Baking and Pastry

Grade(s):	☐ K ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	☐ 6 ☐ 7 ☐ 8	☑ 9 ☑ 10 ☑ 11 ☑ 12 ☐ Other _____
Discipline/Course:	**Discipline:** Family and Consumer Science **Course:** Culinary Arts		
Course Title:	Baking and Pastry		
Prerequisite(s):	Introduction to Culinary Arts		
Course Description: *Program of Studies*	Love to bake, create, and make something delicious from scratch? In Baking and Pastry, you will explore the science and creativity behind breads, cookies, cakes, pastries, and other baked treats. You will learn professional techniques, discover how ingredients work together and develop the precision and problem-solving skills that turn recipes into successful products. Through hands-on work in a commercial kitchen, you will have the opportunity to practice baking, presentation, and product evaluation while creating delicious foods to share. Whether you are interested in a culinary career or simply want to become a more confident baker, this course will give you the skills and creativity to take your baking to the next level.		
Course Essential Questions:	• How do ingredients, ratios, and techniques affect the structure, texture, flavor, and appearance of baked products? • How can bakers use precision, observation, and problem-solving to consistently produce and improve quality baked products? • How do professional practices, including safety, sanitation, organization, and time management, contribute to success in a baking environment? • How can bakers use foundational techniques and informed creativity to adapt, evaluate, and create baked products?		

Course Enduring Understandings:	• Successful baking is both a science and an art. The properties and interactions of ingredients, combined with appropriate techniques and environmental conditions, determine the structure, texture, flavor, appearance, and quality of a baked product. • Precision matters in baking**.** Accurate measuring, appropriate ingredient ratios, correct temperatures, proper mixing methods, and attention to time and technique are essential for consistent results. • Baking problems can be analyzed and solved. Understanding the function of ingredients and processes allows bakers to improve their products by observing, tasting, measuring, reflecting, receiving feedback, and making adjustments. • Safe, sanitary, and organized work habits are essential to successful food preparation**.** Professional bakers must manage equipment, ingredients, workspace, time, and food safety while producing quality products. • Quality baking requires both technical skill and creativity. Bakers use foundational techniques as a starting point and make informed decisions about flavor, texture, appearance, presentation, and adaptation. • Collaboration, communication, time management, and professionalism are essential skills in a commercial and school kitchen.	
Duration: **Credit:**	☑ Semester ☐ Full-Year	☑ 0.5 Credit(s) ☐ 1.0 Credit(s) ☐ 1.5 Credit(s) ☐ N/A
Course Materials/Resources:	Professional baking equipment and tools, digital scales and measurement tools, stand mixers and food processors, ovens and proofing equipment, online resources and instructional videos, recipe databases, professional baking references, food safety materials, and sanitation materials	
FPS Course Academic Expectation(s):	☑ Exploring and Understanding (EU) ☐ Synthesizing and Evaluating (SE) ☑ Creating and Constructing (CC) ☐ Conveying Ideas (CI)	

	☐ Collaborating Strategically (CS) ☐ Using Communication Tools (UCT)
Year at a Glance (Units):	**Unit 1:** Introduction to Baking and Pastry (~2 weeks) **Unit 2:** Quick Breads and Yeast Breads (~6 weeks) **Unit 3:** Cookies (~4 weeks) **Unit 4:** Cakes (~4 weeks) **Unit 5:** Pies, Tarts, and Custards (~4 weeks)

Unit Number and Title	**Unit 1:** Introduction to Baking and Pastry
Duration:	~2 weeks
Resource(s):	N/A
Unit Overview:	This foundational unit establishes the knowledge and skills students will use throughout the entire course. Students will learn kitchen safety and sanitation procedures, proper equipment use, accurate measuring, recipe terminology, and basic baking techniques. Students will also explore the science behind baking, including ingredient functions, gluten development, leavening, heat transfer, and the role of fats, sugars, liquids, eggs, and flour. This unit establishes the course's central idea that understanding why something happens allows a baker to make better decisions and solve problems.
Learning Goals	
Standard(s):	**Area of Study 8.0 Food Production and Services** 8.2 Demonstrate food safety and sanitation procedures 8.2.5 Practice good personal hygiene/health procedures. 8.2.7 Demonstrate safe food handling and preparation techniques that prevent cross contamination from potentially hazardous foods and food groups. 8.3 Demonstrate industry standards in selecting, using, and maintaining food production and food service equipment. 8.5 Demonstrate professional food preparation methods and techniques 8.5.3 Demonstrate knowledge of portion control and proper scaling and measurement techniques. 8.5.4 Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of a variety of foods.
Essential Question(s):	● How do ingredients, ratios, and techniques affect the structure, texture, flavor, and appearance of baked products? ● How can bakers use precision, observation, and problem-solving to consistently produce and improve quality baked products?

