Culinary Institute of America

HEALTHY BAKING

FOOD & NUTRITION CONFERENCE & EXPO

CIA Consulting
The Culinary Institute of America

Culinary Institute of America, San Antonio, TX

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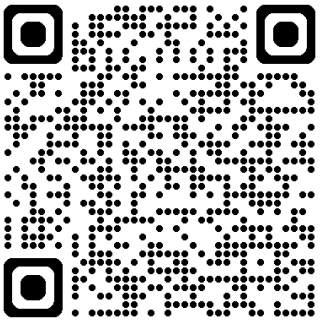

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The Culinary Institute of America

Welcome to the Culinary Institute of America and thank you for joining us for this FNCE Pre-Conference Cooking Activity.

As Registered Dietitian Nutritionists, you play a vital role in translating nutrition science into meaningful food experiences that improve health, inspire behavior change, and support lifelong wellness. While evidence-based nutrition guidance provides the foundation, culinary skills bring those recommendations to life. Together, nutrition and culinary expertise have the power to transform how individuals, families, communities, and organizations think about and experience food.

At the Culinary Institute of America, we believe that great-tasting food and good nutrition go hand in hand. During this hands-on program, you will explore practical culinary techniques, flavor-building strategies, and evidence-based approaches that can help make healthy foods more appealing, accessible, and enjoyable. Through chef demonstrations, hands-on cooking, and collaborative learning, you will gain tools and ideas that can be applied across a variety of professional settings, including clinical practice, community nutrition, foodservice, wellness programs, and nutrition education.

Our goal is to provide an engaging and inspiring learning experience that strengthens your confidence in the kitchen and expands your ability to connect nutrition recommendations with delicious, memorable food experiences. We encourage you to ask questions, share ideas, and learn from one another throughout the program.

Thank you for choosing to spend part of your FNCE experience with us. We hope this program provides practical skills, fresh inspiration, and new connections that you can take back to your work and the communities you serve.

Wishing you an enjoyable and rewarding experience,

Corrie Clark, MS, RDN, LD, CHEP '09
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P.S. The Culinary Institute of America is an independent, not-for-profit college dedicated to advancing food education and leadership. We are honored to support nutrition professionals who are helping shape a healthier future through the power of food.

EXPECTATIONS FOR PARTICIPANTS

To maintain safety/sanitation standards and ensure you have the best experience possible…

- ☑ Silence and put away phones during class.
- ☑ Actively participate.
- ☑ Return promptly from breaks.
- ☑ Remain in attendance for the class duration.
- ☑ Complete the course evaluation.
- ☑ Follow all established health and safety regulations.
    - In addition to the precautions necessary to guard against food-borne illness, care must also be taken to avoid accidents. The following safety measures should be practiced.
        - Wash hands before beginning work in the kitchen.
        - Keep all perishable items refrigerated until needed.
        - NYS law – when handling "ready-to-eat" food items, if you don't cook it, glove it!
        - Wash hands, cutting boards, knives, etc. when switching between meats and vegetables.
- ☑ Maintain CIA uniform standards.
- ☑ Act within the guidelines of the CIA's policy on harassment.
    - The Culinary Institute of America (CIA) is committed to providing a working and learning environment free from harassment. Members of the CIA community, guests, and visitors have the right to be free from any form of harassment (which includes sexual misconduct and sexual harassment) or discrimination; all are expected to conduct themselves in a manner that does not infringe upon the rights of others.

AGENDA

10:00 am – 10:40 am: **Introduction & Instruction**

- Healthy baking principles
- Current nutrition science
- Whole grains, fruits and vegetables in baking, nuts and seeds, flavor building
- Ingredient functionality
- Gluten-free baking fundamentals
- Mise en place
- Sponsor input (5 minutes)
- Team production assignments

10:40 am – 12:20 pm: **Team Production**

12:20 pm – 1:00 pm: **Buffet, Tasting, Debrief**

COURSE INFORMATION

Explore the principles of healthy baking through hands-on preparation of nutrient-dense baked goods featuring whole grains, fruits, vegetables, nuts, seeds, and alternative flours. Participants will learn techniques for maximizing flavor, texture, and nutritional value while creating baked products that balance enjoyment with wellness. Topics include increasing dietary fiber, incorporating plant-based ingredients, reducing added sugars, utilizing whole grain and gluten-free flours, and applying modern ingredient substitution strategies to support contemporary healthy eating patterns.

