

Culinary 3

Exam Information	Description
Exam number 347 Items 40 National Career Cluster Hospitality & Tourism Certification available Yes	The Culinary 3 industry certification exam assesses learners' knowledge of career opportunities in the food service/culinary arts industry. Learners demonstrate their understanding of how to implement and practice safety and sanitation procedures and show knowledge of the use and care of commercial food service equipment. The exam explores quantity food preparation as it relates to catering, bakery, restaurant, hospitality, and quick service business operations. Learners may also be evaluated on candidate leadership and participation in competitive events (FCCLA).

Exam Blueprint and Performance Skills

Standard	Percentage of exam score
1. Safety And Sanitation	11.36%
2. Knives And Food Service Equipment	9.09%
3. Math Concepts	9.09%
4. Menu Planning	4.55%
5. Marketing Strategies	4.55%
6. Eggs And Milk	11.36%
7. Fruits, Vegetables And Garnishes	9.09%
8. Grains, Pasta, Potatoes	13.64%
9. Sustainable Practices	2.27%
10. Poultry, Meat, And Seafood	9.09%

11. Outdoor Cooking	4.55%
12. Bakery Food	11.36%

*Includes performance skill evaluation

Standard 1 - Safety And Sanitation

Connect workplace safety, food safety, and sanitation as applied to food production.
(Review Culinary 2 Strand 1)

Optional: Standard performance evaluations on the final page of this document

Standard 2 - Knives And Food Service Equipment

Differentiate knives and food service equipment function, proper use, and care.

Objective 1 Review types of knives, understand their proper use and care, and demonstrate proper knife safety. (Culinary 1 Strand 3 Standard 1)

1. Types of knives including chef, boning, paring, and serrated.
2. Practice correct holding technique, sharpening, washing and storing.

Objective 2 Review and demonstrate different knife cuts, including: (Culinary 1 Strand 3 Standard 2)

1. Batonnet— $\frac{1}{4} \times \frac{1}{4} \times 2\text{-}3$ inch
2. Julienne— $\frac{1}{8} \times \frac{1}{8} \times 1\text{-}2$ inch, fine julienne- $\frac{1}{16} \times \frac{1}{16} \times 1\text{-}2$ inch
3. Brunoise— $\frac{1}{8} \times \frac{1}{8} \times \frac{1}{8}$ inch
4. Dice, small— $\frac{1}{4} \times \frac{1}{4} \times \frac{1}{4}$ inch; medium— $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$ inch; large— $\frac{3}{4} \times \frac{3}{4} \times \frac{3}{4}$ inch
5. Chiffonade—stack leaves, roll, and slice into thin shreds
6. Diagonal—cut on a 45-degree angle
7. Rondelle—also called coin cut
8. Mince - to cut or chop into very small pieces.
9. Oblique - used for long round foods (ex: carrots) of different thicknesses, should have two angled sides.

Objective 3 Identify common small ware food preparation tools, and how it is to be safely used and cleaned. (i.e. mandolin, piping tools, portion scoops, Parisienne scoop(melon baller), chinois, scales, ricer, rolling pins, stem and digital thermometers)

Objective 4 Identify common food preparation cookware and how it is used and cleaned (i.e. roasting pan, springform pan, dutch oven, cast iron pans/skillets, carbon steel, stainless steel, nonstick pan and wok). To check if the stainless-steel pan is ready to use you can perform a mercury ball test.

Objective 5 Identify common kitchen equipment and how it is to be safely used and cleaned (e.g., convection oven, conventional oven, commercial dishwasher/sanitizer, ice machine, commercial stand mixer, deep fat fryer, proofer, steam table, flat top griddle(plancha)).

Objective 6 Identify common service ware and how it is to be safely used and cleaned. (i.e. hotel pans, sheet pans, chafing, dishes, speed rack).

1. Hotel pans based on their depth and width determines on how much product they contain.
2. Sheet pans come in several sizes; the most used are: full sheet pan(industrial oven size), ½ sheet pan(cookie sheet), ¼ sheet pan.

Optional: Standard performance evaluations on the final page of this document

Standard 3 - Math Concepts

Candidates will apply math concepts pertaining to controlling food costs, portion control, As Purchased(AP)/ Edible Portion(EP), and menu costing.

Objective 1 Identify factors in controlling food costs.

1. Monitor product through the flow of food to prevent loss.
2. Employee training regarding food theft and waste.
3. Examine how forecasting sales drives profitability and growth.

Objective 2 Determine how portion control affects food costs.

