek Soup) 294
Fresh Peach and Yogurt Soup Online 295
Chilled Melon Soup Online 295
Gazpacho 299
Chicken and Sausage Gumbo 300
French Onion Soup 300
Chicken Soup with Matzo Balls Online 300

Recipes printed in red are only available online through Pearson Kitchen Manager within MyLab Culinary. Visit myculinarylab.com for details.

Tonkotsu Ramen	301	Italian-Style Country Meatballs	368	16 Lamb	
Tonkotsu Ramen Broth	302	Salisbury Steak	Online	Turkish-Style Spicy Lamb Kebabs	412
Miso Soup	303	Tournedos Rossini	Online	Vegan Spicy Kebabs	412
Phô Bo (Hanoi-Style Beef and Noodle Soup)	304	Minute Steak Dijonnaise	369	Shish Kebabs	413
Javier's Redfish Sopa	Online	Entrecôtes Bordelaise	Online	Broiled Lamb Kidneys	Online
Minestrone	305	Steak au Poivre (Pepper Steak)	370	Rack of Lamb with Mustard and Hazelnuts	414
Posole	306	Beef Fajitas	371	Rack of Lamb Persillé	414
Cream of Tomato Soup	307	Seared Beef Salad with Nuoc Cham, Greens and Herbs	372	Rack of Lamb with Mint Pesto	415
Cream of Wild Mushroom Soup	Online	Braised Oxtails and Barley Stew	373	Roast Rack of Lamb with Mint	Online
Cheddar and Leek Soup	308	Swiss Steak	374	Roast Leg of Lamb with Jalapeño	Online
Mulligatawny Soup	Online	Braised Short Ribs of Beef	375	Roast Loin of Colorado Lamb	Online
Potato Chowder with Hot Smoked Salmon	309	Orange-Scented Braised Short Ribs of Beef	375	Honey Mustard Denver Ribs	415
West African-Style Groundnut Soup	310	Ginger Braised Short Ribs of Beef	375	Stuffed Leg of Lamb	416
Sausage, White Bean and Kale Soup	311	Boeuf à la Ficelle (Beef Poached on a String)	Online	Lamb and Feta Hand Pie	417
Carrot Ginger Soup	312	Hungarian Goulash	376	Lamb Pie Appetizers	417
Callaloo with Crab	Online	Beef Stroganoff	376	Saffron and Spice Braised Lamb Shanks	418
Roasted Corn Chowder	313	Vaca Frita	377	Irish Lamb Stew	419
Vegan Roasted Corn Chowder	313	Beef Bourguignon	378	Winter Lamb Stew	Online
Wild Mushroom and Veal Soup	Online	Chili Con Carne	379	Lamb in Indian-Style Coconut Curry Sauce	420
Artichoke Soup	Online	Chili with Beans	379	Goat in Indian-Style Coconut Curry Sauce	420
Harvest Lobster and Corn Chowder	Online	Venison Chili	379	Moroccan-Style Lamb Tagine with Preserved Lemon	421
Borsch (Chilled Beet Soup)	314	Vegan Chili	379	Moroccan-Style Preserved Lemons	421
Chilled Cucumber and Yogurt Soup	315	Chili-Stuffed Baked Sweet Potatoes	379	Lamb Navarin	422
Chilled Cherry Soup	Online	Chili-Stuffed Bread Bowl	379		
Sopa de Ajo Blanco (Spanish-Style Cold Almond and Garlic Soup)	316	Texas Chili and Beans	Online		
		Carpaccio	380		
				17 Pork	
13 Principles of Meat Cookery				Carolina Barbecued Ribs	433
Grilled Lamb Chops with Herb Butter	326	15 Veal		Ale-Marinated Pork	433
Roast Prime Rib of Beef au Jus	330	Wood-Grilled Veal Chops with Basil Butter	393	Pork Chimichurri Kebabs	434
Pulled Pork Sandwiches	334	Weisswurst with Braised Red Cabbage and Rösti Potatoes	393	Roasted Fresh Ham	435
Sautéed Veal Scallops with White Wine Lemon Sauce	337	Roast Veal Loin	Online	Bourbon-Baked Ham	Online
Veal Schnitzel (Breaded Veal Cutlets)	339	Rosemary-Roasted Veal Chops	Online	Barbecued Spareribs	435
New England Boiled Dinner	341	Veal Kebabs	Online	Pork Loin with Prunes	436
Braised Brisket and Onions	344	Sautéed Veal Scallops with Calvados	394	Roasted Pork Loin with Peanut Sauce	Online
Brown Beef Stew	346	Veal Marsala	395	Cumin-Roasted Pork Tenderloin	Online
Blanquette of Lamb	348	Wild Mushroom Veal Marsala	395	Sautéed Pork Medallions with Red Pepper	Online
Sous Vide Short Ribs	351	Veal Cordon Bleu	396	Escalope de Porc à la Normande (Pork Scallops with Apples)	437
		Turkey or Chicken Cordon Bleu	396	Pork Tenderloin au Poivre	Online
		Veal Pojarski	397	Mie Goreng (Indonesian Fried Noodles with Pork)	Online
		Sweetbreads Grenoble	398	Nataing (Cambodian-Style Red Pork)	438
		Braised Veal "Sloppy Joes"	Online	Cambodian-Style Red Vegetarian Stir-Fry	438
Flat Iron Steak with Coffee and Cocoa	364	Sautéed Calves' Liver with Onions	399	Crispy Sweet and Sour Pork	Online
Korean-Style Beef Bulgogi	365	Veal Marengo	400	Pan-Fried Brined Pork Chops with Black Pepper Cream Gravy	439
Marinated London Broil	366	Ossobuco	401		
Châteaubriand	366	Stuffed Breast of Veal	Online		
Beef Wellington	367	Veal Fricassee	402		
Home-Style Meatloaf	368				

Tourtière (French Canadian-Style Pork Pie)	440	Roast Chicken with Mashed Potatoes and Natural Pan Gravy	487	Grilled Rosemary Quail	506
Thai-Style Tea-Smoked Ribs	441	Chicken Breast Sauté with Roasted Red Pepper Sauce	Online	Venison Medallions, Black Currant Sauce	Online
Stuffed Pork Chops	442	Tandoori-Style Chicken	488	Venison Medallions Grand Veneur	506
Choucroute	Online	Lemongrass Chicken Lettuce Wrap	489	Achiote-Basted Rack of Venison	Online
Cassoulet	Online	Bangkok-Style Deep-Fried Chicken Wings	490	Grilled Buffalo Steak	Online
Carnitas Tostada (Mexican-Style Pulled Pork and Corn Tortillas)	443	Asian-Style Chile Dipping Sauce	491	Citrus and Juniper Elk Loin	Online
Asian-Style Pork Belly	444	Chicken and Mushroom Crêpes with Sauce Mornay	491	Braised Rabbit with Orecchiette Pasta	507
Jambalaya	445	Chicken Curry	Online	Braised Rabbit with Chorizo	508
Cajun Spice Mix	445	Thai-Style Green Curry with Chicken and Eggplant	Online	Roast Pheasant with Cognac and Apples	509
Sous Vide Rosemary Garlic Pork Tenderloin	446	Coq au Vin	492	Pheasant Roasted with Cinnamon and Bacon	Online
18 Poultry		Chicken Cacciatore	Online	Braised Antelope in Sour Cream	Online
White Wine Marinade	460	Louisiana Chicken	Online	Venison and Black Bean Chili	510
Grilled Chicken Breast with Red Pepper Butter	462	Chicken with 40 Cloves of Garlic	Online	Grilled Quail with Balsamic Honey Glaze	Online
Grilled Marinated Chicken Breasts	463	Country Braised Chicken	Online	20 Fish and Shellfish	
Roast Turkey with Chestnut Dressing and Giblet Gravy	466	Braised Chicken with Apple Cider	Online	Broiled Black Sea Bass with Herb Butter and Sautéed Leeks	543
Poêlé of Chicken with Pearl Onions and Mushrooms	470	Chicken Stuffed with Spinach and Ricotta Cheese in Saffron Sauce	493	Baked Red Snapper	Online
Chicken Sauté with Onions, Garlic and Basil	473	Chicken Pot Pie	494	Baked Tilapia	544
Pan-Fried Chicken with Pan Gravy	475	Individual Chicken Pot Pies	494	Sautéed Halibut with Three-Color Peppers and Spanish Olives	546
Spicy Fried Chicken Tenders with Herb Buttermilk Dressing	476	Turkey Pot Pie	494	Pan-Fried Trout	548
Poached Chicken Breast with Tarragon Sauce	478	Roast Duckling	494	Deep-Fried Catfish Fillets with Tartar Sauce	549
Chicken Fricassee	481	Duck Confit	495	Steamed Salmon with Lemon and Olive Oil	552
Jamaican-Style Jerk Chicken	483	Duck Confit with Dirty Rice	Online	Red Snapper en Papillote	553
Cuban-Style Mojo Chicken	483	Duck à l'Orange	Online	Poached Salmon Fillet	555
Chilli Barbecued Chicken	Online	Kolanta Duck Salad	Online	Fillets of Sole Bonne Femme	556
Murgh Kebab (Chicken Kebab)	Online	Turkey Meatloaf	496	Boiled Lobster	Online
Chicken Yakitori	484	Turkey Scallopine with Capers and Lemon	496	Whole Roasted Red Snapper	Online
Roman-Style Free-Range Chicken	Online	Turkey Tonnato (Turkey in Tuna Sauce)	Online	Cajun-Grilled Trout	Online
Pan-Roasted Sonoma Free-Range Chicken	Online	Lavender and Spice-Crusted Duck Breast with Apricot Compote	497	Arctic Char with Orange Beurre Blanc	558
Grilled Cornish Game Hens with Basil Butter	484	Sautéed Chicken Livers	498	Nigiri Sushi	560
Roast Cornish Game Hen with Wild Rice Stuffing	485	Spiced Ostrich Tenderloin	498	Zushi (Sushi Rice)	561
Chicken Leg Stuffed with Mushrooms and Prosciutto	486	Grilled Ostrich Tenderloin with Yams	Online	Roasted Monkfish with Bacon and Garlic	562
Sous Vide Chicken Legs Stuffed with Mushrooms and Prosciutto	486	Squab Salad with Melon	Online	Teriyaki Salmon	563
Sautéed Chicken with Kentucky Bourbon	Online	Sautéed Foie Gras	Online	Oven-Fried Pecan Catfish	563
Spiced Chicken Cutlets	Online	Roast Goose with Cabbage and Apples	Online	Tropical Oven-Fried Catfish	563
Chicken Kiev	Online	Fried Frog Legs	Online	Pistachio-Crusted Salmon	Online
Chicken and Snow Peas in Black Bean Sauce	Online	19 Game		Oven-Roasted Spiced Salmon	Online
		Red Wine Marinade	504	Blue Crab Cakes	564
		Marinated Loin of Venison Roasted	Online	Pan Seared Diver Scallops	564
				Cha Ca (Hanoi-Style Fish with Dill)	565
				Red Snapper Veracruz	Online

