



Republic of the Philippines

Department of Education

DepEd Complex, Meralco Avenue, Pasig City

STRENGTHENED SENIOR HIGH SCHOOL CURRICULUM

BAKERY OPERATIONS

Grade 11/12

Course Description:

This course covers components in baking various bread, pies, and pastries. It is designed to provide learners with technical and practical skills relevant to bakery operations. Through hands-on experience, learners will be equipped and will have the opportunity to engage in bakery business and perform various roles. After completing the course, learners may obtain National Certification Level II in Bread and Pastry Production, pursue higher education and careers relative to the baking industry.

Elective: Technical Professional

Prerequisite: None

Time Allotment: In Grade 11, 320 hours for two semesters, 8 hours per week/In Grade 12, 320 hours for one semester, 16 hours per week

Schedule: First/Second Semester

QUARTER 1

CONTENT STANDARD	The learners demonstrate an understanding of the fundamentals of baking bread and other baked products.	
PERFORMANCE STANDARD	The learners demonstrate fundamental skills in baking breads.	
	LEARNING COMPETENCIES	CONTENT
	1. Discuss the overview of the baking industry	Overview of Baking Industry <ul style="list-style-type: none"> • History Career and Business Opportunities <ul style="list-style-type: none"> • Artisan baker • Baker • Cake decorator • Entrepreneur • Food vlogger • Food influencer Baking Terminologies Trends and Innovations in Baking

<p>2. Discuss the fundamentals in baking</p>	<p>Baking Tools & Equipment</p> <ul style="list-style-type: none"> • Tools and equipment <p>Ingredients and Substitutes</p> <ul style="list-style-type: none"> • Dry ingredients • Liquid ingredients • Flavorings <ul style="list-style-type: none"> ○ functions of baking ingredients ○ nutritional value of baking ingredients ○ selecting quality ingredients <p>Conversion and substitution</p> <ul style="list-style-type: none"> • Ingredients • Oven temperature • Recipe quantification and reduction • Product costing <p>Baking Techniques</p> <ul style="list-style-type: none"> • Measuring method
<p>3. Prepare bread products following safety</p>	<p>Bread Products</p> <ul style="list-style-type: none"> • Quick breads • Yeasted dough breads <p>Characteristics of Bread</p> <ul style="list-style-type: none"> • Mixing method <ul style="list-style-type: none"> ○ straight dough method ○ modified straight dough method ○ sponge dough method ○ no knead method ○ sourdough starter ○ autolyse

	<p>Contemporary Bread-making Techniques</p> <ul style="list-style-type: none"> • Tangzhong method • Yudane method • Gluten and sugar-less alternatives <p>Food Safety & Sanitation</p> <ul style="list-style-type: none"> • Cleaning surfaces and equipment • Disinfecting • Waste disposal • Cleaning hands and uniforms <p>Risk Assessment, Hazard Identification, and Control Measure</p>
4. Select appropriate packaging and marketing strategies of bakery products	<p>Packaging and Marketing Bakery Products</p> <ul style="list-style-type: none"> • Packaging • Labelling • Storage requirement • Marketing strategies • Costing

QUARTER 2

CONTENT STANDARD	The learners demonstrate understanding of pastry products.	
PERFORMANCE STANDARD	The learners apply skills in preparing pastry products.	
LEARNING COMPETENCIES		CONTENT
1. Explain the fundamentals of pastry making		<p>Introduction to Pastry</p> <ul style="list-style-type: none"> • Origin of pastry • Kinds of pastry • Common pastry products

	<ul style="list-style-type: none"> • Characteristics of pastry by-products
<p>2. Discuss the characteristics of pastries</p>	<p>Kinds of Pastry</p> <ul style="list-style-type: none"> • Short-crust pastry • Filo pastry • Choux pastry • Flaky pastry • Puff Pastry <p>Pastry Products and By-Products</p> <ul style="list-style-type: none"> • Choux pastry (Pâte à choux) • Pies • Tarts • Laminated dough (French and Danish pastry) <p>Quality of Pastry Products</p> <ul style="list-style-type: none"> • Appearance • Taste • Texture and mouthfeel • Composition
<p>3. Prepare crust, fillings and, coating for pastry products</p>	<p>Crust and Fillings</p> <ul style="list-style-type: none"> • Kinds of crust • Kinds of fillings • Functions of filling • Cream fillings • Fruit fillings • Custard filling • Chiffon filling <p>Coatings</p> <ul style="list-style-type: none"> • Glaze • Caramel coating • Icing/frosting