1. Portion cost
2. Total cost ÷ by the number of portions = cost per portion.
3. Serving tools and/or scales are used to control portion size.

Objective 3 Identify concepts of purchasing food to control expenses.

1. Purchasing prepared and processed food items increases product costs.
2. Purchasing whole ingredients increases labor costs.
 - a. As Purchased (AP) is the product before any trimming, cutting, or cooking.
 - b. Edible Portion (EP) is the product after it has to be trimmed or cut.
 - c. Percent Yield is percentage of the remaining food after cutting, trimming, or cooking.
 - $\text{Edible Portion (EP)} \div \text{As Purchased (AP)} = \text{Percentage Yield}$
 - $\text{Edible Portion (EP)} \div \text{Percentage Yield} = \text{As Purchased (AP)}$
 - $\text{As Purchased (AP)} \times \text{Percentage Yield} = \text{Edible Portion (EP)}$

Objective 4 Calculate Menu Pricing

1. Food Cost Percentage: the percentage of sales an operation spends on food products.
 - a. The two main functions of menu pricing are:
 - Inform customers of cost.
 - Determine profitability of menu item.
 - b. If your food cost percentage is 30% of the menu price, the additional 70% covers profit and expenses such as labor, rent, utilities, equipment, and insurance.
 - c. Industry standard food cost percentage ranges 30-40%.
 - $\text{Cost Per Portion} \div \text{Food Cost Percentage} = \text{Menu Price}$
 - $\text{Cost Per Portion} \div \text{Menu Price} = \text{Food Cost Percentage}$
 - d. Menu item classification
 - A method to determine popularity and profitability of each menu item.
 1. Star—high profit, high popularity
 2. Plow Horse—low profit, high popularity
 3. Dog—low profit, low popularity
 4. Puzzle—high profit, low popularity

Optional: Standard performance evaluations on the final page of this document

Standard 4 - Menu Planning

Candidates will demonstrate menu planning principles.

Objective 1 Evaluate nutrition principles and specialized dietary plans.

1. Dietary Guidelines for Americans programs as per the USDA.
 - a. Nutritional considerations: Carbohydrates, Protein, Fats, Vitamins, Minerals, Water
 - b. The acceptable macronutrient distribution range(AMDR) for carbohydrate, protein, and lipids for adults.
 - Carbohydrate: 45-65 percent of daily calories
 - Protein: 10 to 35 percent daily calories
 - Lipid: 20 to 35 percent daily calories
2. Special Dietary Needs
 - a. Food allergies produce histamine when a particular food is eaten.
 - Common food allergens: eggs, milk, tree nuts, peanuts, soy, wheat, sesame, fish and shellfish
 - Substitutes should be made for these allergies and offered to a customer.
 - b. Intolerances are the body's inability to process or breakdown foods.
 - Common food intolerances: celiac, lactose
3. Modification may be needed for low sodium, low fat, vegan, etc.
4. Menu development for any diet modifications should be considered and offered as a part of a comprehensive menu.

Objective 2 Define types of menus and their importance in the style of a restaurant.

1. Types of menus
 - a. Static/Fixed: Still or unchanging
 - b. Cycle: Non-commercial segment
 - c. Market: Food available in the market
 - d. Take-out: Foods that will be consumed off premises
 - e. Room service: Food ordered to an individual hotel room, not a duplication of the restaurant menu, can order breakfast the night before.
 - f. Noncommercial: education, hospital, prison, and retirement community.
 - g. Banquet or Special occasion: a sequence of courses with little or no guest choice
 - h. Catering: company supplies food, drink, and experience tailored to the client's needs
 - i. Brunch: includes breakfast and lunch items served through lunch, usually on weekends
 - j. Tasting: Chef determines the course selection and sequence, portions very small with 5 to over 25 courses
 - k. Children's: Essential to attracting families with kids includes entrée, beverages and desserts. Small portions, low sales price and includes foods that are simple and mild.
 - l. Dessert: Separate from main menu, encourages sales

Objective 3 Describe the menu pricing options below:

1. Table d' hote a multi course meal; fixed menu with entrée flexibility. ex: Banquet
2. Prix Fixe—a set complete meal at one price ex: buffet
3. A la Carte—All items priced and ordered separately.
4. Semi A la Carte -blends features of both a la carte and tasting menu, offers a limited number of dishes, often with a focus on seasonal ingredients and create flavor combinations
5. California—All items offered all day
6. Menu design and construction:
 - a. Basic menu layout and organization
 - b. Food descriptions and photos
 - c. Themes, colors and fonts
 - d. Pricing psychology – using odd cent, pricing by the ounce.