Freshwater Shrimp Wrapped in Potato	Online	Steamed Mussels with Leeks and Carrots	575	Pecan Waffles	614
Pan-Seared Diver Scallops with Beet Vinaigrette	Online	Portuguese-Style Steamed Mussels	575	Dutch Baby Pancake	Online
Macadamia Nut-Crusted Halibut	Online	Mussels in Curry and Cream Sauce	Online	Cinnamon French Toast	615
Sesame Swordfish	Online	Spicy Sausage, Mussel and Clam Stew	Online	Baked Banana Praline French Toast	615
Seared Tuna with Jasmine Rice	Online	Paella	576	Orange French Toast	Online
Pan-Seared Sea Bass with Beet Vinaigrette	Online	Crawfish Étouffée	577	Oatmeal with Bananas and Almond Butter	615
Pan-Fried Trout with Toasted Garlic	Online	Soft-Poached Salmon with Root Vegetables and Pernod Beurre Blanc	578	Breakfast Grits	615
Pan-Seared Diver Scallops with Squash	Online	Pickled Shrimp	580	Cantonese-Style Congee	616
Scallops and Shrimp Sambuca	Online	Tuna Poke	581	Chicken or Pork Congee	616
Seared Diver Scallop	Online	Fin Fish Carpaccio with Lemon Thyme Vinaigrette	581	Frozen Cappuccino	Online
Miso-Glazed Broiled Black Cod	566	Norimaki Zushi	582	Chai Masala (Indian Spiced Tea with Milk)	Online
Salmon Croquettes	567				
Whole Sizzling Catfish	Online				
Poached Halibut with Chanterelles	Online	21 Eggs and Breakfast		22 Vegetables	
Chilled Poached Salmon Roulade	Online	Shirred Eggs with Ham	588	Grilled Vegetable Skewers	651
Steamed Bass with Sansho Pepper	Online	Quiche Lorraine	589	Grilled Sliced Vegetables	651
Stuffed Striped Bass Cartoccio	Online	Scrambled Eggs	590	Baked Butternut Squash, Cumin Yogurt and Pumpkin Seeds	652
Escolar with Eggplant and Carrot Purées	Online	Shrimp and Avocado Omelet	591	Sautéed Mushrooms with Garlic and Thyme	653
Lobster Thermador	Online	Asparagus Frittata with Goat Cheese and Parsley Radish Salad	593	Stir-Fried Baby Bok Choy	654
Paupiettes of Sole with Mousseline of Shrimp	568	Poached Eggs	596	Stir-Fried Asparagus with Shiitake	Online
Braised Shark with Lemon Pesto	Online	Buttermilk Pancakes	598	Fried Green Tomatoes with Shrimp and Creole	
Clams Casino	569	Blueberry Pancakes	598	Rémoulade	655
Oysters Rockefeller	570	Apple-Pecan Pancakes	598	Pan-Roasted Brussels Sprouts	656
Shrimp and Corn Sauté	Online	Crêpes	599	Beer-Battered Onion Rings	657
Shrimp with Olive Oil and Garlic	Online	Cheese Blintz	599	Green Beans with Herbed Vinaigrette and Toasted Hazelnuts	660
Shrimp Curry with Mango	Online	Savory Crêpes	599	White Bean Salad	661
Lobster à l'Américaine	Online	Savory Crêpes Florentine	599	Broccoli Amandine	662
Goan-Style South Indian Fish Curry	571	Crunchy Granola	601	Braised Celery with Basil	Online
Bouillabaisse (Provençal Fish Stew)	572	Southwestern Scrambled Eggs	Online	Gholpi (Afghan-Style Braised Cauliflower)	665
Rouille	572	Greek-Style Scrambled Eggs	Online	Parsnip Purée	666
Jumbo Lump Blue Crab and Langoustine Cake	Online	Rolled Soufflé	Online	Vegan Parsnip Purée	666
Coconut Shrimp	573	Shakshuka Eggs	609	Turnip or Sunchoke Purée	Online
Fried Oysters with Rémoulade Sauce	573	Fried Egg BLT Sandwich	609	Winter Squash Purée	666
Fried Calamari with Lemon, Olive and Pepper Relish	574	Eggs Benedict	610	Summer Vegetables with Tarragon Aioli	Online
Soft-Shell Crab Po'Boy Sandwich	Online	Poached Eggs Florentine	610	Swiss Chard with Lemon and Pine Nuts	Online
Shrimp Poached in Orange Juice	Online	Poached Eggs Norwegian Style	610	Inlagda Rødbetor (Swedish-Style Pickled Beets)	668
Grilled Soft-Shell Crabs	Online	Crabcake Eggs Benedict	610	Curtido (Salvadorian Fermented Cabbage Relish)	670
Chilled Shellfish Platter	Online	Garden Egg Benedict	610	Grilled Portabella Mushrooms	672
Steamed Scallops with Ginger	Online	Southern-Style Eggs Benedict	610	Grilled Baby Squash	Online
Maryland-Style Steamed Blue Crabs	574	Avocado, Bacon and Red Rice Breakfast Salad	611	Garlic Timbales	672
		Scotch Eggs	611	Broccoli or Cauliflower Timbales	672
		Pytt i Panna (Swedish Hash)	612	Mushroom and Manchego Timbales	Online
		Corned Beef Hash	Online		
		Buckwheat Crêpes with Sausage	Online		
		Tortilla Española (Spanish Egg and Onion Omelet)	613		
		Cheese Soufflé	614		
		Waffles	614		

Vegetable Strudel	Online	Giardiniera (Pickled Vegetables)	687	Potato Croquettes	726
Oven-Roasted Garlic	673	Baechu-Kimchi (Korean		Dauphine Potatoes	727
Fennel Gratin	673	Spicy Cabbage)	688	Lorette Potatoes	727
Arizona Baked Corn	Online			Potato Gnocchi	728
Scalloped Eggplant	Online	23 Potatoes, Grains and Pasta		Polenta	729
Baked Beans	674	Baked Potatoes	694	Creamy Polenta with Wild	
Boston-Style Baked Beans	674	Twice-Baked Potatoes	694	Mushrooms	730
Roasted Tomato, Onion		Gratin Dauphinois	695	Polenta Napoleon	Online
and Goat Cheese		Potato and Celery Root Gratin	695	Grits and Cheddar Soufflé	730
Frittatini	Online	Lyonnaise Potatoes	696	Jollof Rice	731
Mushroom and Leek Tart	674	Deep-Fried Potatoes	698	Saffron Rice	732
Maple-Glazed Carrots	675	Mashed Potatoes	700	Pilau (Indian-Style Rice Pilaf)	732
Duxelles	675	Garlic Mashed Potatoes	700	Red Rice	Online
Creamed Corn with Basil	Online	Horseradish Mashed Potatoes	700	Kimchi Fried Rice	732
Amish Corn Relish	Online	Mashed Sweet Potatoes or Rutabagas	700	Brown Rice with Spiced Pecans	Online
Ratatouille	676	Simmered Rice	708	Wild Rice and Cranberry Stuffing	733
Beet and Corn Salad	677	Coconut Jasmine Rice	708	Hoppin' John	734
Peas with Fennel and Bacon	Online	Risotto Milanese	709	Baked Barley with Mushrooms	Online
Sautéed Broccoli Rabe	677	Risotto with Radicchio (al Radicchio)	709	Quinoa, Beet, Squash and	
Pan-Fried Eggplant with		Risotto with Four Cheeses		Spinach Salad	734
Tomato Sauce	678	(al Quattro Formaggi)	709	Orzo and Herb Salad	Online
Stir-Fried Snow Peas	Online	Farro Risotto	709	Creamed Orzo and Leeks	Online
Tempura Vegetables with		Classic Rice Pilaf	710	Mushroom Ravioli	Online
Dipping Sauce	678	Spanish Rice	711	Fettuccine Alfredo	735
Panko Crust Tempura	679	Red Rice Pilaf	711	Fettuccine Carbonara	735
Shrimp Tempura	679	Bulgur Pilaf	711	Fettuccine con Pesto	Online
Deep-Fried Carrots or Leeks		Barley Pilaf	711	Macaroni and Cheese	736
for Garnishing	679	Thai-Style Fried Rice	712	Baked Macaroni and Cheese	736
Glazed Pearl Onions	680	Chinese-Style Fried Rice	712	Macaroni and Cheese with	
Mixed Bean Salad	Online	Forbidden Fried Rice	712	Ham and Tomato	736
Butternut Squash with		Basic Pasta Dough	717	Baked Ziti with Fresh Tomato Sauce	736
Black Beans	Online	Garlic-Herb Pasta Dough	717	Pepe Pasta with Shrimp	Online
Kabocha Squash Purée	681	Spinach Pasta Dough	717	Penne with Asparagus	Online
Red Beet Purée	681	Tomato Pasta Dough	717	Cappelletti in Brodo	Online
Carrot Ginger Purée	681	Chipotle Pasta Dough	Online	Spinach and Ricotta Lasagne	Online
Collard Greens	682	Château Potatoes	722	Vegetable Lasagna	737
Warm Zucchini, Red Pepper and Chickpea		Parisienne Potatoes and		Pad Thai	738
Salad	682	Noisette Potatoes	722	Soba Noodles with Chicken	
Red Beans and Rice with Andouille	683	Grilled Sweet Potatoes	Online	and Green Onions	739
Refried Beans	684	Roasted Fingerling Potatoes	723	Chilled Chinese-Style	
Spinach and Mushroom Crêpe	Online	Rosemary Roasted New Potatoes	Online	Noodle Salad	Online
Fennel and Mushrooms à		Scalloped Potatoes	723	Spaetzle	740
la Grecque	Online	Delmonico Potatoes	Online		
Stuffed Cabbage Rolls	Online	Spicy Sweet Potato and			
Braised Red Cabbage with Apples	684	Chestnut Gratin	Online		
Braised Romaine Lettuce	Online	Thyme and Swiss Cheese Potatoes	Online	24 Salads and Salad Dressings	
Braised Pumpkin	Online	Potato-Ginger Purée	Online	Basic Vinaigrette Dressing	750
Saag Paneer (Indian-Style		Truffle Mashed Potatoes	Online	Dijon Vinaigrette	750
Fresh Cheese with Greens)	685	Herbed Mashed Potatoes	Online	Herb Vinaigrette	750
Butter-Braised Honey Carrots	686	German-Style Potato Salad	724	Mayonnaise	752
Artichokes Hollandaise	Online	Potato Pancakes	724	Caesar Dressing	754
Artichokes Stuffed with		Rösti Potatoes	725	Mesclun Salad with	
Italian Sausage	Online	Cheddar Cheese Rösti Potatoes	725	Raspberry Vinaigrette	756
		Vegan Rösti Potatoes	725	Salad Niçoise	757
		Duchesse Potatoes	726		