	● How do professional practices, including safety, sanitation, organization, and time management, contribute to success in a baking environment? ● How can bakers use foundational techniques and informed creativity to adapt, evaluate, and create baked products?
Enduring Understanding(s):	● The properties and interactions of ingredients, combined with appropriate techniques and environmental conditions, determine the structure, texture, flavor, appearance, and quality of a baked product. ● Accurate measuring, appropriate ingredient ratios, correct temperatures, proper mixing methods, and attention to time and technique are essential for consistent results. ● Understanding the function of ingredients and processes allows bakers to improve their products by observing, tasting, measuring, reflecting, receiving feedback, and making adjustments. ● Safe, sanitary, and organized work habits are essential to successful food preparation**.** Professional bakers must manage equipment, ingredients, workspace, time, and food safety while producing quality products. ● Bakers use foundational techniques as a starting point and make informed decisions about flavor, texture, appearance, presentation, and adaptation. ● Collaboration, communication, time management, and professionalism are essential skills in a commercial and school kitchen.
Learning Goal(s): *Students will know and will be able to use their learning to:* (Content/ Skills)	**Content:** (Students will know…) ● the functions of common baking ingredients, including flour, fats, sugars, eggs, leaveners, liquids, and salt. ● how ingredient ratios and interactions affect the structure, texture, flavor, and appearance of baked products. ● the importance of accurate measurement, scaling, and following standardized recipes. ● proper food safety, sanitation, personal hygiene, and equipment safety practices. ● the purpose and correct use of common baking tools, equipment, and terminology. ● the importance of organization, mise en place, time management, and professional kitchen practices.

	Skills: (Students will be able to…) ● demonstrate proper personal hygiene, food safety, and sanitation practices. ● identify and safely operate common baking tools and equipment. ● accurately measure and scale ingredients using appropriate techniques. ● read, interpret, and follow standardized recipes. ● organize a workstation using mise en place. ● demonstrate appropriate knife and equipment-handling techniques. ● explain the function of key ingredients in a baked product. ● work collaboratively and professionally in a commercial-style kitchen. ● evaluate a basic baked product using sensory characteristics such as appearance, aroma, texture, and flavor. ● use basic baking terminology, tools, and equipment.

Unit Number and Title:	**Unit 2:** Quick Breads and Yeast Breads
Duration:	~6 weeks
Resource(s):	Professional baking equipment and tools, digital scales and measurement tools, stand mixers and food processors, ovens and proofing equipment, online resources and instructional videos, recipe databases, professional baking references, food safety materials, and sanitation materials.
Unit Overview:	Students explore the science, techniques, and processes involved in producing both quick breads and yeast breads. Students will examine how ingredients play a role in the structure, texture, flavor, and appearance of bread products. Through hands-on laboratory experiences students will compare chemical and biological leavening, investigate gluten development and practice appropriate mixing, kneading, fermentation, shaping, proofing and baking techniques. Students will develop their ability to troubleshoot common breadmaking problems and evaluate finished products using sensory and technical criteria.
Learning Goals	
Standard(s):	**Area of Study 8.0 Food Production and Services** 8.5.1 Demonstrate professional skills in safe handling of knives, tools, and equipment. 8.5.3 Demonstrate knowledge of portion control and proper scaling and measurement techniques 8.5.4 Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of a variety of foods. 8.5.10 Prepare breads, baked goods and desserts using safe handling and professional preparation techniques. **Area of Study 9.0 Food Science, Dietetics, and Nutrition** 9.5.6 Conduct sensory evaluations of food products.
Essential Question(s):	● How do ingredients, ratios, and techniques affect the structure, texture, flavor, and appearance of baked products?