Optional: Standard performance evaluations on the final page of this document

Standard 5 - Marketing Strategies

Candidates will explore marketing and identify the applications of marketing strategies.

Objective 1 Explore marketing in the culinary industry.

1. Marketing: the process of attracting and influencing potential customers.
 - a. Factors to consider when determining marketing strategies include location, population, and demographics
 - b. Marketing strategies:

- Public relations—sponsorships, charity events
- Sales Promotions –cost incentives like a 2 for 1, rewards or loyalty programs, samples
- Advertising-- websites, television, radio; usually cost is involved
- Direct Marketing—email, digital media, mailers
- Personal Selling—training employees on how to sell the menu, influencers
- Social Media Presence – Branding, marketing management plan, engagement, visibility, online activity, posts, and interactions
 1. SWOT Analysis – Used to determine a restaurant's/business's feasibility
 2. S- Strengths
 3. W- Weaknesses
 4. O – Opportunities
 5. T- Threats

Optional: Standard performance evaluations on the final page of this document

Standard 6 - Eggs And Milk

Candidates will integrate knowledge and skills as applied to preparation of eggs, milk and milk products.

Objective 1 Discuss the selection and preparation of eggs.

1. Grade or quality, this decreases with age.
 - a. Grades: AA, A, B
 - b. As eggs age the albumen loses its strength (protein structure breaks down), becoming watery and harder to whip.
2. Size (is determined by weight per dozen)
 - a. Largest to smallest; Jumbo, Extra Large, Large, Medium, Small and Pee wee.
 - b. Standard recipes use large eggs (approx. 2 oz. per egg).
3. Purchase form
 - a. fresh- sold in shell, or pooled (in a container or bag)
 - b. frozen- high quality fresh, whole eggs that are pasteurized and frozen.
 - c. dried- used mostly for baked goods and commercial use
4. Color- Shell color is determined by the breed of chicken that lays it. It is not an indicator of taste or nutrition.
5. Eggs can be prepared many ways.
 - a. Fried/sautéed- over medium heat
 - Sunny-side up: yolk is unbroken, egg is not flipped during cooking, the white is firm, yolk is runny
 - Basted: a type of sunny side up in which the white is cooked by spooning hot butter over the egg while frying, or adding a little water to the pan/grill and covering the egg to steam it.
 - Over-easy, over-medium, over-hard: egg is turned over while cooking, named by yolk consistency.
 - Scrambled: made with whole or egg whites, cooked over low/medium heat while gently stirring.

- Omelets—whisked eggs prior to cooking and can be filled with vegetables, cheese and/or meats
- Frittata: open faced omelets of Spanish origin, the hearty fillings are mixed directly into the eggs, cooked on the stove and transferred to oven or broiler to finish cooking through, cut into wedges for serving.
- Poached: best to use very fresh eggs that will hold their shape, eggs are removed from the shell and cooked in gently simmering water, white should be firm and yolks runny
- Simmered in shell, to the desired doneness, cool quickly to avoid discoloration.
 - a. Soft: simmered 4-6 minutes
 - b. Hard: simmered for 12-15 minutes
- b. Baked
 - Shirred: prepared in individual ramekins. The whites should be set while the yolks are soft and creamy.
 - Quiche: an egg custard and fillings baked in a crust

Objective 2 Define and discuss milk and milk products.

1. Processing prior to purchase
 - a. Pasteurization: the process of heating milk to destroy pathogens.
 - b. Homogenization: the process in which the fat particles in milk are reduced in size and dispersed throughout the liquid
2. Milk is labeled and sold by fat content: skim, 1%, 2% and whole (4%)
3. Non-dairy substitutes could be: almond milk, coconut milk, oat milk, and soy milk etc...
4. Cream is also labeled and sold by fat content
 - a. Half and half= 10-18% fat
 - b. Light cream= 18-30% fat
 - c. Regular whipping cream= 30-36% fat
 - d. Heavy cream: has at least 36% fat
5. Cultured dairy is made by adding specific bacterial cultures to fluid dairy products. The bacteria convert the milk sugar to lactic acid. The acid slows growth of undesirable microorganisms. The lactic acid gives these product tang, body and unique flavors.
 - a. Buttermilk, sour cream, creme fraiche, and yogurt
 - Butter is produced by agitating cream. Regular composition is 80% fat, 16% water, 2-4% solids (protein, lactose etc.)
 - b. Sweet: no salt added
 - c. Salted: 1.7% the addition of salt increases the amount of time it can be stored and enhances flavor
 - d. Clarified: water and solids removed, to increase the smoking point
 - e. Non-dairy substitutes could be: coconut oil butter, margarine, and olive oil butter etc.
6. Cheese
 - a. Fresh/unripened: cream cheese, marscarpone, mozzarella, queso oxaca, ricotta
 - b. Soft: brie, boursin, camembert, taleggio
 - c. Semi-soft: cabrales, fontina, gorgonzola, gouda, havarti, jack, provolone
 - d. Firm: cheddar, Emmenthaler, gruyere, jarlsberg, manchego
 - e. Hard: asiago, parmesan, romano
 - f. Processed cheese: American, cheese spread, canned cheese