	<ul style="list-style-type: none"> • Fruit glaze • Chocolate coating • Nut coating • Sugar coating • Coconut coating • Egg wash
<p>4. Prepare traditional and contemporary pastry products</p>	<p>Traditional Pastry Products</p> <ul style="list-style-type: none"> • Croissant • Danish • Baklava • Tarts • Pies • Gluten-free and healthy alternatives <p>Plant-based and Vegan Pastries</p> <p>Contemporary</p> <ul style="list-style-type: none"> • Cronuts • Cruffins • Brookies • Crookies
<p>5. Perform costing and marketing of pastry products</p>	<p>Packaging and Marketing Bakery Products</p> <ul style="list-style-type: none"> • Packaging • Labelling • Storage requirement • Marketing strategies • Costing

QUARTER 3

CONTENT STANDARD	The learners demonstrate understanding on cake products.	
PERFORMANCE STANDARD	The learners apply skills in producing cakes and cake products	
LEARNING COMPETENCIES	CONTENT	
1. Explain the fundamentals of cake production	Overview Cake Production <ul style="list-style-type: none"> • Characteristics of Cake Products • Ingredients 	
2. Classify cakes and icing based on ingredients used	Classification of Cakes <ul style="list-style-type: none"> • Shortened • Unshortened • Rich • Chiffon Quality of Cakes According to <ul style="list-style-type: none"> • Appearance • Taste • Texture and mouthfeel • Composition Frostings and Icings <ul style="list-style-type: none"> • Function • Types • Ingredients 	
3. Produce and store cakes following industry standards	Elements of Cake Production <ul style="list-style-type: none"> • Cake mixing techniques <ul style="list-style-type: none"> ○ creaming ○ folding ○ reverse creaming ○ whipping ○ sponge method 	

	<ul style="list-style-type: none"> • Frostings and icings <ul style="list-style-type: none"> ○ buttercream ○ boiled ○ fondant ○ fudge ○ royal • Glazes • Trends in cake decorating <ul style="list-style-type: none"> ○ edible garnishes ○ drip cakes ○ minimalist designs • Characteristics of Classical and Contemporary Mini Cakes <ul style="list-style-type: none"> ○ size and shape ○ ingredients ○ decorations ○ varieties ○ flavors
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QUARTER 4

CONTENT STANDARD	The learners demonstrate understanding on producing traditional and contemporary petit fours.	
PERFORMANCE STANDARD	The learners apply the skills in producing traditional and contemporary petit fours.	
LEARNING COMPETENCIES		CONTENT

<p>1. Discuss the function of petit fours</p>	<p>Petit Fours</p> <ul style="list-style-type: none"> • Functions • Ingredients • Kinds • Characteristics
<p>2. Describe the characteristics of traditional and modern petit fours</p>	<p>Characteristics Traditional and Modern Petit Fours</p> <ul style="list-style-type: none"> • Size • Shape • Ingredient • Decorations • Varieties • Flavors <p>Trends in Making Petit Fours</p> <ul style="list-style-type: none"> • 3-D printed molds • Unique flavors • Designs • Healthy ingredients
<p>3. Produce traditional and modern petit fours</p>	<p>Traditional Petit Fours</p> <ul style="list-style-type: none"> • Petit fours glacés (iced petit fours) • Petit fours secs (dry petit fours) • Petit fours salés (savory petit fours) • Jelly or fruit-filled petit fours • Marzipan petit fours

GLOSSARY

Autolyse	A baking technique where flour and water are mixed and left to rest, allowing gluten development and enzyme activity to improve dough texture and flavor before adding salt or yeast.
Babka	A sweet, braided bread of Eastern European origin, typically made with a rich, yeasted dough and filled with chocolate, cinnamon, or other sweet fillings.
Baker's Percentage	A formula system in baking where ingredient quantities are expressed as a percentage of the total weight of flour, which is always set at 100%
Baguette	A long, thin loaf of French bread with a crisp crust and a soft, airy interior, typically made from basic ingredients like flour, water, yeast, and salt.
Boiled icing	Italian meringue used as cake icing
Brioche	rich yeast dough containing large amounts of eggs and butter; a product made from this dough
Butter cream	an icing made of butter and/or shortening blended with confectioners' sugar or sugar syrup, other ingredients may also be added
Ciabatta	An Italian bread known for its rustic, flat shape, chewy texture, and open crumb, made with a high-hydration dough.
Chiffon cake	A light cake made following the chiffon method – cake mixing method involving the folding
Creaming method	a mixing method that begins with the blending of fat and sugar; used for cakes, cookies and similar items
Custard	A liquid that is thickened or set by coagulation of egg protein.
Dairy Products	Foods or beverages made from milk, including items like cheese, yogurt, butter, and cream, often valued for their rich nutrients like calcium and protein.