LEARNING OBJECTIVES

Throughout this course, you will…

- **Define** the principles of healthy baking and describe their role in supporting healthy dietary patterns.
- **Select and prepare** a variety of whole grains, fruits, vegetables, nuts, seeds, and alternative flours using fundamental baking techniques.
- **Utilize** spices, extracts, fruits, and other flavor-building ingredients to enhance sweetness perception and overall product quality.
- **Compare** ingredients commonly used in traditional and health-conscious baking applications based on their nutritional contribution and functional properties.
- **Apply** baking techniques that improve nutrient density while maintaining desirable flavor, texture, appearance, and structure.
- **Evaluate** ingredient functionality and identify appropriate substitutions for whole grains, added sugars, fats, and gluten-containing ingredients.
- **Produce** a variety of healthy baked goods using standardized recipes and evidence-based baking practices.

HEALTHY BAKING PRINCIPLES

What is Healthy Baking?

Healthy baking is not about removing enjoyment from baked goods. Rather, it focuses on ingredient quality, nutrient density, flavor, texture, and overall dietary patterns.

Current nutrition guidance encourages increasing nutrient-dense ingredients such as:

- Whole grains
- Fruits
- Vegetables
- Legumes
- Nuts
- Seeds

While thoughtfully managing:

- Added sugars
- Saturated fats
- Sodium

Healthy baking aims to create products that are both delicious and nutritionally meaningful.

CURRENT NUTRITION SCIENCE

Current recommendation from the Academy of Nutrition and Dietetics, Harvard T.H. Chan School of Public Health, and the Dietary Guidelines for Americans emphasize:

- **Dietary Patterns:** Health outcomes are influenced more by overall dietary patterns than by individual nutrients.
- **Increase Fiber:** Fiber supports digestive health, satiety, and cardiometabolic health.
- **Whole Grains:** Whole grains contribute to fiber, vitamins, minerals, and phytochemicals.
- **Fruits and Vegetables:** They contribute to flavor, moisture, color, nutrients, and natural sweetness.
- **Added Sugars:** Current guidance recommends limiting added sugars while maintaining enjoyment and practicality.

Whole Grains, Fruits and Vegetables in Baking
Nuts and Seeds
Flavor Building

Whole Grains

Whole grains contain all three parts of the grain kernel:

- Bran
- Germ
- Endosperm

Compared to refined grains, whole grains provide greater amounts of dietary fiber, B vitamins, minerals, and phytonutrients.

Examples:

- Whole wheat flour
- Whole wheat pastry flour
- Oats
- Rye
- Multigrain blends

Fruits and Vegetables in Baking

Fruits and vegetables contribute:

- Moisture
- Natural sweetness
- Fiber
- Vitamins and minerals
- Color
- Flavor

Examples:

- Apples
- Pineapple
- Carrots
- Pumpkin
- Prunes
- Apricots

These ingredients can improve nutrient density while supporting product quality.

Nuts and Seeds

Nuts and seeds provide:

- Unsaturated fats
- Protein
- Fiber
- Vitamins and minerals
- Texture and flavor

Examples:

- Walnuts
- Almonds
- Pecans
- Sunflower seeds
- Pumpkin seeds
- Sunflower seeds
- Sesame seeds
- Flax seeds

Flavor Building

Flavor remains essential for acceptance and enjoyment.

Healthy bakers rely on:

Spices	Extracts	Fruits	Citrus
• Cinnamon	• Vanilla	• Dried fruits	• Lemon zest
• Ginger	• Almond	• Fresh fruits	• Orange zest
• Nutmeg		• Fruit purees	
• Cardamom			

These ingredients enhance flavor while helping reduce reliance on added sugars.

Ingredient Functionality

Successful healthy baking requires understanding why ingredients are used.

Flour: Provides structure.

Sugar: Provides sweetness, browning, moisture retention, and tenderness.

Fat: Provides tenderness and mouthfeel.

Eggs: Provide structure and emulsification.

Fruit Purees: Provide moisture and sweetness.

Whole Grains: Provide fiber and nutrition while affecting texture.