- g. Non-dairy substitutes are usually made from coconut, nuts, and nutritional yeast.

Optional: Standard performance evaluations on the final page of this document

Standard 7 - Fruits, Vegetables, and Garnishes

Candidates will identify characteristics of produce including fruits, vegetables and garnishes while applying preparation principles.

Objective 1 Identify characteristics of produce (fruits and vegetables) and the appropriate selection, storage and preparation methods.

1. Selecting quality produce.
 - a. Produce can be purchased fresh, canned, frozen, dried, or preserved
 - b. Fresh produce in season will be generally of a higher quality and lower cost.
2. Proper storage of produce.
 - a. The temperature for storing produce varies.
 - To finish ripening produce, store at room temperature.
 - Produce that is already ripe should be chilled to slow ripening.
 - b. Starchy vegetables such as potatoes, winter squash and vegetables in the onion family, are best stored at 60-70°F. in a dry location.
 - c. In food service plan to keep fresh produce in inventory no longer than a week.
3. Enzymatic browning is the process of food turning brown from exposure to oxygen and/or cell damage.
 - a. Foods prone to enzymatic browning include apples, potatoes, bananas, avocados, peaches, and pears.
 - b. A variety of methods can be used to prevent it.
 - Submerged in water.
 - Lemon juice and other acids that lower the pH.
 - Blanching or other forms of cooking denature the enzymes.
 - Lower temperatures can slow the speed of reactions.
 - c. Discuss various cooking techniques and their effect on nutrient preservation/loss.
 - Dry heat tends to preserve nutrients and flavors
 1. Dry heat cooking methods include: grilling/broiling, roasting/baking, deep frying, sautéing/ stir frying
 - Moist heat can result in significant nutrient loss.
 1. To help prevent nutrient loss, cook for a minimum amount of time and use as little water as possible.
 2. Moist heat cooking methods include: blanching/par boiling, steaming, simmering, braising, boiling

Optional: Standard performance evaluations on the final page of this document

Standard 8 - Grains, Pasta, Potatoes

Candidates will identify the characteristics of grains, pasta, potatoes and legumes and appropriate cooking methods.

Objective 1 Identify the characteristics of, and cooking methods for grains.

1. Characteristics
 - a. Long grain rice—stays light and fluffy after cooking, commonly used in pilaf.
 - b. Medium grain rice—moist, tender, slightly chewy grains, commonly used in risotto and paella.
 - c. Short-grain rice—sticky, commonly used in sushi.
 - d. Brown rice—the whole grain form of any length of rice.
 - e. Instant rice—precooked and dehydrated, cooks rapidly.
 - f. Converted rice—partially cooked with steam and fortified when dried.
 - g. Quinoa—high in protein and has all of the essential amino acids.
 - h. Barley, farro and spelt—types of wheat, commonly used in soups and salads.
 - i. Oats—can be rolled, cut, or used whole, commonly used as a cereal.
 - j. Corn—considered a grain when dried, it can be ground fine, medium or coarse used in polenta or grits.
2. Storage
 - a. Store dry grains in a cool dry place.
 - b. After cooking, grains are a TCS food.
3. Cooking techniques
 - a. Cooking methods
 - Boil: boiled in an unmeasured amount of water, when cooked excess water is drained.
 - Steam: added to a measured amount of liquid, covered and cooked. This can take place in the oven, microwave or stove top.
 - Pilaf: sautéed, then a measured amount of liquid is added
 - Risotto: cooked while stirring in warm liquid a little at a time.

Optional: Standard performance evaluations on the final page of this document

Standard 9 - Sustainable Practices

Candidates will identify sustainable practices in food service.

Objective 1 Describe sustainable food practices.