Fermenting	Process where microorganisms like yeast or bacteria convert sugars into alcohol, gases, or acids, enhancing flavor, preservation, and nutritional value in food and beverages.
Focaccia	Soft, flat Italian bread known for its airy texture, crisp crust, and toppings like olive oil, herbs, and sometimes vegetables or cheese.
Fondant	A type of icing made of boiled sugar syrup that is agitated so that it would crystallize into a mass of extremely small white crystals.
Ganache	a rich cream made of chocolate and heavy cream
Gluten	An elastic substance formed from proteins present in wheat flours which gives structure and strength to baked goods.
Hazard	Any potential source of harm, damage, or adverse effect on people, property, or the environment.
Kariman	A soft, slightly sweet, and fluffy Middle Eastern bread, often used to accompany various dishes or served as a snack, typically made with flour, yeast, sugar, and milk.
Leavening	The production or incorporation of gases in a baked product to increase volume and to produce shape and texture.
Meringues	A thick, white foam made of whipped egg whites and sugar.
Pastry cream	A thick custard sauce containing eggs and starch.
Punching	The process of gently deflating dough after its first rise to release excess air, redistribute yeast, and improve texture before shaping.
Puff pastry	A very light, flaky pastry made from a rolled-in dough and leavened by steam.
Risk	The possibility of experiencing loss, harm, or uncertainty due to exposure to potential dangers or unfavorable outcomes.

Roti bun	A soft, sweet bread bun topped with a crispy, buttery layer, often resembling a cross between a traditional roti and a sweet pastry.
Sifting	The process of passing dry ingredients like flour, baking powder, or cocoa through a fine mesh to remove clumps and evenly distribute them for better texture and consistency in the final product
Scones	Baked good, typically made with flour, butter, sugar, and milk or cream, and often served with jam and clotted cream.
Sourdough	A bread made by fermenting dough with naturally occurring wild yeast and lactic acid bacteria, giving it a tangy flavor and chewy texture.
Sponge	A batter or dough of yeast, flour and water that is allowed to ferment and is then mixed with more flour and other ingredients to make bread dough.
Sponge cake	A type of cake made by whipping eggs and sugar to a foam, then folding in flour.
Tart	A flat, baked item consisting of a pastry and a sweet or savory topping of filling; like a pie but usually thinner.
Tangzhong Method	cooking a portion of the flour and water mixture into a thick paste before adding it to the dough, resulting in softer, more moist bread
Thickeners	substances used in food, cosmetics, or industrial products to increase their viscosity or consistency without altering other properties
Yudane Method	mixing a portion of the flour with hot water to create a gelatinized dough, which helps improve the texture and moisture retention of the final bread

REFERENCES

Labensky, S. R. (n.d.). *On baking* (4th ed.). Pearson.

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Republic of the Philippines, & Department of Education. (2023). *Matatag K to 10 curriculum of the K to 12 program: Edukasyong Pantahanan at Pangkabuhayan (EPP) / Technology and Livelihood Education (TLE) Grades 4-10*. Department of Education.

TESDA. (2016). *K to 12 Home Economics – Bread and Pastry Production (NC II) curriculum guide*. Technical Education and Skills Development Authority.

MATERIALS, TOOLS, AND EQUIPMENT

TOOLS	EQUIPMENT	MATERIALS
Measuring cup, solid	Commercial Mixers with complete attachments	Cake flour
Measuring cup, liquid (250 & 500 ml)	Mechanical Dough roller	Bread Flour
Measuring spoon	Decker oven	All-purpose flour
Cake turn table	Compressor	Sugar
Decorating tips	Dough cutter	Yeast
Rolling pins	Gas range	Butter
Pie pan sizes 6, 8, 10	Upright freezer	Margarine
Sheet pans	Refrigerator	Butter (French bread)
Pie cutter		Cooking oil
Rubber scrapper		Lard
Palette knife		All-purpose cream
Cake stand with tier		Whipping cream
Cake pillars		Confectioner sugar

Sauce pan, s/s		Knox gelatin
Ladles s/s		Flaked almonds
Knives s/s with plastic handle		Chocolate chips
Chopping board, color coded		Chocolate, shredded
Scale 2, 10 kgs		Cherries with stem
Grater		Cherries
Wooden spoons		Food colors
Beaters		Tropical fruits
Mixing bowl (6 pcs per set)		Whole wheat, rye, multi grain
Wire whisk		Cream cheese
Muffin pan, small		Paper cups
Muffin pan, medium		Tulip paste
Muffin pan, big		Sugar lace
Loaf pan, small		Pineapple juice
Loaf pan, medium		Contreau
Loaf pan, big		
Rectangular pan 1x8x8		
Round pan 6,8, 10, 12, 14, 16		
Pie pan		
Flour sifter		
Strainer		
Double boiler		
Piping bags		
Coupler		