

STRANDS AND STANDARDS

BAKING & PASTRY



Course Description

This course introduces Culinary Arts students to another aspect of the Culinary Arts industry, baking and pastry. Students will gain experience with baking terminology, equipment, formula conversions, and practice methods for creating yeast breads, pastries, fillings, cakes, and cookie production. Students will also have the opportunity to practice industry workplace skills, food safety and understand the opportunities for careers within the baking and pastry industry.

Intended Grade Level	11-12
Units of Credit	0.5
Core Code	34.01.00.00.176
Concurrent Enrollment Core Code	N/A
Prerequisite	Culinary Arts 1 & 2; Prostart 1 & 2
Skill Certification Test Number	349
Test Weight	0.5
License Area of Concentration	CTE and/or Secondary Education 6-12
Required Endorsement(s)	
Endorsement 1	Family & Consumer Sciences (CTE/General)
Endorsement 2	Culinary Arts
Endorsement 3	N/A

STRAND 1

Consistently demonstrate workplace safety, food safety, and sanitation techniques.

Standard 1

Review established safety rules and guidelines in a work environment. (Refer to Culinary 1 Strand 1 Standard 1)

Standard 2

Review health and hygiene requirements for food handling. (Refer to Culinary 1 Strand 1 Standard 2)

Standard 3

Review food-borne illness and prevention. (Refer to Culinary 1 Strand 1 Standard 3)

STRAND 2

Explore the baking and pastry industry, education and career opportunities.

Standard 1

Explore the baking and pastry educational opportunities.

- American Culinary Federation (ACF)
- Retail Baking of America (RBA)
 - Certifications ranges from novice to master's level, with a variety of specializations.

Standard 2

Analyze the career opportunities available in the baking and pastry industry.

- Entrepreneurship
 - Restaurants
 - Gourment Shop
 - Cafes
 - Specialized confectioners
- Corporation
 - Wholesale Bakeshops
 - Hotels Grocery
 - Stores
 - Commercial

STRAND 3

Apply necessary skills for baking and pastry production.

Standard 1

Employ proper measuring techniques.

- Utilize weights and measures by demonstrating proper scaling and measurement.
- Compare and contrast volume and weight measurements.
- Select the appropriate tools for the task.
- Apply the baking formulas
 - Bakers' Percentage

- Examine the difference between standardized recipes and traditional recipes.

Standard 2

Define terms related to baking and pastry methods, processes, and techniques.

- Docking: Pricking a pie crust to allow steam to escape while baking.
- Blind Baking: baking a pie crust or pastry without the filling.
- Tempering: Bringing two liquids together to a similar temperature by combining them completely.
- Fold in: incorporating two mixtures together delicately. Mix by cutting down the center of the mixture and sweeping to the side. Repeat until incorporated.
- Cut in: Using a solid fat worked into flour until the pieces of fat are very small.
- Cream: Using a solid fat beaten together with sugar to form a web of air between the fat and sugar. Lightens and leavens baked goods.
- Blooming: soften gelatin in cool liquid before using. Ensures a smooth texture in the final product.
- Caramelization: Browning of sugars by heat. Creating a complex flavor.
- Leavening: Process of baked goods rising. Three categories are, Chemical leaveners (Baking soda or powder), Organic leaveners (yeast), and Physical leavener (air).
- Gelatinization: Process by which starch granules absorb water and swell in size.
- Proof: Final rise of a yeast bread product prior to baking.
- Oven Spring: Final burst of rising just after a yeast product is put in the oven before crust hardens.
- Gluten: Protein in wheat, barley, and rye. Found in the endosperm of the grain.
- Batter: Semi- liquid mixture containing a flour or other starch that provides structure.
- Dough: Thick, malleable, often elastic mixture that is stiff enough to knead or roll.
- Meringue: Delicate, frothy mixture made with beaten egg whites and sugar.
 - Swiss: Sugar and egg heated together, to 160F and then whipped to desired peaks.
 - Italian: Made with boiling sugar syrup.
 - French: Whisk the egg whites, then adding granulated sugar until the desired peaks are reached. Less stable than Swiss and Italian.
- Pasteurized: process of heating a food to a certain temperature for a certain amount of time to reduce or destroy pathogens.
- Streusel: Crumbly topping for baked goods made of flour, fat, sugar, and flavoring(s).
- Puree: Cooked food usually fruits or vegetables that have been ground, pressed, or blended to a paste or liquid.
- Review mise en place techniques (Culinary 2 Strand 1 Standard 5)
- Prepare a sequence and prioritized timeline.
- Discuss the importance of planning and preparation in baking and pastry.
 - Inventory (Ingredients, equipment)

Standard 3

Explore the equipment utilized by the baking and pastry industry.

- Explore oven types and benefits of use.
- Explore large production equipment utilized in baking and pastry.

STRAND 4

Demonstrate yeast bread preparation skills.

Standard 1

Discuss the types of flours and yeasts used in baking and pastry.

- Review common baking ingredients.
- Compare and contrast the variety of flours and uses for each.
 - Dietary needs
 - Celiac & Gluten intolerance
 - End Product
 - Crumb
- Compare and contrast types of yeasts used in baking
 - Dry yeast
 - Active & Instant
 - Cake Yeast (fresh)
 - Preferments

Standard 2

Analyze the difference between the types of yeast dough and mixing methods.