1. Explore how local sourcing can support local businesses and increase operational efficiency and quality.
 - a. Utilizing seasonal menus: Prioritizing ingredients grown or produced locally and in season reduces transportation emissions, supports local economies, and often ensures fresher, higher-quality produce.
 - b. personal production: restaurants grow their own food

- c. shopping locally: partnering with local farmers, small scale farms, and local food co-ops , supporting community initiatives
 - d. Food waste reduction: through inventory management, zero-waste cooking, food donation, portion control, preservation, waste management by: recycling appropriate food scraps to local farms(compost or feed), and proper food storage.
2. Explore sustainable practices in food production.
- a. organic: Sourcing organic ingredients avoids harmful pesticides and chemicals, while supporting regenerative agriculture practices improves soil health, sequesters carbon, and enhances biodiversity
 - b. protecting marine resources: Choosing seafood certified by organizations like the Marine Stewardship Council (MSC) or Aquaculture Stewardship Council (ASC) ensures that fish populations and marine ecosystems are not overexploited.
 - c. extending shelf life: food preservation through freeze drying, dehydrating, vacuum sealing, canning, fermentation, dairy processing(cheese & butter)

Objective 2 Investigate methods of resource management.

- 1. Water Conservation—energy star appliances, maintain and repair immediately, low flow toilets and faucet aerators
- 2. Energy Conservation—lighting, programmable thermostats, energy star rated appliances
- 3. Supplies and Building Materials
 - a. Supplies—paper products, reusable vs. disposable
 - b. Building—LEED certified (leadership in energy and environmental design)

Objective 3 Analyze waste management applications.

- 1. Reduce—Monitoring purchasing, menu adjustments, portion size, packaging
- 2. Reuse—repurposing food, food donations
- 3. Recycle—environmental food packaging, biofuels, composting

Standard 10 - Poultry, Meat, and Seafood

Candidates will recognize various types of poultry, meat, and seafood and apply appropriate cooking techniques.

Objective 1 Explain types, purchasing, preparation, and storage of poultry.

- 1. Types—poultry include turkey, chicken, duck, goose, pheasant, quail, and other birds
 - a. Identify the white meat vs. dark meat characteristics
 - White Meat: located on the breast & wings of the bird; lower in fat but less flavorful, easy to overcook.
 - Dark Meat: Located on the legs and thighs of the bird; more connective tissue, which requires longer cooking times and allows for higher internal cooking temperatures without drying out

the meat. Dark meat has more calories but is more flavorful.

- b. Purchasing—mandatory inspection and voluntary grading
- c. Storage—41 degrees or lower on the lowest shelf in the refrigerator
- d. Preparation—dry or moist heat cooking methods
 - Cooking temperatures: All poultry (whole or ground) must be cooked to a minimum temperature of 165°F.
 - Fabrication: the process of cutting or breaking down the poultry into its usable parts.

Objective 2 Explain types, purchasing, preparation, and storage of meats.

- 1. Types—beef, pork, veal, and lamb.
- 2. Purchasing—mandatory inspection and voluntary grading
- 3. Storage—41 degrees or lower, below ready-to-eat foods and above raw poultry.
- 4. Preparation
 - a. Fabrication
 - Wholesale cuts
 - 1. More tender from support muscles
 - 2. Less tender from movement muscles
 - Retail cuts—examples include roast, steak, chops, stew meat and ground meat.
 - b. Tenderizing methods:
 - Mechanical: grinding, needling, pounding, cutting thin
 - Chemical: marinating and meat tenderizers
 - Cooking: slow and dry (i.e., smoking), slow and moist (i.e., stewing, braising, cooking in a slow cooker)
 - c. Cooking methods
 - Dry heat is commonly used with tender cuts.
 - Moist and combination heat is commonly used with less tender cuts.
 - d. Cooking temperatures
 - Beef, veal, pork and lamb roasts, steaks and chops: minimum internal temperature is 145°F.
 - 1. Rare: Internal temperature 125-130F; item has been seared on both sides, offers no resistance when pressed, meat is red in color, warmed through
 - 2. Medium Rare: Internal temperature 135F- 140F; item has moisture beads on top as it is being cooked, then flipped to the opposite side to finish the cooking process, meat is bright pink in color, when pressed meat should have an indentation.
 - 3. Medium: Internal temperature 140F - 145F; similar cooking process to medium rare with a longer cooking time; meat is slightly pink
 - 4. Well Done: Internal temperature 145 F -160 F; meat is brown with no trace of pink, firm to the touch.
 - 5. All ground red meats including pork: minimum internal temperature of 155°F.

Objective 3 Explain types, purchasing, preparation, and storage of seafood.