Chutney Chicken Salad	759	Salad of Seared Ahi Tuna	Online	Jalapeño-Cranberry Relish	814
Ribbon Salad of Zucchini, Carrots, Green Beans and Tomatoes	760	Vine-Ripened Tomato Salad	Online	Mango Chutney	815
Tomato and Asparagus Salad	Online	Caprese Salad	772	Candied Citrus Peel	815
Molded Gazpacho Salad	763	Smoked Mushroom and Lentil Salad	Online	Compressed Fresh Watermelon	816
Molded Gazpacho Salad with Shrimp	763	Cobb Salad	773		
Caesar Salad for Tableside Service	Online	Greek Salad	773	26 Plant-Based Cooking	
Caesar Salad in a Garlic Tuile	Online	Ginger Soy Chicken Salad	Online	Vegan Stroganoff	825
Carrot Ginger Miso Dressing	764	New Potato Salad	Online	Cashew Cream	827
Raspberry Vinaigrette	764	Potato Salad	774	Crispy Fried Tofu	827
Fat-Free Vinaigrette	765	Creamy Coleslaw	774	Southwestern Black Bean Soup	828
Low-Fat Creamy Mustard Dressing	Online	Egg Salad	775	Falafel	828
Orange Soy Vinaigrette	Online	Tuna Salad	775	Falafel Sandwich	829
Blue Cheese Vinaigrette	765	Farro, White Bean and Cucumber Salad with Spiced Dressing	776	Grilled BBQ Portabella Mushroom Sandwich	Online
Poppy Seed Dressing	765	Couscous Salad	777	Veggie Wrap	Online
Sauce Gribiche	766	Tabouli	777	Cannellini Bean Relish	Online
Thousand Island Dressing	766	Raw Kale and Avocado Salad with Carrots, Raisins and Lemon Dressing	778	Tofu and Walnut Tabouli	829
Herb Buttermilk Dressing	767	Panzanella (Italian Bread Salad)	779	Spiced Bean Curd	Online
Green Goddess Dressing	Online	Cranberry Orange Gelatin Salad	779	Saffron Vegetable Risotto	Online
Roquefort Dressing	767	Garlic Croutons	780	Mushroom Bolognese	830
Low-Fat Blue Cheese Dressing	768			Polenta Vegetable Tart	831
Sun-Dried Tomato and Basil Aioli	Online	25 Fruits		Couscous with Seven Vegetables	832
Sherry Walnut Vinaigrette	768	Broiled Grapefruit	Online	Dal Bhat (Indian-Style Lentil Stew with Rice)	833
Tartar Sauce	768	Broiled Stone Fruit	803	Pan-Seared Tofu with Tomatoes, Capers and Olives	834
Aioli (Garlic Mayonnaise)	769	Warm Baked Peaches or Nectarines	803	Chia Bumbleberry Preserves	835
Black Garlic Aioli	769	Savory Fruit Compote	804	Chia Pudding	836
Chipotle Aioli	769	Apple Fritters	805		
Green Herb Aioli	769	Banana Fritters	805	27 Sandwiches	
Pesto Aioli	769	Pears Poached in Red Wine	806	Grilled Vegetable Sandwich	847
Wasabi Aioli	769	Dried Fruit Compote	807	Club Sandwich	848
Za'atar Aioli	769	Figs with Berries and Honey Mousse	Online	Fish Taco	848
Vegan Mayonnaise	769	Blackberry or Raspberry Preserves	809	Grouper Sandwich	Online
Vegan Olive Oil Mayonnaise	769	Peach Cobbler Preserves	809	Hamburger	849
Rémoulade Sauce	770	Mango, Pineapple and Strawberry Salad with Coconut Cream	810	Bacon Blue Cheeseburger	849
Creole Rémoulade	770	Pineapple Papaya Salsa	810	Mushroom Burger	849
Khira Raita (Cucumber-Yogurt Salad)	770	Tropical Fruit Salad	Online	Blended Mushroom Burger	849
Japanese-Style Cucumber Salad	Online	Watermelon and Cherry Salad with Fresh Mint Syrup	811	Crabcake Burger	849
Carrot Salad	771	Sweet Ricotta and Mascarpone Mousse	Online	Turkey Burger	850
Spinach and Edamame Salad	771	Gratin of Fresh Berries	Online	Grilled Red Snapper Burger	Online
Organic Microgreens and Spring Vegetables	Online	Baked Apples	811	Arugula, Capicola Ham and Provolone Panino	851
Salad of Sweet and Bitter Greens	Online	Grilled Fruit Kebabs	812	Cubano (Cuban Grilled Ham and Pork Sandwich)	851
Gemischter Salat (German Mixed Salad)	Online	Cherry Confit	812	Grilled Chicken, Avocado and Vegetable Wrap	852
Wilted Spinach Salad with Warm Bacon Dressing	772	Braised Rhubarb	813	Grilled Cheese with Arugula	Online
Curly Endive, Apple and Gorgonzola Salad	Online	Berry Compote	813	Southwestern Grilled Cheese Sandwich	Online
Winter White Salad	Online	Applesauce	814	Southwestern Grilled Chicken Wrap	Online
Pink Grapefruit and Avocado Salad	Online	Fresh Cranberry-Orange Relish	814		

Philly Cheese Steak Sandwich	Online	Galantine of Turbot and Lobster	Online	Tuna Tartare	918
Kentucky Hot Brown Sandwich	852	Chopped Chicken Liver	890	Samosas (Deep-Fried Indian-Style Turnovers)	919
Reuben Sandwich	853	Breakfast Sausage Patties	890	Vegetarian Samosas	919
Roast Beef and Blue Cheese Sandwich	Online	Tex-Mex Turkey Sausage	Online	Cha Gio (Deep-Fried Vietnamese-Style Spring Rolls)	920
Pan Bagnat (Provençal Tuna Sandwich)	853	Chorizo	891	Date and Chorizo Rumaki	921
Sabich (Israeli-Style Vegetable Sandwich)	854	Lamb Sausage with Tricolor Bean Salad	Online	Arancini (Deep-Fried Rice Balls)	921
Amba-Style Mango Sauce	855	Smoked Kielbasa	891	Stuffed Cherry Tomato Bites	922
Monte Cristo Sandwich	855	Gravlax	892		
Po' Boy	856				
Oyster Po' Boy	856				
Muffuletta Sandwich	857	29 Hors d'Oeuvre			
Olive Salad	857	Hummus	898	31 Quick Breads	
Roasted Beet and Goat Cheese Pita	Online	Lamb Satay	900	Country Biscuits	954
Egg Salad and Smoked Salmon Sandwich	Online	Rabbit and Shiitake Skewers	Online	Blueberry Muffins	956
Chicken, Pesto and Tomato Sandwich	Online	Swedish Meatballs	901	Cranberry Orange Muffins	956
Whole-Wheat Calzone	Online	Rumaki	902	Pecan Spice Muffins	956
Saucisson Tartine	858	Spanakopita	903	Cinnamon Sugar Muffins	957
Radish and Butter Tartine	858	Stuffed Wontons with Apricot Sauce	904	Chocolate Chip Walnut Muffins	957
Grilled Asparagus Tartine	858	Apricot Sauce	905	Whole Wheat, Flax and Seed Muffins	957
		Buckwheat Blini	908	Sour Cream Muffins	958
		Baked Wonton Crisps	908	Streusel Topping	959
		Chive Ginger Pancakes	Online	Hush Puppies (Deep-Fried Cornbread)	959
		Curried Chicken Canapés	Online	Chocolate Cherry Scones	961
		Poached Sea Scallop Canapés	Online	Cinnamon Orange Scones	961
		Tostaditas of Gulf Crab	Online	Cream Scones	Online
		Kalamata Olive and Asiago Crostini	Online	Shortcakes	Online
		Tortilla Cups with Grilled Chicken Pico de Gallo	909	Fresh Strawberry Shortcake	Online
		Baba Ghanoush	910	Basic Corn Muffins	962
		Tapenade	910	Southern-Style Cornbread	962
		Guacamole	911	Southwest-Style Cornbread	962
		Pimento Cheese and Olive Crostini	911	Morning Glory Muffins	962
		Clam Dip	Online	Basic Bran Muffins	963
		Spinach and Artichoke Dip	912	Pumpkin Muffins	Online
		Brandade de Morue (French-Style Salt Cod Spread)	913	Lemon Poppy Seed Muffins	963
		Sautéed Garlic Croutons	913	Berry Brown Butter Coffee Cake	964
		Grilled Shrimp with Prosciutto	Online	Coconut Lime Loaf	964
		Stuffed Figs with Taleggio and Orange Basil Glaze	914	Zucchini Bread	965
		Tricolor Potato Canapés	Online	Blue Corn Muffin	Online
		Stuffed Mushroom Caps	914	Lemon Tea Bread	Online
		Pork Belly Bao Buns	915	Sour Cream Coffeecake	966
		Escargots in Garlic Butter	Online	Popovers	967
		Rosemary and Garlic Grilled Shrimp	Online	Onion Popovers	967
		Pupusas	916	Lavosh Flatbread Crackers	968
		Chèvre Tarts	917		
		Seviche	918	32 Yeast Breads	
				Simple Sourdough Starter	973
				Soft Yeast Dinner Rolls	980
				Deli-Style Rye Bread	982
				Parisian Croissants	984
				White Sandwich Bread	987
				Whole-Wheat Sandwich Bread	987

- | | | | | | |
|--------------------------------------------|--------|---------------------------------------------|--------|----------------------------------------|--------|
| Cloverleaf Rolls | 987 | Éclair Paste (Pâte à Choux) | 1022 | 34 Cakes and Frostings | |
| Twisted Knot Rolls | 987 | Italian Meringue | 1025 | American Poundcake | 1052 |
| Potato Cheddar Cheese Bread | Online | Shortbread Tart Dough (Pâte Sablée) | 1029 | French-Style Fruitcake | 1053 |
| Tender Potato Herb Rolls | Online | Quiche Dough (Pâte Brisée) | 1030 | High-Ratio Yellow Cake | Online |
| French or Italian Bread | 988 | Lemon Meringue Pie | 1030 | Classic Genoise | 1054 |
| Pain de Campagne (French Country Loaf) | Online | Fresh Strawberry Pie | Online | Chocolate Genoise | 1054 |
| Whole-Wheat Bread | 988 | Freeform Apple Pies | 1031 | Classic Spongecake | 1056 |
| San Francisco-Style Sourdough Bread | 989 | Peach Crumb Pie | Online | Swiss Jelly Roll | 1057 |
| Multigrain Sourdough Bread | Online | Blackberry Crumble | 1032 | Chocolate Spongecake | 1057 |
| Breadsticks | Online | French Apple Tart | 1032 | Matcha (Green Tea) Spongecake | 1057 |
| Cranberry Raisin Oatmeal Bread | 990 | Tarte Tatin | Online | Victoria Spongecake | 1057 |
| Focaccia (Roman Flatbread) | 991 | Fyrstekake (Norwegian-Style Almond Cake) | 1033 | Ladyfingers | Online |
| Pizza Margherita | 992 | Fresh Berry Tart | 1033 | Chocolate Angel Food Cake | 1058 |
| Eggplant and Sun-Dried Tomato Pizza | Online | Rustic Vegetable Galettes | 1034 | Vanilla Angel Food Cake | 1058 |
| Swiss Chard and Ricotta Calzone | Online | Strawberry Napoleon | Online | Lemon Angel Food Cake | 1058 |
| Naan (Indian Flatbread) | 993 | Portuguese-Style Egg Tarts | 1034 | Orange Chiffon Cake | 1059 |
| Garlic Naan | 993 | Palmiers | 1035 | Lemon Chiffon Cake | 1059 |
| Brioche | 994 | Puff Pastry Batons | 1035 | Gluten-Free Orange Chiffon Cake | 1059 |
| Large Brioche à Tête | 995 | Puff Pastry Cheese Sticks | 1035 | Pan Coating | Online |
| Raisin Brioche | 995 | Chocolate Éclairs | 1036 | Simple Buttercream | 1064 |
| Brioche for Sandwiches | Online | Diplomat Cream and Fruit-Filled Éclairs | Online | Light Chocolate Buttercream | 1065 |
| Savory Cheese and Herb Brioche | 995 | Paris-Brest | Online | Lemon Buttercream | 1065 |
| Maritzo (Roman-Style Cream-Filled Brioche) | 995 | Baked Meringue | 1037 | Strawberry or Raspberry Buttercream | 1065 |
| Challah | 996 | Chocolate Délice | Online | Chai Buttercream | 1065 |
| Italian Panettone | Online | Baklava Pastries | 1038 | Peanut Butter Buttercream | 1065 |
| Cinnamon Buns | 997 | Apple Strudel | 1039 | Italian Buttercream | 1066 |
| Pecan Sticky Buns | 997 | Galactobourekó (Greek Custard Pie) | Online | Chocolate Italian Buttercream | 1066 |
| Danish Pastries | 998 | Peach and Blueberry Napoleon | Online | Coffee Italian Buttercream | 1066 |
| Cream Cheese Filling | 1000 | Linzer Tart | Online | Lemon Italian Buttercream | Online |
| Apricot Filling | 1001 | Chocolate Beignets | Online | French Mousseline Buttercream | 1067 |
| Ricotta Filling | 1001 | Chocolate-Mint Crinkle Cookies | 1040 | Chocolate Mousseline Buttercream | 1067 |
| Almond Paste Filling | Online | Oatmeal Raisin Cookies | 1041 | Basic Fudge Frosting | 1068 |
| Almond Cream Filling | 1001 | Peanut Butter Sandies | 1041 | Cocoa Fudge Frosting | 1068 |
| Kugelhopf | 1002 | Flourless Chocolate Chewies | Online | Basic Sugar Glaze | 1069 |
| | | Chocolate Chip Cookies | 1042 | Royal Icing | 1070 |
| 33 Pies, Pastries and Cookies | | White Chocolate, Cranberry and Miso Cookies | 1042 | Chocolate Ganache | 1071 |
| Basic Pie Dough | 1006 | Orange Almond Biscotti | 1043 | Dark Chocolate Truffles | 1072 |
| Sweet Dough | 1007 | Lemon or Lime Bars | 1044 | Carrot Cake with Cream Cheese Frosting | 1080 |
| Basic Cream Pie | 1012 | Linzer Cookies | Online | Cream Cheese Frosting | 1080 |
| Chocolate Cream Pie | 1012 | Spritz Cookies | 1044 | Marble Cake | 1081 |
| Banana Cream Pie | 1012 | Gingerbread Cookies | 1045 | Marble Cupcakes | 1081 |
| Coconut Cream Pie I | 1012 | Sugar Cookies | 1046 | Strawberry Vanilla Butter Cake | 1082 |
| Coconut Cream Pie II | 1012 | Decorative Cookie Icing | 1046 | German Chocolate Cake | 1083 |
| Apple-Cranberry Pie | 1013 | Lacy Pecan Cookies | 1047 | Coconut Pecan Frosting | 1083 |
| Apple-Rhubarb Pie | 1013 | Tulipe Cookies | 1048 | Tuscan-Style Olive Oil Cake | 1084 |
| Blueberry Pie Filling | 1014 | Madeines | Online | Swedish-Style Apple Cake | Online |
| Sweet Cherry Pie | 1015 | | | Vanilla Raspberry Wedding Cake | Online |
| Pumpkin Pie | 1016 | | | Sacher Torte | 1085 |
| Puff Pastry | 1019 | | | Dark Chocolate Glaze | 1085 |
| Quick Puff Pastry | Online | | | Tres Leches Cake | 1086 |
| | | | | Flourless Chocolate Cake | 1087 |
| | | | | Bûche de Noël (Yule Log) | Online |
| | | | | Rio Torte | Online |
| | | | | Chocolate Caramel Maxine Torte | Online |