Gluten-Free Baking Fundamentals

Gluten-free baking requires an understanding of ingredient functionality to achieve desirable structure, texture, and flavor without gluten.

Structure without gluten: Build structure using alternative ingredients and proper baking techniques.

Flour blends: Combine gluten-free flours to improve flavor, texture, and performance.

Starches: Add tenderness, volume, and crumb structure.

Hydrocolloids: Use ingredients such as xanthan gum or psyllium husk to improve binding and moisture retention.

Moisture management: Balance hydration to achieve optimal texture and product quality.

Cross-contact prevention: Follow best practices to prevent gluten exposure during preparation and baking.

Mise en Place

Mise en place, a French culinary term meaning “everything in its place,” is a foundational practice used by professional chefs to organize ingredients, equipment, and workflow before cooking begins.

Effective mise en place promotes efficiency, consistency, food safety, and successful recipe execution.

Before You Begin

- Read the entire recipe before starting.
- Review yields, temperatures, and cooking times.
- Clarify any questions with instructors.
- Visualize the recipe from start to finish.
- Gather and measure all ingredients.
- Complete washing, trimming, peeling, and cutting tasks.
- Assemble all required equipment and tools.
- Organize ingredients in order of use.

During Production

- Maintain a clean and organized workstation.
- Practice proper knife skills and food safety procedures.
- Communicate with team members.
- Taste and adjust seasoning throughout cooking.
- Follow standardized recipes while applying sound culinary judgment.

Team Production Assignments

Team One

Fruit and Vegetable-Enriched Baking

Morning Glory Muffins

Pumpkin Muffins

Team Two

Whole Grain and Fiber-Rich Baking

Bran Muffins

Trail Mix Cookies

Team Three

Healthy Breakfast and Snack Baking

Ginger-Apricot Coffee Cake

Muesli Breakfast Bars

Team Four

Gluten-Free Baking Fundamentals

Red Raspberry-Rhubarb Crisp

Biscotti

Team Five

Artisan Whole Grain Baking

Peanut Butter Energy Bites

Whole Wheat Yogurt Flatbread

MORNING GLORY MUFFINS

Yield: 12 muffins

Ingredients	Amounts
Flour, all-purpose	6 oz.
Flour, almond	5.5 oz.
Sugar, granulated	8 oz.
Cinnamon, ground	0.1 oz.
Baking soda	0.2 oz.
Salt, kosher	⅛ oz.
Oil, vegetable	6.75 oz.
Vanilla, extract	1 oz.
Egg, whole, large	6 oz.
Coconut, shredded	2.5 oz.
Raisins	4 oz.
Carrot, grated	8 oz.
Apple, baking, chopped	3 oz.
Pineapple, crushed	8 oz.
Walnuts, coarsely chopped	2 oz.

Method

1. Preheat oven to 385°F.
2. In a mixing bowl, combine the all-purpose flour, almond flour, sugar, cinnamon, and baking soda. Reserve.
3. In a separate mixing bowl, combine the oil, vanilla extract, and eggs.
4. Gently combine the wet ingredients with the dry.
5. Fold in the coconut, raisins, carrot, apple, pineapple, and walnuts.
6. Lightly grease muffin pans. Fill ⅔ full with the batter.
7. Bake in the preheated oven until firm.

Pumpkin Muffins

Yield: 12 muffins

Ingredients	Amounts
Butter, unsalted, soft	6 oz.
Sugar, brown, light	5 oz.
Sugar, granulated	5 oz.
Prune, purée	8 oz.
Egg, whole, large	2 ea.
Egg, whites	4 ea.
Molasses	6 oz.
Salt, kosher	5 g
Ginger, ground	2 g
Cinnamon, ground	1.5 g
Allspice, ground	2 g
Nutmeg, grated	1 g
Baking powder	12 g
Baking soda	12 g
Flour, bread	1 lb.
Flour, pastry, whole-wheat, white	1 lb.
Raisins	6 oz.
Vanilla, extract	1 tsp.
Applesauce, unsweetened	2 oz.
Buttermilk	12 oz.
Pumpkin, purée	15 oz.
Cheese, cream, nonfat, softened	8 oz.
Sugar, confectioners, sifted	1 lb.
Vanilla, extract	1 tsp.