	● How can bakers use precision, observation, and problem-solving to consistently produce and improve quality baked products? ● How do professional practices, including safety, sanitation, organization, and time management, contribute to success in a baking environment? ● How can bakers use foundational techniques and informed creativity to adapt, evaluate, and create baked products?
Enduring Understanding(s):	● The properties and interactions of ingredients, combined with appropriate techniques and environmental conditions, determine the structure, texture, flavor, appearance, and quality of a baked product. ● Accurate measuring, appropriate ingredient ratios, correct temperatures, proper mixing methods, and attention to time and technique are essential for consistent results. ● Understanding the function of ingredients and processes allows bakers to improve their products by observing, tasting, measuring, reflecting, receiving feedback, and making adjustments. ● Safe, sanitary, and organized work habits are essential to successful food preparation**.** Professional bakers must manage equipment, ingredients, workspace, time, and food safety while producing quality products. ● Bakers use foundational techniques as a starting point and make informed decisions about flavor, texture, appearance, presentation, and adaptation. ● Collaboration, communication, time management, and professionalism are essential skills in a commercial and school kitchen.
Learning Goal(s): *Students will know and will be able to use their learning to:* (Content/ Skills)	**Content:** (Students will know…) ● the characteristics and categories of quick breads and yeast breads. ● the functions of chemical and biological leaveners. ● how gluten development affects the structure and texture of bread products. ● the differences between mixing methods used for quick breads and yeast breads. ● the stages of yeast bread production, including mixing, kneading, fermentation, shaping, proofing, and baking. ● the factors that affect yeast activity, fermentation, and bread quality.

	● how ingredients, proportions, temperature, and technique influence the final product. ● the difference between lean and enriched doughs. ● common bread defects and their causes. **Skills:** (Students will be able to…) ● prepare a variety of quick breads using appropriate mixing methods. ● prepare yeast breads using appropriate mixing, kneading, fermentation, shaping, and proofing techniques. ● measure and scale ingredients accurately. ● demonstrate proper gluten development for different bread products. ● evaluate dough for consistency, development, and readiness. ● control time and temperature during fermentation and baking. ● shape and finish breads using appropriate techniques. ● diagnose common bread-making problems and identify possible causes. ● evaluate finished breads based on appearance, volume, texture, crumb, aroma, and flavor.

Unit Number and Title:	**Unit 3:** Cookies
Duration:	~4 weeks
Resource(s):	Professional baking equipment and tools, digital scales and measurement tools, stand mixers and food processors, ovens and proofing equipment, online resources and instructional videos, recipe databases, professional baking references, food safety materials, and sanitation materials.
Unit Overview:	Students investigate cookies as a category of baked goods in which relatively small changes in ingredients, ratios, mixing methods, portioning, and baking conditions can create significant differences in texture and appearance. Students will build on their understanding of ingredient functionality and baking science while comparing different cookie-making methods. The unit emphasizes precision, consistency, experimentation, evaluation, and problem-solving.
Learning Goals	
Standard(s):	**Area of Study 8.0 Food Production and Services** 8.5.1 Demonstrate professional skills in safe handling of knives, tools, and equipment. 8.5.3 Demonstrate knowledge of portion control and proper scaling and measurement techniques 8.5.4 Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of a variety of foods. 8.5.10 Prepare breads, baked goods and desserts using safe handling and professional preparation techniques. 8.5.12 Demonstrate professional plating, garnishing, and food presentation techniques. **Area of Study 9.0 Food Science, Dietetics, and Nutrition** 9.5.6 Conduct sensory evaluations of food products.
Essential Question(s):	● How do ingredients, ratios, and techniques affect the structure, texture, flavor, and appearance of baked products? ● How can bakers use precision, observation, and problem-solving to consistently produce and improve quality baked products?