- Enriched Dough (challah, brioche, crescent, sweet dough)
 - Adding fat and/or sugar.
- Lean Dough (french bread, sandwich bread, pizza crust, bagels, pita).
- Practice the stages of proper mixing.
 - Pick up period
 - Blending of ingredients
 - Clean up
 - Dough begins to come together
 - Initial Development
 - Gluten beginning to develop
 - Final Period
 - Gluten developed, dough is smooth and elastic
- Straight Mixing Method
 - Ingredients added together all at once. As a result, the dough can lack flavor and shelf-life.
- Sponge Mixing Method
 - Yeast is mixed with a portion of the flour and water then allowed time to develop (sponge) prior to mixing the other ingredients.
- Brioche Mixing Method
 - Sponge method with butter added as the last ingredient.
- Completion of dough preparation.
 - Fermentation
 - Shaping
 - Panning
 - Proofing
 - Baking
 - Finishing

Standard 3

Discuss proper holding and storage of yeast breads.

- Cooling
- Packaging
 - Paper
 - Plastic
- Refrigeration vs. Freezing
- Sustainability
 - Usable waste (bread pudding, croutons)

STRAND 5

Explore and produce a variety of fillings.

Standard 1

Demonstrate the production and use of a cream filling.

- Stirred Custard/Pudding
 - Curd
 - Flavored custard that contains butter and acidic fruit.
 - Pastry cream
 - Explore the fillings that can be produced from a pastry cream.
 - Mousse
 - Bavarian Cream
 - Ice Cream
- Baked Custard
 - Pie filling
 - Bread Pudding
 - Crème Brûlée
 - Flan

Standard 2

Demonstrate the production and use of a fruit filling.

- Whole fruit filling
 - Apple Pie
- Macerated fruit filling
 - Compote
 - Jam/jelly

Standard 3

Demonstrate the production and use of baking and pastry finishes.

- Icing
- Glazes
- Sauces
- Ganache
- Marzipan

STRAND 6

Explore a variety of pastry doughs.

Standard 1

Differentiate between the four types of pastry doughs.

- Short Dough (tart crust, short bread)
 - High percentage of fat produces a tender and crumbly crust.
- Flaky Dough (traditional pie crust)
 - Cut in doughs using a solid fat, leaves flakes of visible fat.
- Pâte à Choux (eclairs, cream puff)
 - Cooked batter, that expands when baked. Liquid, fat, flour, and eggs.
- Lamine Dough (danish, puff pastry, croissant)
 - Layers of fat folded and rolled into dough.

STRAND 7

Explore a variety of cake preparations and finishes.

Standard 1

Explore the preparation techniques of cake batters.

- Mixing methods
 - Blending method
 - Combine the dry and wet ingredients separately then add wet to dry ingredients together.
 - Creaming method
 - Cream together sugar and fat, add eggs followed by the rest of the ingredients.
 - Two stage method (muffin method)
 - Dry ingredients mixed with the liquid added in stages.
- Foaming method
 - Eggs whipped and beat to incorporate air before it is mixed into a batter. Eggs used as the leavening agent.

Standard 2

Explore assembling and finishing techniques of cakes.

- Layered
- Filled
- Glazed
- Iced/frosted/decorated

Standard 3

Discuss proper holding and storage of cakes.

- Cooling
- Packaging
 - Paper
 - Plastic
- Storage

- Sustainability
 - Reuses of cake (cake pops, trifle)

STRAND 8

Explore a variety of cookies

Standard 1

Differentiate between the six mixing methods for cookies

- Drop (chocolate chip, oatmeal)
 - Made from dough firm enough to be spooned or scooped onto a baking sheet.
- Bar/Sheet (lemon bar, brownie)
 - Baked in large sheets and portioned after baking.
- Rolled/Cut Out (sugar, gingerbread cookie)
 - Dough prepared, chilled and rolled then cut into desired shape before cooking.
- Molded (Spritz, almond crescent)
 - A dough stiff enough to be formed by hand, stamped, pressed or piped.
- Twice baked (biscotti)
 - Prepared in a log or loaf, baked then cooled, sliced and re-baked.
- Piped (Macarons)
 - Batter is placed in a piping bag and piped into shapes on a sheet pan.

Standard 2

Discuss proper holding and storage of cookies.

- Cooling
- Packaging
 - Paper
 - Plastic
- Storage

Performance Skills

- Students will properly weigh ingredients using a scale, to produce a baked good.
- Students will produce two yeast bread products, using a lean and an enriched dough.
- Students will produce a cream filling.
- Students will produce two pastries including a Pâte à Choux to produce a finished product.
- Students will prepare a filling and use it to produce complete a cake product, including a finish.
- Students will produce at least two different varieties of cookies.

Workplace Skills

Students will develop professional and interpersonal skills needed for success in industry. Determine the difference between hard skills and soft skills.

- Hard Skills: Hard skills are specific, teachable abilities that can be defined and measured
- Soft Skills: Personal attributes that enable someone to interact effectively and harmoniously with other people.

Identify soft skills needed in the workplace

- Professionalism
- Respect legal requirements/expectations
- Good communication skills
- Resourcefulness & creativity
- Work Ethic