Method

1. Preheat oven to 375°F. Prepare muffin cups with pan grease, including top of pan.
2. In the bowl of a stand mixer fitted with a paddle attachment, cream together the butter, brown sugar, granulated sugar, and prune purée.
3. Mix in the eggs, egg whites, and molasses until just combined. Reserve.
4. In a mixing bowl, sift together salt, ginger, cinnamon, allspice, nutmeg, baking powder, baking soda, bread flour and pastry flour.
5. Mix in the raisins, coating them well with flour to prevent them from sinking to bottom of batter. Reserve.

6. In a separate mixing bowl, combine the vanilla, applesauce, buttermilk, and pumpkin purée. Add the pumpkin purée mixture to the butter mixture in two portions, alternating with dry ingredients.
7. Scale at 4 ounces per muffin. Fill the prepared pans.
8. For the icing, in the bowl of a stand mixer fitted with a paddle attachment, beat the cream cheese until light. Gradually add the sugar and vanilla, on low speed, just until blended.
9. Bake the muffins in the preheated oven until done, 20 to 30 minutes. Cool. Apply icing.

BRAN MUFFINS

Yield: 24 muffins

Ingredients	Amounts
Sugar, granulated	8 oz.
Butter, unsalted	4 oz.
Salt, kosher	1 pinch
Egg, whole, large	8 oz.
Milk, whole, room temperature	12 oz.
Bran, wheat	4 oz.
Flour, bread	13 oz.
Baking powder	¾ oz.
Honey	2 oz.
Molasses	2 oz.

Method

1. Preheat oven to 400°F.
2. In the bowl of a stand mixer fitted with a paddle attachment, cream together the sugar, butter, and salt.
3. Gradually add the eggs, scraping sides of bowl occasionally.
4. Gradually add the milk. Add the bran.
5. In a mixing bowl, sift together flour and baking powder (two times). Add to the butter mixture. Mix until smooth.
6. Add the honey and molasses.
7. Scale into muffin pans.
8. Bake in the preheated oven until done.

Note: Oat bran can be substituted for the wheat bran.

TRAIL MIX COOKIES

Yield: 12 cookies

Ingredients	Amounts	
Cashews	2	oz.
Walnuts, coarsely chopped	1.5	oz.
Pumpkin, seeds	2	oz.
Sunflower seeds	2	oz.
Butter, unsalted	1.6	oz.
Almond, paste	1	oz.
Applesauce, unsweetened	2	oz.
Sugar, granulated	10	oz.
Salt, kosher	1	pinch
Egg, whole, large	2	ea.
Vanilla, extract	0.25	oz.
Flour, bread	4	oz.
Flour, whole wheat	5	oz.
Baking powder	0.1	oz.
Baking soda	0.25	oz.
Cinnamon, ground	0.25	oz.
Oats, rolled	3	oz.
Cherries, dried	2	oz.
Chocolate, chips, dark	2	oz.

Method

1. Heat a small, dry skillet over medium-low heat. Add the cashews and walnuts. Toast, stirring often, for 2 to 3 minutes. Add the pumpkin seeds and sunflower seeds. Toast until the nuts are lightly golden and the seeds are aromatic, 2 to 3 minutes. Transfer to a plate. Cool and reserve.
2. In the bowl of a stand mixer fitted with a paddle attachment, cream the butter, almond paste, applesauce, sugar and salt until smooth.
3. Gradually add the eggs and vanilla, scraping the sides of the bowl as necessary.
4. In a mixing bowl, sift the bread flour, whole wheat flour, baking soda, baking powder and cinnamon together.
5. Add the sifted flour mixture, oats, dried cherries, chocolate chips and the reserved nuts and seeds to the wet ingredients. Mix until just combined.
6. Roll dough out to a log (16 inches in length) and chill for about 1 hour.
7. Preheat oven to 350°F.

8. Cut into ¼-inch pieces and place on a parchment lined sheet pan.
9. Bake in the preheated oven until lightly browned, about 15 minutes. Do not over bake as cookies will continue to bake while pan cools.

Note: Unsalted peanuts can be substituted for the cashews.