- 1. Types
 - a. Fin fish—Round fish (two filets: trout, snapper, salmon, cod), flat fish (four filets: halibut, flounder, dover sole)
 - b. Shellfish—Crustaceans (lobster, crab, shrimp), Mollusks (clam, scallops, oyster), Cephalopods (octopus, squid, cuttlefish)
- 2. Purchasing—slight sea smell, eyes clear and full, gills bright red, flesh firm, shells closed, no slime
- 3. Storage—41 degrees or lower, below ready-to-eat foods and above raw meat and poultry.
- 4. Preparation
 - a. Fabrication for fin fish
 - Drawn, dressed, pan-dressed, filet, steaks

- b. Cooking methods depend on the size of portion and type of fish.
- c. Cooking temperatures: fin fish are recommended to cook at 145°F. Shellfish easily overcooked
 - Raw fish – Must be sushi or sashimi grade fish that has been processed at appropriate temperatures(frozen) to kill off parasites.

Optional: Standard performance evaluations on the final page of this document

Standard 11 - Outdoor Cooking

Candidates will be able to explore various outdoor cooking equipment and determine appropriate outdoor cooking techniques.

Objective 1 Identify and describe various outdoor cooking appliances, including smokers, dutch ovens, grills, griddles, pizza ovens, and campfire cooking.

1. Smokers
 - a. Types of Smokers
 - Offset Smokers: Firebox attached to the side; indirect heat and smoke cook the meat in the main chamber.
 - Vertical/Water Smokers: Food cooks above a water pan; maintains moisture and steady heat.
 - Pellet Smokers: Use compressed wood pellets and electronic controls for consistent temperature and smoke.
 - Electric Smokers: Use electric heating elements and wood chips for smoke; easy to maintain temperature.
 - Kamado Grills: Ceramic cookers (e.g., Big Green Egg) that retain heat and moisture exceptionally well.
 - Gas Smokers: Use propane for heat and wood chips for smoke.
 - b. Cooking Methods & Developing Flavor
 - Indirect low heat is used as smoke compounds are absorbed by raw meat. Thin blue smoke is ideal for flavor; thick white smoke can make food bitter.
 - Flavor Differences: Each smoker type and fuel source provides unique flavors, moisture levels, and textures. Each type of wood imparts a different flavor profile.
 - Temperature Control: Different smokers offer varying levels of temperature stability and ease of control.
 - Smoke Ring Formation: Nitrogen dioxide from smoke reacts with myoglobin in raw meat, creating a pink ring beneath the surface.
2. Dutch Oven Cooking
 - a. Heavy cast iron pot with tight-fitting lid
 - b. Used for baking, roasting, stewing, frying, and braising outdoors
 - c. Can be used directly over campfire coals, buried in coals, or with charcoal briquettes placed strategically on the lid and beneath.
 - d. Maintains steady, radiant heat for slow, even cooking
3. Grilling (Direct Heat)
 - a. Cooks food quickly over high heat
 - b. Common for burgers, steaks, vegetables, and smaller proteins.
4. Griddling (Outdoor flattop griddles)
 - a. Similar to an indoor griddle
 - b. Cooks a large amount of food quickly.

- c. Common for burgers, steaks, pancakes, pizza, tortillas, ideal for large quantities of food, very versatile.
- 5. Pizza Ovens
 - a. Ovens designed to cook at high temperatures typically have stone or steel bases and are surrounded on most sides to keep heat in.
 - b. Can be wood-fired, gas-fired, coal-fired, or electric.
 - c. Can also be used to cook other foods that do well at high temperatures.
- 6. Campfire Cooking
 - a. Using grates, skewers, or foil packs over open flames or coals
 - b. Requires fire management and understanding of heat zones

Objective 2 Candidates will be able to determine the appropriate outdoor cooking equipment necessary for each type of cooking implement and discuss how to care for each.

1. Identify essential barbecue tools and equipment such as long-handled tongs, grill brush, basting brush, spatula, heat-resistant gloves, thermometers (oven/grill safe & digital meat thermometers), butcher paper, injectors & fire extinguisher.
 - a. Different types of outdoor cooking may require other equipment.
2. Demonstrate proper cleaning and maintenance of smokers and related equipment.
3. Compare care requirements for barbecue equipment versus standard kitchen equipment.

Objective 3 Candidates will be able to select appropriate cuts of meat for various outdoor cooking processes and explain choices based on desired outcomes.