Fudge Brownies	1088	Stabilized Whipped Cream	1099	Chocolate Pots de Crème	1111
Raspberry Swirl Brownies	1088	Chocolate Chantilly	1099	New York Cheesecake	1112
Chocolate Peanut Butter Brownies	Online	Bavarian Cream	1100	Turtle Cheesecake	Online
Applesauce Brownies	Online	Charlotte Bavarian	1101	Pistachio Citrus Cheesecake	Online
Praline Squares	Online	White Chocolate Hazelnut Bavarian	1101	Bread Pudding with Bourbon Sauce	1113
German Chocolate Layered Brownies	Online	Lime Chiffon	1102	Chocolate Bread Pudding	1113
Banana Bars	Online	Lemon Chiffon	1102	Baked Rice Pudding	1113
Chocolate Banana Bars	Online	Orange Chiffon	1102	Bourbon Sauce	1113
		Classic Chocolate Mousse	1103	Cherry Clafouti	1114
35 Custards, Creams, Frozen Desserts and Dessert Sauces		Ice Cream Base	1105	Lemon Curd	1114
Vanilla Custard Sauce	1092	Chocolate Ice Cream	1105	Lime Curd	1114
Chai Custard Sauce	1092	Cappuccino Ice Cream	1105	White Chocolate Frangelico Bavarian	Online
Chocolate Custard Sauce	1092	Brandied Cherry Ice Cream	1105	Longchamp	Online
Coffee Custard Sauce	1092	Macha (Green Tea) Ice Cream	1105	Cheese Soufflé	Online
Hazelnut Custard Sauce	Online	Dulce de Leche Ice Cream	1105	Hot Lemon Soufflé	Online
Ginger Custard Sauce	1092	Grapefruit Sorbet	1106	Chocolate Chiffon Pie	Online
Pistachio Custard Sauce	1092	Lemon Sorbet	1106	Raspberry Mousse Cake	1115
Pastry Cream	1093	Mango Sorbet	1106	Buttermilk Panna Cotta	1116
Chocolate Pastry Cream	1093	Raspberry Sorbet	1106	Caramel Buttermilk Panna Cotta	1116
Coconut Pastry Cream	1093	Strawberry Sorbet	Online	Kheer (Indian-Style Rice Pudding)	1116
Coffee Pastry Cream	1093	Fruit Coulis	1107	Tapioca Pudding	Online
Mousseline Pastry Cream	1093	Raspberry Sauce	Online	Honey Ice Cream	Online
Champagne Sabayon	1094	Caramel Sauce	1108	Coffee Granita	1117
Sabayon Mousseline	1094	Dark Chocolate Syrup	1108	Blood Orange Granita	1117
Toffee Caramel Flan	1095	Crème Brûlée	Online	Lemon or Lime Granita	1117
Baked Crème Brûlée	1096	Passion Fruit Crème Brûlée	Online	Chocolate Hazelnut Marquise	Online
Chocolate Soufflés	1098	Coffee Crème Brûlée	Online	Butterscotch Sauce	1118
Crème Chantilly (Chantilly Cream)	1099	Ginger Crème Brûlée	Online	Ginger Caramel Sauce	Online
		Diplomat Cream Filling	Online	Chocolate Fudge Sauce	1118
		Crème Chiboust	Online		
		Passion Fruit Crème Chiboust	Online		

Preface

Learning to cook is much more than simply learning to follow a recipe. Consequently, *On Cooking*, Seventh Edition, is not a cookbook or a collection of recipes. It is a carefully designed text initially published 30 years ago and consistently designed and organized to teach you the fundamentals of the culinary arts and to prepare you for a rewarding career in the food service industry.

The goal of *On Cooking* is to focus your attention on general procedures, highlighting fundamental principles and skills, whether it be for preparing a yeast bread or grilling a piece of fish. Both the how and why of cooking are discussed, emphasizing culinary principles first, not recipes. Only after the principles are introduced and explained are sample recipes offered. This new edition includes many more recipes drawn from various international cuisines. Professional cooking no longer leans solely on French culinary traditions. Chefs now turn to the traditions of Asia, Africa and elsewhere for inspiration and ingredients. *On Cooking*, Seventh Edition recognizes this evolution and includes many recipes created *in the style of* popular dishes found throughout the world.

The content is extensively illustrated with photographs and line drawings to help you identify foods and equipment. Most recipes include photographs of the finished dish ready for service and many procedures are illustrated with step-by-step photographs. Tables and bulleted lists present information in a concise format to enhance your understanding of concepts.

To provide you with a sense of the rich traditions of cookery, informative sidebars on food history, chef biographies and other topics are located throughout the book. Sidebars that relate to flavors and flavorings also appear throughout the material to enhance your understanding of ingredients and possible variations. Safety Alerts are shown in red, to remind you of conditions or situations that might pose a danger to you or to diners. Electronic recipe management software accompanying this text provides access to recipes and the ability to scale, convert and price them.

We wish you much success in your future career and hope that this text will continue to inform and inspire you long after graduation.

A NOTE ON RECIPES

Recipes are important and useful as a means of standardizing food preparation and recording information. In *On Cooking*, Seventh Edition, recipes are designed primarily to reinforce and explain techniques and procedures presented in the text. Many recipe yields are intentionally low to be less intimidating to beginning cooks and more useful in small schools and kitchens.

All ingredients are listed in both U.S. and metric measurements. The metric equivalents are rounded off to even, easily measured amounts. You should consider the ingredient lists as separate recipes or formulas; do not measure some ingredients according to the metric amounts and other ingredients according to the U.S. amounts or the proportions will not be accurate and the intended result will not be achieved. Throughout this book, unless otherwise noted:

- *mirepoix* refers to a preparation of 2 parts onion, 1 part celery and 1 part carrot by weight
- *pepper* refers to ground black pepper, preferably freshly ground
- *butter* refers to whole unsalted butter
- *milk* refers to whole or reduced fat (not nonfat) milk
- *egg* refers to whole large eggs
- *yogurt* refers to whole plain (unsweetened) yogurt
- *TT* means “to taste”

Detailed procedures for standard techniques are presented in the text and generally are not repeated in each recipe (e.g., in a recipe, the instruction will be simply “deglaze the pan” or “monté au beurre”). Notes and variations appear at the end of selected recipes. These notes indicate ingredient substitutions for cost saving or to accommodate a plant-based diet. Variations illustrate how one set of techniques or procedures can be used to prepare different dishes with only minor modifications.

A mise en place feature is included for recipes that appear in the front sections of each recipe chapter. Ingredients that require preparation before the recipe is begun are listed in the margin under the Mise en Place heading. Consult this brief checklist after you read the recipe but before you begin to cook. Some recipes also include headnotes that describe the cultural or historical background of a dish or the unique techniques used in its preparation. This short text will enhance your understanding of a cuisine or cooking technique.

No matter how detailed the written recipe, however, we assume that you are acquiring certain knowledge, skills and judgment. It becomes a judgment call to know, for example, when a loaf of bread or a fish fillet is properly cooked. Ovens and cookware may vary in efficiency. For these reasons, recipes and formulas describe alternate tests for doneness, requiring you to use your developing skills to determine when a dish is properly cooked. You should also rely upon the knowledge and skills of your instructor for guidance. Although some skills and an understanding of theory can be acquired through reading and study, no book can substitute for repeated hands-on preparation and observation.

A registered dietician analyzed all the recipes in this book using nutritional analysis software that incorporates data from the U.S. Department of Agriculture, research laboratories and food manufacturers. The nutrient information provided here should be used only as a reference, however. A margin of error of approximately 20 percent can be expected because of natural variations in ingredients. Preparation techniques and serving sizes may also significantly alter the values of many nutrients. For the nutritional analysis, if a recipe offers a choice of ingredients, the first-mentioned ingredient is the one used. Ingredients listed as “to taste” (TT) and “as needed” are omitted from the analysis. It is assumed that corn oil and whole milk are used when a recipe calls for “vegetable oil” and “milk,” respectively. In cases of a range of ingredient quantities or numbers of servings, the average is used.



Good Choice

Throughout this book various recipes are marked with a Good Choice icon. This symbol identifies dishes that are particularly low in calories, fat, saturated fat or sodium; they may also be a good source of vitamins, protein, fiber or calcium.



Vegetarian

Recipes marked as vegetarian do not contain meat, fish, shellfish or poultry, but may contain dairy products and/or eggs. (This symbol is not used in the baked goods recipes in Chapters 31–35, however, because none of them contains meat, fish, shellfish or poultry.)



Vegan

Vegan recipes do not contain any animal products. Vegetarian and vegan dishes are not necessarily low in calories, fat or sodium; nor are they necessarily good sources of vitamins, protein, fiber or calcium.

Acknowledgments

This book would not have been possible without the assistance and support of many people. Special thanks to our photographers, Richard Embery, Debby Wolvos and Debby's assistants, Jenelle Bonifield and Holly Harmon, for their talent, professionalism and commitment to quality. The nutritional analysis for this edition was prepared by Mindy Hermann, MS, RD, whose thoroughness and prompt replies were greatly appreciated.