GINGER-APRICOT COFFEE CAKE

Yield: one, 8-inch cake

Ingredients	Amounts	
Flour, pastry, whole-wheat, white	2	cups
Flour, all-purpose	1	cup
Baking soda	1 ½	tsp.
Baking powder	1 ½	tsp.
Salt, kosher	¼	tsp.
Ginger, ground	1 ½	tsp.
Butter, unsalted	7.5	oz.
Sugar, brown	1 ⅛	cups
Sugar, granulated	¼	cup
Vanilla, extract	1 ½	tsp.
Egg, whole, large	1 ½	ea.
Egg, whites	3	ea.
Yogurt, plain, low-fat	4.5	oz.
Sour cream, light	1 ½	cups
Sugar, brown	½	cup
Cinnamon, ground	2	tsp.
Pecans, coarsely chopped	3	oz.
Butter, unsalted	¼	cup
Flour, pastry, whole-wheat, white	¼	cup
Apricot	8	ea.

Method

1. Preheat oven to 360°F.
2. For the batter, in a mixing bowl, sift together the pastry flour, all-purpose flour, baking soda, baking powder, salt, and ginger. Reserve.
3. In the bowl of a stand mixer fitted with a paddle attachment, cream together the butter, brown sugar, and granulated sugar.
4. Add the vanilla and eggs. Add sour cream and yogurt, scraping bowl as necessary.
5. Gradually add the flour mixture. Mix until just combined.
6. For the streusel, in a separate mixing bowl, combine the brown sugar, cinnamon, pecans, butter, and pastry flour. Reserve.
7. Slice the apricots into ¼ to ½ inch slices.
8. Grease the pans. Spread enough batter to just cover the bottom of the pan.

9. Arrange layer of apricots on the layer of batter. Cover apricots with half of the streusel.
10. Cover the layer of streusel with the rest of batter. Layer the remaining apricots. Top with the remaining streusel.
11. Bake for about 1 hour and 20 minutes.

Note: This recipe can also yield two loaves, depending on the cooking vessel.

MUESLI BREAKFAST BARS

Yield: 24 bars

Ingredients	Amounts
Muesli, tropical, gluten free (Bob's Red Mill)	6 cups
Strawberries, freeze-dried, broken into pieces	⅔ cup
Pumpkin, seeds	½ cup
Honey	1 cup
Almond, butter	1 cup
Salt, sea, flaky (Maldon)	2 tsp.

Method

1. Line a ½ sheet pan with parchment paper that hangs over two of the edges.
2. In a large bowl, mix the muesli, freeze-dried strawberries, and pumpkin seeds until combined Reserve.
3. In a small saucepan over medium heat, place the honey and almond butter. Stir until smooth.
4. Cook, stirring constantly, until the mixture thickens to the consistency of caramel sauce, 4 to 5 minutes.
5. Immediately remove the pan from the heat and drizzle over the muesli. Working quickly, stir to evenly coat the muesli.
6. Scrape into the prepared pan. Use the spatula to press the muesli into an even, flat layer all the way to the edges of the pan. Sprinkle with flakey sea salt.
7. Refrigerate until set, about 1 hour. Cut into 24 bars.

Red Raspberry-Rhubarb Crisp

Yield: two, 8-inch tarts

Ingredients	Amounts	
Rhubarb, cut in ¼-in. slices	3	cups
Sugar, granulated (Divided)	1 ¾	cups
Flour, rice, white	7 ⅓	Tbsp.
Flour, rice, brown	6	Tbsp.
Potato starch	5	tsp.
Tapioca starch	3	Tbsp.
Salt, kosher	¾	tsp.
Baking powder	1	tsp.
Egg, whole, large	1	ea.
Butter, unsalted, melted	½	cup
Cinnamon, ground	1.5	oz.
Sugar, granulated	1.5	oz.

Method

1. Preheat oven to 350°F.
2. In a medium bowl, toss the rhubarb with ¾ cup of the sugar. Let sit until some juices have released, about 15 minutes.
3. In a bowl, combine the remaining sugar with the white rice flour, brown rice flour, potato starch, tapioca starch, salt, baking powder and egg until a crumbly mixture is formed.
4. Add the raspberries to the bowl with the rhubarb. Toss to combine. Divide the fruit mixture equally between two, 8-inch round pans.
5. Sprinkle equal portions of flour mixture over fruit. Drizzle the melted butter over each. Sprinkle lightly with cinnamon and sugar mixture.
6. Bake in the preheated oven for 30 to 40 minutes.