	● How do professional practices, including safety, sanitation, organization, and time management, contribute to success in a baking environment? ● How can bakers use foundational techniques and informed creativity to adapt, evaluate, and create baked products?
Enduring Understanding(s):	● The properties and interactions of ingredients, combined with appropriate techniques and environmental conditions, determine the structure, texture, flavor, appearance, and quality of a baked product. ● Accurate measuring, appropriate ingredient ratios, correct temperatures, proper mixing methods, and attention to time and technique are essential for consistent results. ● Understanding the function of ingredients and processes allows bakers to improve their products by observing, tasting, measuring, reflecting, receiving feedback, and making adjustments. ● Safe, sanitary, and organized work habits are essential to successful food preparation**.** Professional bakers must manage equipment, ingredients, workspace, time, and food safety while producing quality products. ● Bakers use foundational techniques as a starting point and make informed decisions about flavor, texture, appearance, presentation, and adaptation. ● Collaboration, communication, time management, and professionalism are essential skills in a commercial and school kitchen.
Learning Goal(s): *Students will know and will be able to use their learning to:* (Content/ Skills)	**Content:** (Students will know…) ● the major types and characteristics of cookies. ● how ingredient ratios and mixing methods affect cookie spread, texture, tenderness, and structure. ● how baking temperature, time, portion size, and pan preparation affect cookie quality. ● factors that contribute to consistent production and product quality **Skills:** (Students will be able to…) ● prepare a variety of cookies using appropriate mixing and portioning techniques.

	● accurately measure, scale, and portion cookie dough. ● apply appropriate mixing methods to achieve desired texture and structure. ● control oven temperature, baking time, and product spacing. ● evaluate cookies based on appearance, texture, flavor, color, spread, and consistency. ● identify common cookie-production problems and determine possible causes. ● modify ingredients or techniques to achieve a desired product characteristic. ● demonstrate consistent production of a standardized cookie product.

Unit Number and Title:	**Unit 4:** Cakes
Duration:	~4 weeks
Resource(s):	Professional baking equipment and tools, digital scales and measurement tools, stand mixers and food processors, ovens and proofing equipment, online resources and instructional videos, recipe databases, professional baking references, food safety materials, and sanitation materials.
Unit Overview:	Students apply their knowledge of ingredient functionality, mixing methods, leavening, temperature, and product evaluation to cake production. Students will explore different types of cakes and the importance of proper mixing, pan preparation, baking, cooling, filling, frosting, and presentation. This unit increases the complexity of student decision-making and emphasizes that quality results depend on both scientific understanding and technical execution.
Learning Goals	
Standard(s):	**Area of Study 8.0 Food Production and Services** 8.5.1 Demonstrate professional skills in safe handling of knives, tools, and equipment. 8.5.3 Demonstrate knowledge of portion control and proper scaling and measurement techniques 8.5.4 Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of a variety of foods. 8.5.10 Prepare breads, baked goods and desserts using safe handling and professional preparation techniques. 8.5.12 Demonstrate professional plating, garnishing, and food presentation techniques. **Area of Study 9.0 Food Science, Dietetics, and Nutrition** 9.5.6 Conduct sensory evaluations of food products.
Essential Question(s):	● How do ingredients, ratios, and techniques affect the structure, texture, flavor, and appearance of baked products? ● How can bakers use precision, observation, and problem-solving to consistently produce and improve quality baked products?

	● How do professional practices, including safety, sanitation, organization, and time management, contribute to success in a baking environment? ● How can bakers use foundational techniques and informed creativity to adapt, evaluate, and create baked products?
Enduring Understanding(s):	● The properties and interactions of ingredients, combined with appropriate techniques and environmental conditions, determine the structure, texture, flavor, appearance, and quality of a baked product. ● Accurate measuring, appropriate ingredient ratios, correct temperatures, proper mixing methods, and attention to time and technique are essential for consistent results. ● Understanding the function of ingredients and processes allows bakers to improve their products by observing, tasting, measuring, reflecting, receiving feedback, and making adjustments. ● Safe, sanitary, and organized work habits are essential to successful food preparation**.** Professional bakers must manage equipment, ingredients, workspace, time, and food safety while producing quality products. ● Bakers use foundational techniques as a starting point and make informed decisions about flavor, texture, appearance, presentation, and adaptation. ● Collaboration, communication, time management, and professionalism are essential skills in a commercial and school kitchen.
Learning Goal(s): *Students will know and will be able to use their learning to:* (Content/ Skills)	**Content:** (Students will know…) ● the characteristics and major categories of cakes. ● how different mixing methods affect cake structure and texture. ● the role of gluten development, aeration, and emulsification in cake quality. ● the importance of accurate scaling, oven temperature, and baking time. ● the principles of cake filling, frosting, finishing, and presentation. ● how technique and ingredient selection influence the final appearance, texture, and flavor of a cake.