Alan thanks his wife, Chantal, for her help, patience and understanding since work began on this textbook some 30 years ago. He thanks his sons, Logan and Grayson, now teenagers, for keeping the noise down while dad is in the office punching away at the keyboard. He is blessed to work with his good friend Priscilla, the most knowledgeable, organized, and productive person he has ever worked with. He thanks Sarah for working so hard on the project from wherever she happens to be in the world. Her knowledge of food and attention to detail has improved the text with each edition.

Alan also acknowledges his many friends and coworkers who have been invaluable to the success of the text: Rebekah Flores, Gregory Reynolds, Michelle Jacob, Herb Fair, Keila Pizarro, Tony May, Mark Bookhamer, Rebekah Frate, Isabel Campos, Daniel Pena, Christopher Coffman, Juan Soto, John Navaro, Estella Morales, Maria Higareda, Jimmy Curry, Erin O'Brian, Stephanie Bookhamer, Devin Blunt, Jorg Lehrmann and Kevin Henderson.

Sarah sends many thanks to Alan Hause and Priscilla Martel for their hard work and consistent participation over the years. She especially thanks Alan for always producing gorgeous and delicious food, and Priscilla for being the leader who pulls everything together with her breadth of knowledge and attention to detail. Finally Sarah sends her gratitude to the many wonderful students she has worked with over the years, both in Korea and in the United States; they are the real reason that books such as this are written.

Priscilla would like to acknowledge the contributions of the many fine chefs and instructors who have supported this book through many revisions. Her thanks go to Chef Chris Douglass, Lisa Falso-Doherty, Chef Christine Merlo and the staff at Boston University Metropolitan College for assisting in the production of videos to accompany this edition. And to Katie Toulmin and the team at Cabin 3 Media for their work. She would like to sincerely thank Sarah and Skip for their commitment to providing fundamental culinary knowledge to our student readers in a clear and inspiring manner. They are models of teamwork and professionalism for which she is always grateful.

The authors wish to thank Susan Jardina and Jar Céramistes and Peddlers Sons Produce for their generous donations of equipment and supplies.

We also wish to thank everyone involved in this project at Pearson Education, including Derril Trakalo, product manager; Shruti Joshi, content production manager; Mark Marsden, product marketing manager; and Shannon LeMay-Finn, development editor.

We are grateful for the outstanding quality of the responses to our instructor review questionnaires and surveys. Responses to these surveys played a critical role in the preparation of this seventh edition of *On Cooking*. The following reviewers provided many excellent suggestions and ideas for the seventh edition:

Paul Ashman, Gulf Coast State College
Robert Barton, Milwaukee Area Tech College
Kerry Beadle, SUNY Morrisville
Frank Benowitz, Mercer County Community College
Hatley Bright, Rappahannock Community College
Kevin Cabrera, San Joaquin Delta College
Ann Carpenter-Szalay, Stark State College
Jill Cassidy, Western Illinois University

June Clarke, Delaware State University
Catherine Coleman, Durham Technical Community College
Mark Cosgrove, County College of Morris
Chris Currier, Sandhills Community College
Mark D'Alessandro, Florida International University
Stacy Damaso, Los Angeles Trade Technical College
Shelley Doonan, Mt. San Antonio College
Michael Drazszak, Cuesta College

Andrew Eith, Kent State University
 Thomas England, Ivy Tech Community College–Central Indiana
 Carol Erwin, Wayne State College
 Susan Feigenbaum, Los Angeles Trade Technical College
 Alan Finkelstein, San Jose State University
 Ann Flora, Maysville Community & Technical College
 KJ Francom, Utah Valley University
 Stephen Gagnon, Hillsborough Community College
 Margaret Galvin, Cincinnati State Technical and
 Community College
 Doug Ganhs, Oakland Community College
 Michele Gaw, Cuyahoga Community College
 Peter Gilmore, Delaware County Community College
 Daniel Guerra, El Paso Community College
 Katie Halfacre, University of Mississippi
 Robert Hall, University of Arkansas Pulaski Technical College
 Robert Hansen, Bob Jones University
 Brandon Harpster, Southeast Community College
 David Hawey, Durham College
 Sandra Johnston, McHenry County College
 Ara Karakashian, Hudson County Community College
 Christian Kefauver, West Virginia Northern Community College
 Steven Leake, Southwest Tennessee Community College

Dean Louie, University of Hawai'i Maui College
 Ron Lovell, Allan Hancock College
 Robert Lukasik, Erie Community College North Campus
 Anthony Lupino, SUNY Morrisville
 David Miller, Bob Jones University
 Michael Otto, Cape Cod Community College
 Anthony Redendo, Phoenix College
 Betty Redwood-Brown, Durham Technical Community College
 Bryan Richard, Ogeechee Technical College
 Kyle Richardson, Joliet Junior College
 Pamela Roberts, Central Piedmont Community College
 Adrienne Rogers, University of Arkansas–Pulaski
 Technical College
 Kimberly Rother, Elgin Community College
 Deborah Schneider, Onondaga Community College
 Wayne Smith, Western Colorado Community College
 Claire Stewart, New York City College of Technology
 Marylou Tate, Nashville State Community College
 James M. Taylor, SUNY Onondaga Community College
 Emily Wallace, South Puget Sound Community College
 Aaron B. Ware, Oklahoma State University Institute of Technology
 Michele Wehrle, Community College of Allegheny County
 Kathryn Wolfer, Ferris State University

The authors also wish to thank the many reviewers of previous editions who helped shape the evolution of *On Cooking* over the span of more than 30 years.

G. Allen Akmon, Sullivan University
 Karin Allen, Utah State University
 Chris Argento, Nassau Community College
 Mike Artlip, Kendall College
 Victor Bagan, Odessa College
 Jeff Bane, Clearly University
 Todd Barrios, Stephen F. Austin State University
 David Barrish, Reynolds Community College
 Leslie Bartosh, Alvin Community College
 Bea Beasley, Santa Rosa Junior College
 Erica Beirman, Iowa State University
 Carol Bennett, Central Arizona College
 Frank Benowitz, Mercer County Community College
 Paul John Bernhardt, Diablo Valley College
 Ben Black, Culinary Institute of Charleston at Trident
 Technical College
 LeRoy Blanchard, Los Angeles Trade Technical College
 Patricia Bowman, Johnson & Wales University
 Eric Breckoff, Piedmont Virginia Community College
 Scott Bright, Quest Food Management Services
 Tracey Brigman, University of Georgia
 Stephen Burgeson, Buffalo State College
 Angelo Camillo, Woodbury University
 Kristina Campbell, Columbus Technical College
 Mary Ann Campbell, Trenholm State Community College
 Michael Carmel, Trident Technical College
 Paul Carrier, Milwaukee Area Technical College
 Melinda Casady, Portland's Culinary Workshop

Dorothy Chen-Maynard, California State University,
 San Bernardino
 Susan Ciriello, Art Institute of Washington
 Jeffrey Coker, Salt Lake Community College
 Jerry Comar, Johnson & Wales University
 Matt Cooper, Mott Community College
 Anne Corr, Cook Like a Chef Camp
 Sylvia Crixell, Texas State University, San Marcos
 Chris Crosthwaite, Lane Community College
 Cathy Cunningham, Tennessee Technological University
 Chris Currier, Sandhills Community College
 Jacqueline deChabert-Rios, East Carolina University
 Richard Donnelly, East Stroudsburg University
 Michael Downey, St. Louis Community College at Forest Park
 Charles Drabkin, Edmonds Community College
 Jodi Lee Duryea, University of North Texas
 Tuesday Eastlack, Northwest Arkansas Community College
 Sari Edelstein, Simmons College
 Kimberly Emery, SUNY-Plattsburgh
 Thom England, Ivy Tech Community College
 Naomi Everett, University of Alaska
 Melanie Ewalt, Kirkwood Community College
 Richard Exley, Scottsdale Culinary Institute
 Stephen Fernald, Lake Tahoe Community College
 Edward Fernandez, Kapiolani Community College
 Doug Flick, Johnson County Community College
 Deborah Foster, Ball State University
 Thomas Gaddis, Pellissippi State Community College

Wendy Gordon, SUNY Rockland Community College
Debra Gourley, Ivy Tech Community College
Clarke Griffin, St. Louis Community College
Lauri Griffin, Ivy Tech Community College
Kristen Grissom, Daytona State College
Marian Grubor, West Virginia Northern Community College
Jeff Hamblin, Brigham Young University-Idaho
Lois Hand, Bob Jones University
Brandon Harpster, Southeast Community College
Joe Harrold, Florida State College at Jacksonville
Kathleen Hassett, Horry-Georgetown Technical College
Ed Hennessy, Delaware Technical and Community College
Michael Herbert, Northern Virginia Community College
Travis Herr, Pensacola State College
Vern Hickman, Renaissance Culinary Center
Martina Hilldorfer, Kauai Community College
Carol Himes, Pueblo Community College
David Hoffman, Mohawk Valley Community College
David Horsfield, Kirkwood Community College
Thomas Hosley, Carteret Community College
John Hudoc, Robert Morris College
Robert Hudson, Pikes Peak Community College
Robert “Miles” Huff, Culinary Institute of Charleston at
Trident Technical College
Sharon Hunt, Fort Valley State University
Barry Infuso, Pima Community College
Bruce Johnson, Salt Lake City Community College
Dorothy Johnston, Erie Community College
Melodie Jordan, Keystone College
Wendy Jordan, Rosemary’s Restaurant
Thomas Kaltenecker, McHenry County College
Deborah Karasek, Bob Jones University
Debbie Kern, Delgado Community College
Mary Ann Kiernan, Syracuse University
Linda Kinney, University of Massachusetts
Kathy Knight, University of Mississippi
Chris Koch, Cooking or Whatever
Christopher Koch, Drexel University
Cindy Komarinski, Westmoreland County Community College
Julie Hosman Kulm, Boise State University
Jackson Lamb, Metropolitan State University of Denver
Claude Lambertz, University of Nevada-Las Vegas
Steve Lammers, Olympic College
Barbara Lang, Cornell University College of Agriculture
and Life Sciences
Heinz Lauer, Culinaria Cuisine
Joseph LaVilla, San Francisco State University
Julie Lee, Western Kentucky University
Peter Lehmueller, Johnson & Wales University
Warren Leigh, Holyoke Community College
Larry Lewis, San Diego Culinary Institute
Dean Louie, University of Hawaii Maui College
Beth Lulinski, Northern Illinois University
George Macht, College of DuPage
Sylvia H. Marple, University of New Hampshire
Nicole Martinelli, Keiser University
Dean Massey, Clover Park Technical College
Lawrence Matson, The Art Institute of Dallas
Mark Mattern, M & M Enterprises, Inc.
James McGuinness, Keiser University
Paula McKeehan, Tarleton State University
Fiona McKenzie, Sandhills Community College
Ken Mertes, Robert Morris College
Brenden Mesch, The Art Institute of San Antonio
Deborah Miller, Keiser University
Maria Montemagni, College of the Sequoias
Judy Myhand, Louisiana State University
Andrea Nickels, Robert Morris College
Adrienne O’Brien, Luna Community College
Darla O’Dwyer, Stephen F. Austin State University
Lisa O’Neill, East Central Community College
Erich Ogle, Hinds Community College
Charlie Olawsky, Grand Rapids Community College
Shelly Owens, Metropolitan State College of Denver
Clarence Pan, Daytona State College
Joel Papcun, Great Lakes Culinary Institute
Patrick Parmentier, L’Ecole Culinaire, Kansas City
Jayne Pearson, Manchester Community College
Donna Pease, Technical College of the Lowcountry
Sean M. Perrodin, San Jacinto College-North Campus
Ellen Piazza, Saint Louis Community College
Christine Piccin, Santa Rosa Junior College
Tony Pisacano, Ogeechee Technical College
Toussaint Potter, AT&T
Joan E. Quinn, Northern Illinois University
Charles Robertson, Illinois Central College
Colin Roche, Johnson & Wales University
Linda Rosner, Lexington College
Charles Rossi, Atira Hotels
Scott Rudolph, California State Polytechnic
University-Pomona
Carl Sandberg, Gwinnett Technical College
Janet Saros, Montgomery College
Craig Schmantowsky, Lynn University
Jules Schmitz, Cascade Culinary Institute
David Schneider, Indian River State College
Bridget Schwartz, George Washington University
Janet Shaffer, Lake Washington Technical College
Jeffrey Sheldon, Midwest Culinary Institute at Cincinnati State
Gregg Shiosaki, Seattle Central Community College
Cherie Simpson, The University of Alabama
Curtis Smith, Spokane Community College
Wayne Smith, Western Colorado Community College
Rupert Spies, Rupert Spies Consulting
Brian Stahlsmith, Mercyhurst College
Wendy Stocks, Purdue University-Calumet
Linda Sullivan, Indiana University of Pennsylvania
James Swenson, MilitaryChefs.com
Jim Switzenberg, Harrisburg Area Community College
Janis Taylor, Freed-Hardeman University
Klaus Tenbergen, Columbia College
Katie Thomas, Blackhawk Technical College

