



Culinary Institute
of America

Pastry Boot Camp

Day 3: Techniques in Puff Pastry,
Meringue, and Cake Decorating



Learning Objectives

- Produce classic puff pastry by following a step-by-step lamination method.
- Execute all folding techniques (single, double, book) to build layer structure.
- Identify meringue ingredients and explain each one's impact on texture and stability.
- Differentiate among French, Swiss, and Italian meringues.
- Understand the fundamentals of baking + building a cake.
- Assemble, ice, and decorate a cake using professional pipping and finishing techniques.

What is Puff Pastry?

An **unleavened** dough that rises by steam generated in countless thin butter layers



Big picture steps:

- Make the détrempe (base dough)
- Prepare the beurre (butter block)
- Encase & turn (laminates)
- Rest, roll, fold - repeat
- Final sheet – cut & bake

Ingredients & Equipment

Ingredients:

- All-purpose flour
- Unsalted butter (for détrempe + beurre)
- Cold water
- Salt



Equipment:

- Rolling pin
- Pastry scraper
- Scale (for accuracy)
- Plastic wrap + bench flour

Step 1- Make the Détrempe

- 1. Combine:** flour, salt, and cold water in bowl
- 2. Mix:** just until a shaggy dough forms
- 3. Knead:** lightly (10-15 turns) to bring it together – **do not overwork**
- 4. Shape:** into a flat rectangle (1/2 inch thick), wrap, and chill 20-30 min



Step 2- Prepare the Butter Block



Butter block can also be referred to as the **“envelope”**

- 1. Slice:** cold butter into even slabs or hit with rolling pin to soften.
- 2. Arrange:** butter on parchment paper shaping into a rectangle shape (slightly larger than your chilled dough)
- 3. Beat/roll:** gently to ,ale a uniform block (1/2 inch thick)
- 4. Wrap:** and chill until firm but still pliable (10 minutes)

Step 3- Encase & First Turn



- 1. Roll:** détrempe into a rectangle roughly twice the size of butter block
- 2. Center:** the butter on the dough, leaving a boarder
- 3. Fold:** dough "envelope-style" over butter-seal all edges
- 4. Roll out:** into a long rectangle (3/4" thick)
- 5. Perform a single turn:** fold one short end- center, fold the other end over it (letter fold)
- 6. Wrap & rest:** 20-30 min in fridge

Step 4– Subsequent Turns & Rest

Single turn (letter fold): adds 3-4 more layers each time



Double turn (book fold): fold both ends in – fold in half, adding more layers



Step 4– Subsequent Turns & Rest

- Alternate single + double for a total of **4-6 turns**
- Rest 20-30 minutes between each turn to keep butter cold and dough relaxed



Step 5- Final Roll, Cut & Bake

- 1. Roll:** to final thickness (1/8" for most uses)
- 2. Chill:** 15 minutes so cuts are clean
- 3. Cut:** desired shapes
- 4. Bake:** at 400°-425°F until puffed and golden
- 5. Cool:** on a rack a few minutes before serving