BISCOTTI

Yield: 16 biscotti

Ingredients	Amounts
Flour, almond	4 oz.
Flour, rice, white	4 oz.
Guar gum	½ oz.
Egg, white, powder	1 ½ oz.
Baking powder	2 tsp.
Sugar, granulated	6 oz.
Breadcrumbs, gluten free	3 oz.
Almonds	4 oz.
Hazelnuts	4 oz.
Vanilla, extract	½ tsp.
Almond, extract	½ tsp.
Orange, juice	1 oz.
Egg, whole, large	2 ½ ea.

Method

1. Preheat oven to 350°F.
2. For the flour blend, in a bowl, place the almond flour, white rice flour, guar gum, and egg white powder. Mix to combine.
3. In the bowl of a stand mixer fitted with a paddle attachment, place the flour blend, baking powder, sugar, breadcrumbs, almonds, hazelnuts, vanilla extract, almond extract, orange juice, and eggs. Mix until just combined.
4. On a clean work surface, roll out the dough into 10-inch-long tubes.
5. Press down until the tubes are 2-inches wide.
6. Place the tubes on a parchment paper lined sheet pan.
7. Bake in the preheated oven for 20 minutes. Remove and cool.
8. Turn down the oven temperature to 300°F.
9. Cut the tubes on bias into 2-inch-wide pieces. Lay flat on the sheet pan, with the inside of the biscotti facing up.
10. Bake in the preheated oven for 40 minutes.
11. Turn off oven, with biscotti inside. Remove after oven is completely cooled.

Note: Cake crumbs can be substituted for the breadcrumbs.

Peanut Butter Energy Bites

Yield: 16 bars

Ingredients	Amounts
Peanut, butter, natural, unsalted, unsweetened	½ cup
Banana, ripe, mashed	½ cup
Butter, unsalted, melted	¼ cup
Egg, whole, large	1 ea.
Carrot, finely grated, lightly packed	1 cup
Honey	¼ cup
Vanilla, extract	1 tsp.
Oats, rolled, old-fashioned	1 ½ cups
Flour, oat	¾ cup
Flaxseed, meal	3 Tbsp.
Baking powder	1 tsp.
Baking soda	½ tsp.
Salt, kosher	½ tsp.
Cinnamon, ground	½ tsp.
Chocolate, chips, dark	½ cup

Method

1. Preheat oven to 350°F. Line an 8 x 8 pan with parchment paper.
2. In a large bowl, whisk together the peanut butter, banana, melted butter, egg, carrot, honey, and vanilla until smooth.
3. Stir in the oats, oat flour, flaxseed meal, baking powder, baking soda, salt, and cinnamon until combined. Fold in the chocolate chips.
4. Spread batter in prepared pan. Bake until top is set and lightly golden, 30 to 35 minutes.
5. Cool. Slice into squares.

WHOLE WHEAT YOGURT FLATBREAD

Yield: 8 portions

Ingredients	Amounts
Corn, cob, kernels removed	2 ea.
Tomato, cherry, quartered	1 cup
Onion, red, diced	½ cup
Parsley, flat leaf, fresh	½ cup
Mint, fresh, roughly chopped	¼ cup
Lime, juice, fresh	¼ cup
Oil, olive, extra virgin	⅓ cup
Salt, kosher	to taste
Pepper, black, ground	to taste
Cheese, ricotta	1 ½ cups
Oil, olive, extra virgin	¼ cup
Flour, whole wheat	2 cups
Yogurt, plain	1 cup
Baking powder	1 Tbsp.
Baking soda	1 tsp.
Garlic, minced	2 tsp.
Lime, zested	1 ea.
Salt, kosher	½ tsp.
Oil, canola	2 Tbsp.