George Thompson, Oregon Culinary Institute
Peter Tobin, Inland Northwest Culinary Academy at Spokane
Community College
Arthur Tolve, Bergen Community College
James Trebbien, The Institute for the Culinary Arts at Metropolitan
Community College
Mary G. Trometter, Pennsylvania College of Technology
Armando Trujillo, Northern Arizona University
Anna Turner, Bob Jones University
Katrina Warner, Tarrant County College
Diana Watson-Maile, East Central University

Boo Wells, Jefferson Community College
Seunghee Wie, California State University-Sacramento
Brenda Wilkening, Estrella Mountain Community College
Lorna Williams, Bob Jones University
Josef Wollinger, Blackhawk Technical College
Chris Woodruff, Lake Michigan College
Louis Woods, Anne Arundel Community College
Mark Wright, Erie Community College-State University
of New York
Kimberly Youkstetter, Worcester Technical High School
Charles Ziccardi, Drexel University

Professionalism 1



After studying this chapter, you will be able to:

- 1.1 name key historical figures responsible for the development of the restaurant industry and describe the contributions of each
- 1.2 list and describe characteristics of modern food service operations
- 1.3 explain the organization of classic and modern kitchens
- 1.4 identify the attributes a student needs to become a successful culinary professional
- 1.5 describe the importance of professional ethics for chefs and list specific behaviors that all culinary professionals should follow
- 1.6 describe some of the culinary careers today's student may pursue

cookery the art, practice or work of cooking

cooking (1) the transfer of energy from a heat source to a food; this energy alters the food's molecular structure, changing its texture, flavor, aroma and appearance; (2) the preparation of food for consumption

professional cooking a system of cooking based on a knowledge of and appreciation for ingredients and procedures

Like any fine art, great **cookery** requires taste and creativity, an appreciation of beauty and a mastery of technique. Like the sciences, successful cookery demands knowledge and an understanding of basic principles, and like any successful leader, today's professional chef must exercise sound judgment and be committed to achieving excellence in all endeavors.

This book describes foods and cooking equipment, explains culinary principles and **cooking** techniques and provides recipes using these principles and techniques. No book, however, can provide taste, creativity, commitment and judgment. For these, chefs and other culinary professionals must rely on themselves. This chapter explores the rich history of the restaurant industry in the West and the individuals who influenced the development of the profession. It also outlines the attributes of the professional chef. As you begin your culinary studies, we hope that you find inspiration in the history of the Western food service industry as you learn about the qualities that will guide you in your chosen career.

HISTORICAL DEVELOPMENT OF THE RESTAURANT INDUSTRY

Cooks have produced food in quantity for as long as people have eaten together. For millennia, chefs, whether they be Asian, Native American, Aboriginal, European or African, have catered to the often elaborate dining needs of the wealthy and powerful; and for centuries, vendors in China, Europe and elsewhere have sold foods to the public that they prepared themselves or bought from others.

But in the West, the history of the professional chef is of relatively recent origin. Its cast is mostly French, and it is intertwined with the history of restaurants—for only with the development of restaurants in Europe and North America during the late 18th and early 19th centuries were chefs expected to produce, efficiently and economically, different dishes at different times for different diners.

The 18th Century—The First Restaurants

The word *restaurant* is derived from the French word *restaurer* (“to restore”). Since the 16th century, the word *restorative* had been used to describe rich and highly flavored soups or stews capable of restoring lost strength. Restoratives, like all other cooked foods offered and purchased outside the home during this period of history, were made by guild members. Each guild had a monopoly on preparing a category of food items. For example, during the reign of Henri IV of France (r. 1589–1610), there were separate guilds for *rôtisseurs* (who cooked the main cuts of meat), *pâtissiers* (who cooked poultry, pies and tarts), *vinaigriers* (who made sauces and some stews, including some restoratives) and *traiteurs* (who made meat stews).

The French claim that the first modern restaurant opened one day in 1765 when a Parisian tavern keeper, a Monsieur Boulanger, hung a sign advertising the sale of his special restorative, a dish of sheep feet in white sauce. Boulanger's establishment differed from the inns and taverns that had existed throughout Europe for centuries. These inns and taverns served foods prepared (usually off premises) by the appropriate guild. The food offered by the inn or tavern was incidental to the establishment's primary function: providing sleeping accommodations or drink. Customers were served the daily dish family style and ate at communal tables. Boulanger's contribution to the food service industry was serving a variety of foods prepared on premises to customers whose primary interest was dining.

Among other restaurants that opened in Paris during the succeeding decades, the Grande Taverne de Londres is credited with advancing the development of the modern

restaurant by offering a menu listing available dishes during fixed hours. (The date of its opening is debated, either 1782 or 1786.) Its owner, Antoine Beauvilliers (1754–1817), was the former steward (chief of the household staff) to the Comte de Provence, later King Louis XVIII of France. Beauvilliers's impeccably trained wait staff served patrons at small, individual tables in an elegant setting.

The French Revolution (1789–1799) had a significant effect on the budding restaurant industry. Along with the aristocracy, the revolution generally abolished guilds and their monopolies. The revolution also allowed the public access to the skills and creativity of the well-trained, sophisticated chefs who previously had worked exclusively in the aristocracy's private kitchens. Although many of the aristocracy's chefs either left the country or lost their jobs (and some their heads), a few opened restaurants catering to the growing urbanized middle class.

The Early 19th Century—Carême and *Grande Cuisine*

As the 19th century progressed, more restaurants opened, serving a greater selection of items and catering to a wider clientele. By midcentury, several large, grand restaurants in Paris were serving elaborate meals, reminiscent of the *grande cuisine* (also known as *haute cuisine*) of the aristocracy. *Grande cuisine*, which arguably reached its peak of perfection in the hands of Antonin Carême, was characterized by meals consisting of dozens of courses of elaborately and intricately prepared, presented, garnished and sauced foods. Other **restaurateurs** blended the techniques and styles of *grande cuisine* with the simpler foods and tastes of the middle class (*cuisine bourgeoise*) to create a new

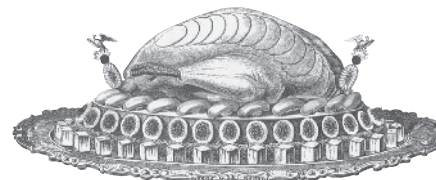
grande cuisine the rich, intricate and elaborate cuisine of the 18th- and 19th-century French aristocracy and upper classes; it was based on the rational identification, development and adoption of strict culinary principles; by emphasizing the how and why of cooking, *grande cuisine* was the first to distinguish itself from regional cuisines, which tend to emphasize the tradition of cooking

restaurateur a person who owns or operates an establishment serving food, such as a restaurant

Marie-Antoine (Antonin) Carême (1783–1833)

Antonin Carême, known as the “cook of kings and the king of cooks,” was an acknowledged master of French *grande cuisine*. Abandoned on the streets of Paris as a child, he worked his way from cook's helper in a working-class restaurant to become one of the most prestigious chefs of his (or, arguably, any other) time. During his career, he was chef to the famous French diplomat and gourmand Prince de Talleyrand, the Prince Regent of England (who became King George IV), Tsar Alexander I of Russia and Baron de Rothschild, among others.

Carême's stated goal was to achieve lightness, grace, order and perspicuity in the preparation and presentation of food. As a pâtissier, he designed and prepared elaborate and elegant pastry and confectionery creations, many of which were based on architectural designs. (He wrote that “the fine arts are five in number, namely: painting, sculpture, poetry, music, architecture—the main branch of which is confectionery.”) As a showman, he garnished his dishes with ornamental *hâtelets* (skewers) threaded with colorful ingredients, such as crayfish and intricately carved vegetables, and presented his creations on elaborate *socles* (bases). As a saucier, he standardized the use of the flour and butter mixture called *roux* as a thickening agent, perfected



A poultry illustration from Carême showing *hâtelets* (skewers) used as a garnish.

recipes and devised a system for classifying sauces. As a garde-manger, Carême popularized cold cuisine, emphasizing molds and aspic dishes. As a culinary professional, he designed kitchen tools, equipment and uniforms.

As an author, Carême wrote and illustrated important texts on the culinary arts, including *Le Maitre d'hotel français* (c. 1822), describing the hundreds of dishes he personally created and cooked in the capitals of Europe; *Le Pâtissier royal parisien* (c. 1825), containing fanciful designs for *les pièces montées*, the great decorative centerpieces that were the crowning glory of grand dinners; and his five-volume masterpiece on the state of his profession, *L'Art de la cuisine française au XIXe siècle* (1833), the last two volumes of which were completed after his death by his associate, Plumerey. Carême's writings almost single-handedly refined and summarized five hundred years of culinary evolution. But his treatises were not mere cookbooks. Rather he analyzed cooking, old and new, emphasizing procedure and order and covering every aspect of the art known as *grande cuisine*.

Carême died before age 50, burnt out, according to French poet and essayist Laurent Tailhade, “by the flame of his genius and the coal of the spits.”

gourmand a connoisseur of fine food and drink, often to excess

gourmet a connoisseur of fine food and drink

gastronomy the art and science of eating well

gourmet foods foods of the highest quality, perfectly prepared and beautifully presented



Delmonico's Restaurant kitchen in New York City in 1902.

cuisine simpler than *grande cuisine* but more complex than mere home cooking, which often centered around bread.

Across the Atlantic, however, restaurant culture took on a very different look and purpose at this time, however. In the new United States, inexpensive dining facilities sprung up during the 19th century catering to the many working-class immigrants. People from Scandinavia, Ireland, Italy, China, Germany and elsewhere arrived on the promise of work, land and better futures. Many immigrants worked as transients along the new railroad lines, in western gold and silver mining, or as domestic servants or factory workers in urban centers. Street vendors and casual restaurants offering foods from home were welcomed by these immigrants, even though the dishes available generally lacked authentic ingredients. Gradually immigrant communities—such as the many Little Italy's, Chinatowns and Greek villages—established food import systems still used today. Eventually these shops and cafes opened to anyone who found these previously unfamiliar foods appealing.

The Late 19th Century—Escoffier and *Cuisine Classique*

Following the lead set by the French in both culinary style and the restaurant business, restaurants opened in the United States and throughout Europe during the 19th century. Charles Ranhofer (1836–1899) was the first internationally renowned chef of an American restaurant—Delmonico's in New York City. In 1893, Ranhofer published his “Franco-American” encyclopedia of cooking, *The Epicurean*, which contained more than 3500 recipes.