Tips for Success

Always keep everything **cold**- warm butter = greasy pastry

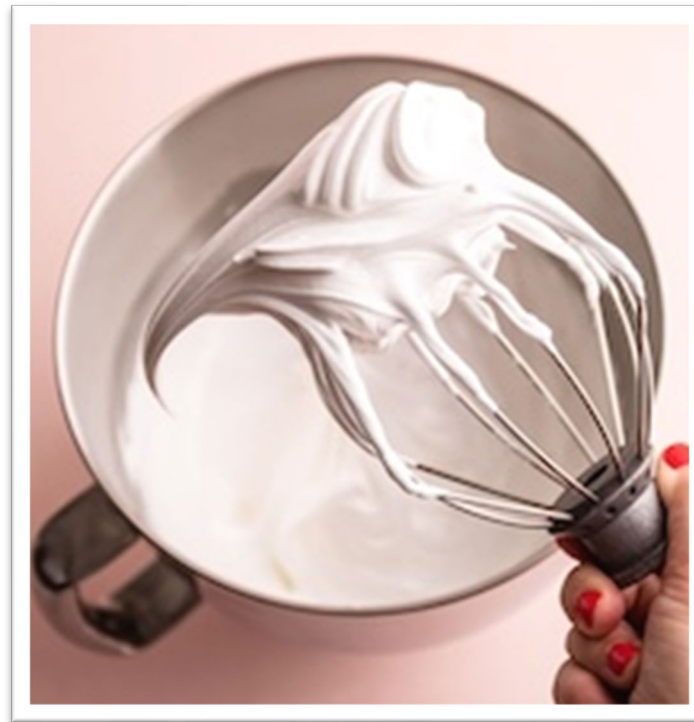
Use a light dusting of flour, too much makes dough tough

Practice your turns on scrap dough first to see the layers



What is Meringue?

A foam made by whipping egg whites with sugar (and sometimes an acid) until glossy peaks form



- **Structure:** air cells surrounded by stretched proteins- creates volume and lightness

Uses:

- Toppings (pies)
- Shells (pavlova)
- Fillings (dacquoise)
- Folded into batters

Volume vs. Stability

Volume

- Achieved by trapping air bubbles in whipped egg white proteins
- Peak height and glossy sheen indicate maximum volume

Stability

- Sugar and acid (cream of tartar, lemon juice) strengthen the foam
- Too little sugar = weepy collapsed meringue
- Too much sugar- dense, slow-to-whip

Three Types Meringue

French

- Whipped raw egg whites, gradually add sugar
- Quick, but least stable (best baked immediately)

Swiss

- Gently heat egg whites + sugar over a bain-marie, then whip
- Very smooth and glossy; good for buttercreams + cookies

Italian

- Pour hot sugar syrup (238° - 242°F) into whipping whites
- Most stable and heat safe-ideal for mousses and piping

French Meringue

- 1. Prep:** use a perfectly clean, dry bowl and whisk
- 2. Whip:** beat room temperature egg whites to soft peaks
- 3. Sugar:** add sugar a little at a time, whip to stiff, glossy peaks
- 4. Use:** Pipe or fold immediately



Swiss Meringue

- 1. Combine:** whisk egg whites and all the sugar in a heatproof bowl
- 2. Heat:** place over simmering water and whisk until warm (140°F) and sugar dissolves
- 3. Whip:** transfer to mixer and whip to cool, glossy peaks
- 4. Use:** great for buttercreams, cookies, or folding into batters



Italian Meringue

- 1. Whip whites:** beat egg whites to soft peaks
- 2. Syrup:** heat sugar and water to (238°-242°F) **“softball stage”**
- 3. Stream:** with mixer running, pour in a thin stream into whites
- 4. Finish:** whip to cool, thick, glossy peaks
- 5. Use:** ideal for stable icings, mousses, and toppings



Fundamentals of Baking a Cake

Baking a cake is a delightful process that involves a few fundamental steps:

- Measuring ingredients
- Equipment
- Preheat + grease pans
- Mixing
- Baking
- Cooling
- Frosting + decorating



Building a Layered Cake

- 1. Level + slice:** using a serrated knife split cooled sponge into even horizontal layers
- 2. Prepare your base:** place bottom layer of cake on a board and secure with a dab of icing
- 3. Syrup:** lightly brush each layer with flavored simple syrup
- 4. Fill + stack:** spread even layer of filling, then gently add next sponge, repeat



Cake Icing and Decorating



- 5. Crumb coat:** apply a thin “crumb coat” of icing all around the stacked cake to seal in crumbs. Chill until set
- 6. Final coat + smooth:** add final layer of icing, using a bench scraper or spatula to achieve clean + crisp edges
- 7. Decorate:** proceed with your piping and decorative finishes





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Any Questions?