Method

1. For the corn salsa, in a bowl, place the corn, tomato, onion, parsley, mint, lime juice and olive oil. Mix well. Season with salt and pepper to taste. Reserve.
2. For the olive ricotta, in a separate bowl, place the ricotta and olive oil. Mix to combine. Reserve.
3. For the flatbread, in a large bowl, combine whole wheat flour, yogurt, baking powder, baking soda, garlic, lime zest, and salt. Stir to mix until a shaggy dough is created.
4. Dust a clean work surface with some whole wheat flour. Knead the dough until smooth, 1 to 2 minutes.
5. Form the dough into a rectangle. Slice into eight squares. Using a rolling pin, roll out each square until the dough is about ¼-inch thick.
6. Heat a griddle over medium high heat. Brush with the canola oil. Add the dough and cook, turning when the bottom is golden brown, 3 to 4 minutes. Reserve.
7. When ready to serve, spread the ricotta mixture onto each flatbread. Top evenly with the corn salsa.

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Basic Knife Cuts

Mince
<$\frac{1}{16}$-in. cube

Brunoise
⅛-in. cube (fine dice)

Chop
⅛-in. to ¼-in. cube

Small Dice
¼-in. cube

Medium Dice
½-in. cube

Large Dice
¾-in. cube

Fine Julienne
$\frac{1}{16}$-in. sq. x 2-in.

Rondelle
Varied diameter/ thickness
Can be round or bias-round cut

Julienne
⅛-in. sq. x 2-in.

Chiffonade
rolled, sliced thin

Batonnet
¼-in. sq. x 2-in.

Conversion Tables

Metric Weights and Measures Equivalencies

1 gram (g)	=	1/28 oz. (or 0.035 oz.)
½ ounce (oz.)	=	14 g
1 ounce	=	28.35 g. (approx. 30 g)
2 ounces	=	56 g. (approx. 60 g)
4 ounces	=	110 g
6 ounces	=	170 g
8 ounces	=	225 g
12 ounces	=	340 g
1 pound (16 oz.)	=	453.6 g (454 g)
1 kilogram (kg)	=	2.21 lb.
1 liter	=	35 fl. oz. (1 ¾ pt.)

Metric Conversion Table

To Change…	To…	Multiply by
Pounds (lb.)	Grams (g)	453.6
Ounces (oz.)	Grams (g)	28.35
Pounds (lb.)	Kilograms (kg)	.45
Teaspoons (tsp.)	Milliliters (ml)	5
Tablespoons (Tbsp.)	Milliliters (ml)	15
Fluid Ounces (fl. oz.)	Milliliters (ml)	30
Cups	Liters (l)	.24
Pints (pt.)	Liters (l)	.47
Quarts (qt.)	Liters (l)	.95
Gallons (gal.)	Liters (l)	3.8
Temperature (°F)	Temperature (°C)	5/9 after subtracting 32*

**Example: 9°F above boiling equals 5°C above boiling.*

Temperature Equivalencies

Fahrenheit (°F)	Celsius (°C)	Classification
250	130	very cool
300	150	low
325	165	moderate-low
350	180	moderate
400	200	moderate-hot
425	220	hot
450	230	very hot

US Customary Liquid Volume Conversions

1 tablespoon (Tbsp.)	=	3 teaspoons (tsp.)
1 fluid ounce (fl. oz.)	=	2 tablespoons (Tbsp.)
1 cup	=	8 fluid ounces (fl. oz.)
1 pint (pt.)	=	2 cups
1 pint (pt.)	=	16 fluid ounces
1 quart (qt.)	=	2 pints (pt.)
1 gallon (gal.)	=	4 quarts (qt.)
1 gallon (gal.)	=	128 fluid ounces (fl. oz.)

US to Metric Dry Measures Conversions

tsp.	Tbsp.	oz.	cup	lb.	grams
3	1	½	1/16	---	14
6	2	1	⅛	1/16	28
12	4	2	¼	⅛	57
24	8	4	½	¼	113
36	12	6	¾	⅜	170
48	16	8	1	½	227
96	32	16	2	1	454

Volume Measure Conversions

US	Metric
1 tsp.	5 milliliters (ml)
1 Tbsp.	15 ml
1 fl. oz./ 2 Tbsp.	30 ml
2 fl. oz./ ¼ cup	60 ml
8 fl. oz./ 1 cup	240 ml
16 fl. oz./ 1 pint (pt.)	480 ml
32 fl. oz./ 1 quart (qt.)	960 ml
128 fl. oz./ 1 gallon (gal.)	3.84 liters (L)

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