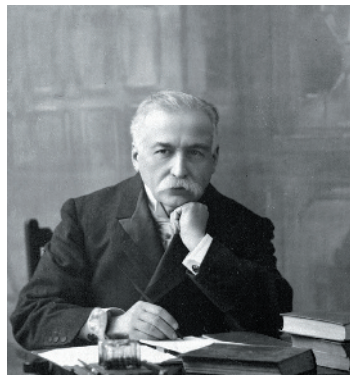
One of the finest restaurants outside France was the dining room at London's Savoy Hotel, opened in 1898 under the directions of César Ritz (1850–1918) and Auguste Escoffier (1846–1935). There they created a restaurant that attracted royalty and aristocratic women, a group rarely seen dining in public at the time. Escoffier is generally credited with refining the *grande cuisine* of Carême to create *cuisine classique* or

Auguste Escoffier (1846–1935)

Auguste Escoffier's brilliant culinary career began at age 13 in his uncle's restaurant and continued until his death at age 89. Called the “emperor of the world's kitchens,” he is perhaps best known for defining French cuisine and dining during La Belle Époque (also referred to as the “Gay Nineties”).

Unlike Antonin Carême, Escoffier never worked in an aristocratic household. Rather he exhibited his culinary skills in the dining rooms of the finest hotels in Europe, including the Place Vendôme in Paris and the Savoy and Carlton hotels in London.

Escoffier did much to enhance *grande cuisine* as defined by Carême. Crediting Carême with providing the foundation for great—that is, French—cooking, Escoffier simplified the profusion of flavors, dishes and garnishes typifying Carême's work. For example, Carême would present elaborate displays of as many as 150 dishes for guests at a private function. In contrast, Escoffier would offer 11 dishes served tableside to each guest individually. Escoffier also streamlined some of Carême's overly elaborate and fussy procedures and classifications. For example, he reduced Carême's elaborate system



Tournedos Rossini, a dish created by Escoffier, as it might be served today.

of classifying sauces into the five families of sauces still recognized today. Escoffier sought simplicity and aimed for the perfect balance of a few superb ingredients. Some consider his refinement of *grande cuisine* to have been so radical as to credit him with the development of a new cuisine referred to as *cuisine classique* (classic or classical cuisine).

Escoffier's many writings include *Le Livre des menus* (1912), in which, discussing the principles of a well-planned meal, he analogizes a great dinner to a symphony with contrasting movements that should be appropriate to the occasion, the guests and the season, and *Ma cuisine* (1934), surveying *cuisine bourgeoise*. But his most important contribution is a culinary treatise intended for the professional chef titled *Le Guide culinaire* (1903). Still in use today, it is an astounding collection of more than 5000 classic cuisine recipes and garnishes. In it, Escoffier emphasizes the mastery of techniques, a thorough understanding of cooking principles and the appreciation of ingredients—attributes he considered to be the building blocks professional chefs should use to create great dishes.

classic cuisine. He invented such dishes as *Suprêmes de soles à l'aurore* (or “fillet of sole at dawn”) in a blushing pink sauce and *Pêche Melba* (or “Peach Melba”), named after Australian singer Nellie Melba, a guest at the hotel. By doing so, he brought French cuisine into the 20th century.

The Mid-20th Century—Point and *Nouvelle Cuisine*

The mid-20th century witnessed a trend toward lighter, more naturally flavored and more simply prepared foods. Fernand Point was a master practitioner of this movement. But Point’s goal of simplicity and refinement was carried to even greater heights by a generation of French chefs Point trained: principally Paul Bocuse, Jean and Pierre Troisgros, Alain Chapel, François Bise and Louis Outhier. They, along with Michel Guérard and Roger Vergé, were the pioneers of ***nouvelle cuisine*** in the early 1970s. Their contemporary, Gaston Lenôtre, modernized the classic pastries of *grande cuisine*, infusing them with the bright, fresh flavors of *nouvelle cuisine*.

Nouvelle cuisine rejected overly rich, needlessly complicated dishes and placed the emphasis on healthful eating. The ingredients must be absolutely fresh and of the highest possible quality; the cooking methods should be simple and direct whenever possible. The accompaniments and garnishes must be light and contribute to an overall harmony; the completed plates must be elegantly designed and decorated. Following these guidelines, traditional cooking methods were applied to nontraditional ingredients, and ingredients were combined in new and previously unorthodox fashions.

The Late 20th and Early 21st Centuries—An American Culinary Revolution

During the last 40–50 years, broad changes launched in the United States have affected the global culinary landscape. Two such trends are bold, international flavors and fresh food, simply prepared.

The popularity of **international cuisine** within the United States is due, in large part, to an unlikely source: the Immigration and Nationality Act of 1965. Under its provisions, a large number of people from various Asian countries immigrated to the United States. They brought with them their rich culinary traditions and ignited America’s love affair with fiery hot cuisines. By the late 1970s many North Americans were no longer content with overly salty pseudo-Chinese dishes. They demanded authenticity and developed cravings for spicy dishes from the Szechuan and Hunan provinces of China, as well as Vietnam and Thailand. In the 1970s Mexican foods also became mainstream, and authentic regional Mexican dishes are now commonplace throughout the United States. Descendants of these and more recent immigrants are exploring the roots of their native cultures and cuisines, so the diverse ingredients and cooking of Brazil, Haiti, India, Korea, Nigeria, Somalia, Malaysia and Thailand, to name just a few countries, are readily available to the North American dining public.

During this same time period, restaurateurs and chefs began “Americanizing” the principles of French *nouvelle cuisine*. When Alice Waters opened Chez Panisse in Berkeley, California, in 1971, her goal was to serve fresh food, simply prepared. Rejecting the growing popularity of processed and packaged foods, Waters used fresh, seasonal and locally grown produce in simple preparations that preserved and emphasized the foods’ natural flavors. Chez Panisse and the many chefs who passed through its kitchen launched a new style of American cuisine that became known as California or **New American cuisine**. As the culinary movement launched by Waters’s philosophy spread across the United States, farmers and chefs began working together to make fresh, locally grown foods available, and producers and suppliers began developing domestic sources for some of the high-quality ingredients that were once available only from overseas.

These chefs ushered in a period of bold experimentation. Chefs working in America began to combine ingredients and preparation methods from a variety of cuisines. Their work resulted in **fusion cuisine**. Fusion cuisine began with typical European techniques or dishes but added ingredients or preparation methods associated with one or more international or **regional cuisines**. A fillet of Norwegian salmon might be grilled over hickory wood and then served on a bed of Japanese soba noodles, for example, or a traditional

classic cuisine a late 19th- and early 20th-century refinement and simplification of French *grande cuisine*. Classic (or classical) cuisine relies on the thorough exploration of culinary principles and techniques and emphasizes the refined preparation and presentation of superb ingredients.

nouvelle cuisine French for “new cooking”; a mid-20th-century movement away from many classic cuisine principles and toward a lighter cuisine based on natural flavors, shortened cooking times and innovative combinations

international cuisine the cuisine and dining practices characteristic of a country or region

New American cuisine a late 20th-century movement that first became popular in California and spread across the United States; it stresses the use of fresh, locally grown, seasonal produce and high-quality ingredients simply prepared in a fashion that preserves and emphasizes natural flavors

fusion cuisine the blending or use of ingredients and/or preparation methods from various international, regional or national cuisines in the same dish; also known as transnational cuisine

regional cuisine a collection of foods and beverages based on local ingredients, traditions and practices; within a larger geographical, political, cultural or social unit, regional cuisines are often variations of one another that blend together to create a national cuisine

national cuisine the characteristic cuisine of a nation



Chef Alice Waters of Chez Panisse in Berkeley, California, a founder of today’s local food movement.

French duck confit may be seasoned with lemongrass, ginger and chiles. Pizzas with untraditional toppings, such as smoked salmon and caviar, launched Wolfgang Puck's career in Los Angeles, California, in the early 1980s. Today such fusion is commonplace—from Chef Roy Choi's Kogi BBQ Korean-Mexican tacos in Southern California to the subtle use of Asian seasonings in the classic sauces prepared by Jean-Georges Vongerichten at his restaurants throughout the country. But in the 1970s and 1980s, fusion represented a breakthrough in cooking that soon spread throughout the western culinary community.

In recent years, chefs have been instrumental in changing the way Americans dine by elevating the style and quality of the foods they serve. For example, the current popularity of sourdough and artisan bread can be traced directly to **Chef Nancy Silverton** and her La Brea Bakery in Los Angeles. With degrees from Le Cordon Blue in London and Ecole Le Nôtre in France, Silverton settled in Los Angeles, joining Wolfgang Puck as the first pastry chef at Spago. Her cookbook *Desserts*, written during that time, is still considered a classic. Before opening La Brea Bakery, Silverton tested bread recipes using wild yeasts and various sourdough starters hundreds of times, finally settling on a dough made with wild yeast from grapes, then hand-shaped and given a slow two-day rise. Her attention to detail and consistency earned her business success and extensive industry recognition.



Chef Nancy Silverton at her La Brea Bakery in 2000.

Chef Thomas Keller, who started cooking in restaurants in his teens, worked at renowned restaurants Guy Savoy and Le Taillevent in Paris before opening his own restaurant in 1994. Today experts regard Keller's restaurants, The French Laundry in Yountville, California, and Per Se in New York City, as among the finest in the world. His cuisine, based on traditional French and modern cooking techniques, utilizes only foods in season, many grown on premises or sourced from local farmers. Known for producing lengthy tasting menus with clean flavors as well as his obsessive attention to detail, Keller develops professionalism in his staff, who are encouraged to be mindful, organized and “work clean.”

The focus of **Chef Bryant Terry's** career is to create a “healthy, just and sustainable food system” for everyone. Now chef-in-residence at the Museum of the African Diaspora (MoAD) in San Francisco, he was born and raised in the American South, educated at NYU, then completed the Chef's Training program at the Natural Gourmet Institute for Health and Culinary Arts in New York. Terry explains that his work celebrates the staples, flavor profiles and ingredients from the African continent, the Caribbean and the American South. He believes that what he celebrates can bring health and pleasure into people's kitchens. Terry has published several acclaimed vegan cookbooks, including *Afro-Vegan* and *Grub*. Terry's drive to encourage healthy eating stems from memories of his family's small farms and gardens: “They didn't call it local food, they didn't call it the organic-local-seasonal-sustainable movement—it was just the way that they lived.”

Bayona restaurant, located in the heart of New Orleans' French Quarter, has served award-winning cross-cultural cuisine for almost 35 years. **Chef-owner Susan Spicer** uses fresh, locally grown ingredients in daily menus influenced by elements of European, Asian and Indian cuisine. Spicer is known for giving back to the community and feels her success is due to consistent hard work and her ability to “see the big picture” of the business and how “it all comes together on the plate.” While Bayona is an icon of the New Orleans culinary scene, Spicer has launched several other highly acclaimed restaurants in the area, often with former employees, whom she proudly mentors.

All the chefs mentioned in this text have received many awards for their work, including recognition from the James Beard Foundation. However, chefs of this caliber do not work for the awards and acclaim, they succeeded as professionals because they love the business, want to serve their customers well, care about their staff and find joy in always learning more.



Beets and Leeks, a signature dish prepared at The French Laundry in Yountville, California, by Chef Thomas Keller and his staff.



Soul food vegan dinner party prepared by Chef Bryant Terry.

Global Foods, Local Ingredients

The fluidity of international borders, the accessibility of global travel and the Internet have radically changed the way we cook and the foods we eat. During the first decades of the 21st century, chefs in the United States and other countries embraced simple

snacks, **street food** and home cooking from countries they visited online or in person. From *tacos de birria* (meat-stew filled tacos served hot in markets across Tijuana, Mexico) to Chinese *xiaolongbao* (steamed soup-filled buns), restaurant chefs have incorporated global flavors and street foods onto their menus. In addition, the signature flavors found in street food and other **global cuisines** are migrating onto menus in the form of dipping sauces, salad dressings, spicy rubs and humble sandwiches.