	Skills: (Students will be able to…) ● prepare cakes using appropriate mixing methods. ● accurately measure, scale, and portion cake batter. ● prepare and apply appropriate fillings, frostings, and finishing techniques. ● prepare cake layers with consistent size, shape, texture, and doneness. ● demonstrate appropriate techniques for cooling, leveling, filling, stacking, and finishing cakes. ● apply basic decorating and piping techniques. ● evaluate cakes based on volume, texture, crumb, appearance, flavor, and structure. ● identify and troubleshoot common cake-production problems. ● use foundational techniques to create an aesthetically pleasing finished cake.

Unit Number and Title:	**Unit 5:** Pies, Tarts, and Custards
Duration:	~4 weeks
Resource(s):	Professional baking equipment and tools, digital scales and measurement tools, stand mixers and food processors, ovens and proofing equipment, online resources and instructional videos, recipe databases, professional baking references, food safety materials, and sanitation materials.
Unit Overview:	Students master the preparation of pie and tart dough by exploring techniques for creating tender, flaky crusts, and a variety of sweet and savory fillings. This unit covers blind baking, lattice work, meringues, fruit preparation, and custard-based fillings. Students develop precision in rolling, shaping, and finishing pies and tarts with attention to both flavor and visual appeal.
Learning Goals	
Standard(s):	**Area of Study 8.0 Food Production and Services** 8.5.1 Demonstrate professional skills in safe handling of knives, tools, and equipment. 8.5.3 Demonstrate knowledge of portion control and proper scaling and measurement techniques 8.5.4 Apply the fundamentals of time, temperature, and cooking methods to cooking, cooling, reheating, and holding of a variety of foods. 8.5.7 Prepare various fruits, vegetables, starches, legumes, dairy products, fats, and oils using safe handling and professional preparation techniques. 8.5.10 Prepare breads, baked goods and desserts using safe handling and professional preparation techniques. 8.5.12 Demonstrate professional plating, garnishing, and food presentation techniques. **Area of Study 9.0 Food Science, Dietetics, and Nutrition** 9.5.6 Conduct sensory evaluations of food products.
Essential Question(s):	● How do ingredients, ratios, and techniques affect the structure, texture, flavor, and appearance of baked products?

	● How can bakers use precision, observation, and problem-solving to consistently produce and improve quality baked products? ● How do professional practices, including safety, sanitation, organization, and time management, contribute to success in a baking environment? ● How can bakers use foundational techniques and informed creativity to adapt, evaluate, and create baked products?
Enduring Understanding(s):	● The properties and interactions of ingredients, combined with appropriate techniques and environmental conditions, determine the structure, texture, flavor, appearance, and quality of a baked product. ● Accurate measuring, appropriate ingredient ratios, correct temperatures, proper mixing methods, and attention to time and technique are essential for consistent results. ● Understanding the function of ingredients and processes allows bakers to improve their products by observing, tasting, measuring, reflecting, receiving feedback, and making adjustments. ● Safe, sanitary, and organized work habits are essential to successful food preparation**.** Professional bakers must manage equipment, ingredients, workspace, time, and food safety while producing quality products. ● Bakers use foundational techniques as a starting point and make informed decisions about flavor, texture, appearance, presentation, and adaptation. ● Collaboration, communication, time management, and professionalism are essential skills in a commercial and school kitchen.
Learning Goal(s): *Students will know and will be able to use their learning to:* (Content/ Skills)	**Content:** (Students will know…) ● the characteristics and uses of common pie and tart doughs. ● how gluten development and temperature affect pastry texture. ● the techniques used to produce tender, flaky pastry. ● the role of eggs in providing structure, thickening, richness, and emulsification. ● the importance of temperature control when preparing egg-based desserts. ● principles of dessert composition, plating, and presentation. ● how seasonal ingredients and contemporary techniques can be incorporated into pastry products.

	Skills: (Students will be able to…) ● prepare pie and tart dough using appropriate mixing and handling techniques. ● roll, shape, dock, and blind-bake pastry dough appropriately. ● prepare and assemble pies and tarts using appropriate fillings. ● control temperature and baking time to achieve desired pastry and filling characteristics. ● prepare stirred and baked custards, pastry cream, puddings using appropriate techniques.