1. Select appropriate cuts of meat for smoking and explain choices based on desired outcomes.
2. Compare and contrast marinating, brining, dry and wet rubs techniques and their effects on flavor, moisture retention, and texture.
 - a. Marinating: The process of soaking food, typically meat in a flavorful liquid before cooking.
 - b. Brining: Soaking food in a highly concentrated salt solution (brine) before cooking.
 - c. Dry Rub: The application of a blend of spices, herbs, and salt is applied directly to the surface of the food before cooking.
 - d. Wet Rub: A paste or sauce-like mixture of spices and herbs with a liquid base that is applied to meat before cooking.

Standard 12 - Bakery Food

Candidates will explore and participate in bakery food production.

Objective 1 Identify the functions and types of each ingredient used in bakery products.

1. Identify the functions and types of each ingredient used in bakery products.
2. Flour
 - a. Flour provides structure.
 - b. Types
 - Bread, all-purpose, pastry, whole wheat
 - Non-wheat (usually made to be gluten-free). These come from other starchy plants, such as corn, oats, potatoes, beans, and rice.
3. Sugar

- a. Sugar provides flavor, color, food for yeast, tenderizer, and a stabilizer for egg whites.
- b. Types
 - Syrups: honey, molasses, corn, maple
 - Sugars: brown, turbinado/raw, course/sanding, granulated, super fine/bakers/caster, con-confectioners/powdered
 - Fruit puree and juice
4. Fats
 - a. Fats provide tenderness, flavor, moisture, browning, and flakiness.
 - b. Types
 - Shortening—made from vegetable oil that is hydrogenated.
 - Oil
 - Butter—it can be purchased salted or unsalted.
 - Margarine—made from hydrogenated vegetable oil with color, flavor and water added.
5. Leavening
 - a. Leavening agents are what make baked goods rise and have a light tender texture and good volume.
 - b. Types:
 - Yeast
 - Chemical
 1. Baking soda/sodium bicarbonate: needs an acid to make a chemical reaction that produces carbon dioxide.
 2. Baking powder: made of baking soda, a dry acid such as cream of tartar, and a moisture absorber such as corn starch. When mixed with a liquid the ingredients combine to produce carbon dioxide.
 - Physical
 1. Eggs—air is introduced by creaming or whisking and is trapped in the protein then it expands when it gets hot.
 2. Steam—during baking water evaporates and expands.
6. Salt:
 - a. Adds flavor to food and brings out the flavor of the other ingredients.
7. Eggs
 - a. Functions
 - b. Structure—contributes to the structure.
 - c. Emulsification—blends ingredients.
 - d. Leavening
 - e. Flavor—when used in large amounts, such as in pate' choux and challah bread.
 - f. Color
8. Packaging types
 - a. Shell eggs—sold in flats that hold 30 eggs. If stored properly at 41°F or below, they will last up to four weeks beyond the packing date.
 - b. Egg products—eggs that have been removed from the shell and pasteurized.
9. Liquids
 - a. Functions
 - form the gluten structure
 - activate leavening agents
 - some give flavor, tenderize, add moisture, and help with browning
 - b. Types
 - Water
 - Milk and cream
 - Eggs
 - Syrups
 - Fruits and juices
 - Butter, oil, and margarine

10. Flavorings
 - a. Effects taste and color of the final baked product.
 - b. Types
 - Extracts—liquid flavorings
 - Spices—bark, roots, flower buds, berries or seeds of aromatic plants.
 - Nuts
11. Chocolate
 - a. Comes from cacao beans harvested from the pod, roasted, chopped into nibs, crushed into a paste called chocolate liquor, and possibly sweetened and flavored (called bittersweet chocolate), or pressed to separate into liquid called cocoa butter and solids that are ground into cocoa powder.
12. Type
 - a. Unsweetened—a mixture of chocolate liquor and cocoa butter
 - b. Semisweet—a mixture of chocolate liquor, cocoa butter and sugar
 - c. Milk chocolate—chocolate liquor, cocoa butter, sugar and powdered, sweetened condensed or liquid milk.
 - d. White—sweetened cocoa butter
 - e. Cocoa powder—ground solids
 - Dutch-processed cocoa powder—treated with alkali to reduce acidity

Objective 2 Identify the types, preparation, and storage methods of yeast breads.