Today chefs are sourcing ingredients globally as well as working in tandem with farmers to supply their guests with fresh flavors while preserving local agriculture and heirloom varieties. As we discuss in detail later in this chapter, the concern for locally raised ingredients, referred to as the **farm-to-table** or **locavore movement**, has influenced chefs to serve fresh seasonal foods, such as wild greens or shellfish from day boat clammers, that are grown or harvested within a few miles of their restaurants.

Modernist Cuisine

During the 1990s scientists, particularly in the United States, England, France and Spain, began to see food preparation as a distinct and worthy field of exploration. Chefs and scientists wanted to understand why food behaved as it did, why traditional cooking techniques sometimes failed and how to improve culinary methods. They began seeking answers to these questions under the umbrella of **molecular gastronomy**, a term coined by the British physicist Nicholas Kurti and French chemist Hervé This in 1988. Inspired by the experiments of molecular gastronomy, early 21st-century chefs reinvented the notion of cooking by employing ingredients and machinery more common in industrial food manufacturing than in restaurant kitchens. This offshoot of molecular gastronomy is now referred to as **modernist cuisine**, first defined by Nathan Myhrvold (former Chief Technology Officer at Microsoft and the principal author of *Modernist Cuisine*, *Modernist Bread* and *Modernist Pizza*).

The founding chef of this movement is Ferran Adrià of elBulli, which operated in Roses, Spain, from 1987 to 2011. The food served at elBulli engaged all of one's senses. Dinner was a tasting menu of up to 35 bite-sized dishes. What appeared to be cooked may actually have been flash frozen. An herb clipped to a spoon allowed guests to smell the aroma before tasting the herb in the dish. Warm foam tasted of carrots or mushrooms, hot gelatin encapsulated mango purée that resembled egg yolks and ravioli filled with liquid were some of the show-stopping techniques for which Adrià became known.

Current practitioners include Heston Blumenthal at The Fat Duck in Bray, England, Massimo Bottura at Osteria Francescana, Modena, Italy and Grant Achatz at Alinea in Chicago. The hallmarks of this high-tech haute cuisine include dehydrators, edible menus, gels and spheres, intensely flavored smoke and -30°F anti-griddles that “cook” liquefied food. These chefs produce foods that look like one thing, taste like something totally different and smell like childhood memories. Take Blumenthal's bacon and egg ice cream as one example. It is a plated dessert consisting of ice cream made from a bacon-infused custard. All the elements of the savory breakfast appear on the plate including a cup of tea, served as a sweet jelly, and toast in the form of sweet, caramelized brioche. As Blumenthal says, his goal is to make food exciting by overturning expectations. Although few restaurants are going to the extreme of replacing their cook-tops with water baths and chemical freezers, many of the tools and techniques that these avant-garde chefs perfected are now being used and appreciated on a smaller scale by chefs who may add a gelled garnish or spheres of sauce to a traditional dish.

CHARACTERISTICS OF THE MODERN FOOD SERVICE OPERATION

From Monsieur Boulanger's humble establishment, a great industry has grown. The growth and diversification of the food service industry in Europe and the Americas is due in part to the Industrial Revolution of the 19th century and the social and economic changes it brought, including the introduction of new culinary technologies, food supplies and consumer concerns.



Chef Susan Spicer, owner of the acclaimed Bayona in New Orleans.



Lamb skewers cooked on the street in Kashgar, Xinjiang, China.

street food ready-to-eat or cooked dishes prepared to order from a vendor in a cart or public market

global cuisine foods (often commercially produced items) or preparation methods that have become ubiquitous throughout the world; for example, curries, pizza, sandwiches and fried potatoes

farm-to-table or locavore movement an awareness of the source of ingredients with an emphasis on serving locally grown and minimally processed foods in season

molecular gastronomy a contemporary scientific movement that investigates the chemistry and physics of food preparation

modernist cuisine a term that refers to science-inspired techniques for food preparation; an avant-garde approach to food preparation, sanitation and health concerns based on science-inspired techniques



Liquid olives, created by Chef Ferran Adrià.

Culinary Technologies

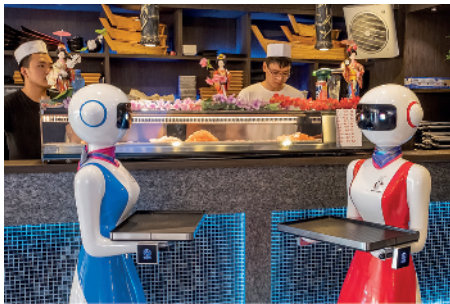
Technology has always had a profound effect on cooking. For example, the development of clay and, later, metal vessels that could contain liquids and withstand and conduct heat offered prehistoric cooks the opportunity to stew, make soups and porridge, pickle and brine foods and control fermentation. But it was not until the rapid technological advances fostered by the Industrial Revolution that anything approaching the modern kitchen was possible.

One of the most important advancements was the introduction of the cast-iron stove. Prior to the 19th century, most cooking was done on spits or grills or in cauldrons or pots set on or in a wood- or coal-burning hearth. Hearthside cooking did not lend itself well to the simultaneous preparation of many items or to items requiring constant and delicate attention. With the introduction of cast-iron stoves during the 1800s, cooks could more comfortably and safely approach the heat source and control its temperatures. On the new cook stoves, they could also prepare foods in the small quantities needed to serve individual diners on demand.

Also of great importance were developments in food preservation and storage techniques. For thousands of years food had been preserved by sun-drying, salting, smoking, pickling, sugar-curing or fermenting. Salt-cured codfish and salmon have been staples in Scandinavia for millennia, and the earliest household records and cookery manuscripts from medieval Britain include inventories of bacon and salted meats. Although useful, these ancient procedures dramatically change the appearance and flavor of most foods. By the early 19th century, preserving techniques began to emerge that had minimal effect on appearance and flavor. For example, by 1800 food could be “canned” by storing it in sterilized glass jars subjected to very high heat. An early mechanical refrigerator was developed by the mid-1800s; soon reliable iceboxes, refrigerators and, later, freezers were available. During the 20th century freeze-drying, vacuum-packing and irradiation became common preservation techniques.

Developments in transportation technology were also underway. During the 19th century steam-powered ships and railroads brought foods quickly to market from distant suppliers. Since the mid-20th century temperature-controlled cargo ships, trains, trucks and airplanes have all been used as part of an integrated worldwide food transportation network. Combined with dependable food preservation and storage techniques, improved transportation networks freed chefs from seasonal and geographic limitations in their choice of foods and expanded consumers’ culinary horizons.

Advancements in technology also facilitated or even eliminated much routine kitchen work. Since the 19th century chefs have relied increasingly on mechanical and motorized food processors, mixers and cutters as well as a wealth of sophisticated kitchen equipment from high-carbon stainless steel knife blades to infrared thermometers and ultrasonic homogenizers. Foodservice operators faced with staff shortages are even turning towards robots to perform repetitive kitchen tasks such as preparing French fried potatoes.



Robot waiters at the Gran Caffè Rapallo restaurant in Liguria, the first restaurant in Italy to use automated service devices.

Food Supplies

Modern food preservation, storage and transportation techniques have made both fresh and exotic foods regularly available to chefs and consumers. Because of advances in packaging and transportation, foodstuffs grown or made virtually anywhere in the world are now available to restaurants regardless of season or location.

Last century’s advancements in agriculture, such as the switch from organic to chemical fertilizers and the introduction of pesticides and drought- or pest-resistant strains, increased yields of healthy crops. Traditional hybridization techniques and, more recently, genetic engineering have produced new varieties of grains, such as soybeans, corn, rapeseeds and rice, which are resistant to herbicides or insects. Although scientists may argue that such engineering simply speeds up the process of natural selection, consumers are often more concerned about the unforeseen impact on consumer health and unintended consequences to the environment. Governments around the world regulate, restrict or outright ban the sale of foodstuffs containing **genetically modified organisms (GMOs)** on a case-by-case basis.

genetically modified organism (GMO) a plant, microorganism or animal in which genetic material (segments of DNA) have been modified or engineered in a laboratory to change inheritable characteristics, such as resistance to insects or herbicides

Additionally, advancements in animal husbandry and aquaculture have led to a more reliable supply of leaner meat, poultry and fish. Foods found traditionally only in the wild (for example, game, wild rice and many mushrooms) are now being raised commercially and are routinely available. The commercialization of foodstuffs has created a backlash among some consumers and chefs, however. New concerns about sustainability and support for local farmers and food producers present the industry with new challenges and new opportunities for chefs to revise their menus and adopt ecologically based business practices.

Consumer Concerns

Consumer concerns about nutrition and diet have fueled changes in the food service industry. Obviously, what we eat affects our health. Adequate amounts of certain nutrients promote good health by preventing deficiencies; studies show that good nutrition also helps prevent chronic diseases and increases longevity. Chefs must now understand human nutritional needs and the various special diets followed by customers. Beyond simply reducing fat and sugar for weight control, chefs must accommodate customers' allergies, specialized diets due to illnesses and ethical or social dining concerns of groups such as vegetarians and locavores.

The public is also rightfully concerned about food safety. Federal, state and local governments help promote food safety by inspecting and grading meats and poultry, regulating label contents for packaged foods and setting sanitation standards. The last line of defense, however, are the restaurant workers who prepare and serve food. It is up to you, as a culinary professional, to follow sanitation and food safety guidelines to protect others from injury or illness.

Concerns about nutrition and food safety have also resulted in renewed interest in local and organically grown fruits and vegetables and free-range-raised animals. The local food movement and the concern for sustainable food production are leading chefs to find new sources for ingredients and expand their community involvement.

Local Production

Fresh foods travel from the producer to the consumer by two basic methods: (1) the industrial, commercial system, which operates huge, consolidated farms and global transportation networks and (2) small local or regional systems. One key difference is how far the food travels from where it is grown or produced to the end consumer. Local systems distribute food items over short distances. These local farms are often small family farms, which are defined by the United States Department of Agriculture (USDA) as those operated by the people who own the land or the animals and have sales of less than \$350,000 per year.

While the word *local* implies that the food item is being sold close to where it was grown or produced, there is no consistent definition for that term. Many consumers and organizations working in this field, such as farmer's markets, cite a radius of 50–100 miles (80–160 km) from production to point of sale as the determining factor. Weather conditions, urbanization and production capacity of the area also have an impact on the definition of *local*, sometimes extending the acceptable zone into a larger regional area. The USDA indicates that food can be marketed as local or regional if the total distance the product was transported is less than 400 miles (640 km) from where it originated.

Chefs are using the public's interest in eating locally produced foods to create restaurant menus featuring such products. Some chefs, like their pre-industrial predecessors, now grow their own produce, raise their own pigs or chickens and forage from nearby forests for ingredients. They may contract with local farmers, beekeepers, cheese makers or seafood suppliers for products, building their menus according to product availability, rather than serving out-of-season items or those transported long distances. In its purest version, farm-to-table means that the foods served come directly from a local farm, without passing through a market, distributor or grocery store. It implies a relationship between the chef and the farmer, with the chef serving the farm's products at their peak of freshness, ripeness and flavor. Farm-to-table menus may change daily due to product availability, and preparation techniques focus on retaining nutrients and freshness.

A Very Big Business Indeed

The National Restaurant Association, which closely monitors the economic impact of the U.S. food service industry, issued the following statistics for 2021:

- There are nearly one million foodservice outlets in the United States; total annual sales were approximately \$799 billion.
- More than 14.5 million people were employed in the restaurant industry.
- Nearly half of all American adults have worked in the food service industry at some time during their lives.
- Restaurants are an essential part of the lifestyle of 63 percent of all adults.