1. Types:
 - a. Lean—very little or no sugar or fat—dry, chewy crumb and hard crust.
 - b. Rich—addition of shortening, butter, sugars, eggs, milk or cream—moist, with a soft structure and fine crumb
2. Preparation methods
 - a. Straight-dough—mix all the ingredients together in one step.
 - b. Modified straight dough—yeast is activated before adding remaining ingredients.
 - c. Sponge method—First sponge (water, yeast, and flour) is made and allowed to ferment. Second, final ingredients are added.
 - d. Rolled in dough—dough that has layers of fat folded and rolled in, resulting in a rich, flakey texture.
3. Packaging and storing
 - a. Cool completely before packaging.
 - b. Best if used within one day in a food service operation.
 - c. If keeping for more than one day, wrap tightly, and freeze to prevent from going stale.

Objective 3 Identify the types, preparation, and storage methods of pies and pastries.

1. Types of pie & pastry doughs and fillings:
 - a. Basic pie dough, 3-2-1 dough, referring to the ratio of flour to fat and water.
 - b. Crumb crust made from crackers or cookies.
 - c. Pate Choux—light pastry dough containing fat, liquid, flour, and eggs.
 - d. Puff Pastry—light pastry made from laminated dough.
 - e. Cream—sweet pastry cream filling. Examples are coconut, banana and chocolate silk.
 - f. Custard—made with eggs that set when baked. Examples are pumpkin and pecan.
 - g. Chiffon—an airy filling stabilized with gelatin. Beaten egg whites or whipped cream are folded in.
 - h. Fruit- sweet mixture of fruit, often combined with sugar, thickeners (like flour, cornstarch, or tapioca), and sometimes spices, cooked or prepared to be baked inside a pie crust.
 - i. Savory- cooked mixture of ingredients, often including meats, vegetables, sauces, or cheeses, prepared to be enclosed and baked within a pie crust

2. Preparation
 - a. Do not overmix or over-handle pie dough, it will result in a tough texture.
 - b. Shells that are baked empty before filling are known as baking blind.
3. Storage
 - a. Baked fruit pies can be held at room temperature 1-2 days. Do not freeze.
 - b. Unbaked fruit pies or empty shells can be frozen for up to 2 months
 - c. Cream pies need to be refrigerated and used within 2-3 days. Do not freeze.
 - d. Pate choux shells can be baked, cooled, and frozen.

Objective 4 Identify the preparation and storage methods of cakes and types and functions of icings.

1. Preparation methods for cakes
 - a. Creaming—Cream fat, sugar and salt, add the eggs and other liquids; add the sifted dry ingredients.
 - b. Sponge—Fold in the dry ingredients into the whipped whole eggs, then fold in the melted cooled butter.
 - c. Foam—Egg whites, liquid flavorings and part of the sugar are whipped to stiff peaks; remaining sugar and flour are folded in. Cooled upside down.
2. Storage of cakes
 - a. Can be frozen for up to one month.
3. Types of frosting/icings
 - a. Buttercream
 - b. Fondant
 - c. Ganache
 - d. Glaze
4. Functions of frosting/icings.
 - a. Creates a protective coating for baked goods
 - b. Contributes to flavor and richness
 - c. Improves appearance

Optional: Standard performance evaluations on the final page of this document

Performance Skills Evaluation

Exam name: Culinary 3

Candidate Name: _____

Performance assessments may be completed and evaluated any time before the certification is issued. The following performance skills can be used in connection with the associated standards and exam. The evaluator will function as the subject matter expert to determine if the candidate meets the skills requirements with a Yes/No for passing.

Standard 1 – Safety And Sanitation Create a HACCP plan for a potential food item that is going to be sold to the public.	Pass:
Standard 2 – Knives And Food Service Equipment Demonstrate competency with all the knife cuts listed in Strand 2 Standard 2 and describe the process of how to sharpen a knife properly.	Pass:
Standard 3 – Math Concepts Students will determine a menu price for an individual menu item using the principles of menu costing.	Pass:
Standard 4 – Menu Planning Create a full-service menu costing one item on the menu; based on one of the menu types.	Pass:
Standard 5 – Marketing Strategies Use one marketing strategy to promote your culinary program, or mock culinary event.	Pass:
Standard 6 – Eggs And Milk Students will prepare a dish that includes eggs, milk, or milk products	Pass:
Standard 7 – Fruits, Vegetables, And Garnishes Students will prepare and present a food item containing produce.	Pass:
Standard 8 – Grains, Pasta, Potatoes Students will prepare a product containing one of the following: grains, pasta, potatoes or legumes.	Pass:

Standard 10 – Poultry, Meat, And Seafood

- Students will prepare meat, poultry or seafood using an appropriate cooking method

Pass:**Standard 12 – Bakery Food**

- Students will prepare and present a bakery item for a minimum of 30 people.

Pass:**Evaluator Name:****Date:**
