

# Instructional Framework



## Culinary Arts

12.0500.00

This Instructional Framework identifies, explains, and expands the content of the standards/measurement criteria, and, as well, guides the development of multiple-choice items for the Technical Skills Assessment. This document corresponds with the Technical Standards endorsed on May 24, 2017.

<b>Domain 1: Safety and Sanitation</b>	
<b>Instructional Time: 40-50%</b>	
<b>STANDARD 1.0 APPLY SANITATION PROCEDURES</b>	
1.1 Define the concept of HACCP (Hazard Analysis Critical Control Point)	<ul style="list-style-type: none"><li>• 3 Hazards - Biological, Chemical, Physical Hazards</li><li>• Define Hazard Analysis Critical Control Points (HACCP)<ul style="list-style-type: none"><li>◦ 7 parts of the HACCP Plan</li></ul></li></ul>
1.2 Identify major reasons for and recognize signs of food spoilage and contamination	<ul style="list-style-type: none"><li>• Proper thawing methods<ul style="list-style-type: none"><li>◦ First in First Out (FIFO)</li></ul></li></ul>
1.3 Identify the most common foodborne illnesses	<ul style="list-style-type: none"><li>• Salmonella</li><li>• E.coli</li><li>• Shigella</li><li>• Norovirus</li><li>• Hepatitis A &amp; B</li><li>• Listeria</li><li>• Staphylococcus aureus</li></ul>
1.4 Demonstrate good personal hygiene, proper dress code, and personal health practices	<ul style="list-style-type: none"><li>• Correct handwashing techniques</li><li>• Uniform</li><li>• Glove use standards</li><li>• Illness and the workplace (when to stay home, not touch food)</li></ul>
1.5 Describe cross-contamination and use of acceptable procedures when preparing and storing foods that require time/temperature control for safety (TCS)	<ul style="list-style-type: none"><li>• Define cross contamination</li><li>• Examples of cross-contact<ul style="list-style-type: none"><li>◦ Common allergens</li><li>◦ Diet</li></ul></li><li>• Equipment use</li><li>• Difference between cleaning and sanitation</li></ul>

	<ul style="list-style-type: none"> <li>• Define time/temperature control for safety (TCS) <ul style="list-style-type: none"> <li>◦ Cooling/chilling/holding procedures</li> </ul> </li> </ul>
1.6 Delineate the requirements for proper receiving and storage of raw and prepared foods	<ul style="list-style-type: none"> <li>• First in First Out (FIFO)</li> <li>• Ready to Eat (RTE)</li> <li>• Proper delivery inspections <ul style="list-style-type: none"> <li>◦ Packaging</li> <li>◦ Temperatures</li> <li>◦ Expiration dates</li> </ul> </li> <li>• Storage Procedures <ul style="list-style-type: none"> <li>◦ Dry goods</li> <li>◦ Refrigeration</li> <li>◦ Freezer</li> </ul> </li> </ul>
1.7 Identify proper waste disposal methods and recycling of materials	<ul style="list-style-type: none"> <li>• Waste disposal methods <ul style="list-style-type: none"> <li>◦ Fryer oil</li> <li>◦ Food waste</li> <li>◦ Paper goods</li> <li>◦ Misc. recycled materials</li> <li>◦ Composting</li> </ul> </li> </ul>
1.8 Recognize, treat, and prevent signs of insect, rodent, and pest infiltration	<ul style="list-style-type: none"> <li>• Recognition <ul style="list-style-type: none"> <li>◦ Prevention</li> <li>◦ Treatment</li> <li>◦ Licensed pest control</li> </ul> </li> </ul>
1.9 Identify regulatory agencies governing sanitation and safety in the food service operation	<ul style="list-style-type: none"> <li>• USDA</li> <li>• FDA</li> <li>• OSHA</li> <li>• Local County Health Inspections</li> </ul>
1.10 Define temperature danger zone for food safety and sanitation	<ul style="list-style-type: none"> <li>• Temperature danger zone <ul style="list-style-type: none"> <li>◦ Danger Zone 41-135° F</li> </ul> </li> </ul>
1.11 Identify minimum internal cooking temperature	<ul style="list-style-type: none"> <li>• Identify minimum internal cooking temperature <ul style="list-style-type: none"> <li>◦ Poultry</li> <li>◦ Beef (ground/non-ground meat)</li> <li>◦ Seafood</li> <li>◦ Eggs (eggs on buffet/immediate service)</li> <li>◦ Reheating</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Hot food holding</li> </ul>
1.12 Define methods for the growth of microorganisms (FATTOM )	<ul style="list-style-type: none"> <li>● Define FATTOM (Food, Acidity, Time, Temperature, Oxygen, Moisture)</li> </ul>
1.13 Maintain appropriate temperature and placement of products in refrigeration equipment	<ul style="list-style-type: none"> <li>● Cold food holding</li> <li>● Shelving order of products</li> <li>● Temperatures for refrigerators and freezers</li> </ul>
<b>STANDARD 2.0 APPLY SAFETY PROCEDURES</b>	
2.1 Identify current types of and the proper use and storage for cleaners and sanitizers	<ul style="list-style-type: none"> <li>● Proper chemical storage</li> <li>● Food safe cleaners and sanitizers</li> </ul>
2.2 Define and explain the purpose of Safety Data Sheets (SDS)	<ul style="list-style-type: none"> <li>● Define Safety Data Sheet (SDS)</li> <li>● Components of SDS sheets</li> <li>● Define Right to Know</li> </ul>
2.3 Identify appropriate emergency procedures for common kitchen and dining room injuries	<ul style="list-style-type: none"> <li>● Burns</li> <li>● Cuts</li> <li>● Fires</li> <li>● Choking</li> <li>● Bodily fluids</li> </ul>
2.4 Define types and appropriate uses for fire extinguishers found in the food service area	<ul style="list-style-type: none"> <li>● Proper use of a fire extinguisher – Pull, Aim, Squeeze, and Sweep (P.A.S.S.)</li> <li>● Fire Suppression System (commercial hood system – i.e., Ansul, Piranha)</li> <li>● Fire extinguishers <ul style="list-style-type: none"> <li>○ A - wood/paper</li> <li>○ B - grease/oil</li> <li>○ C - electric</li> <li>○ K - universal</li> </ul> </li> </ul>
2.5 Identify safety precautions for common workplace accidents and injuries, including OSHA regulations	<ul style="list-style-type: none"> <li>● Facility maintenance <ul style="list-style-type: none"> <li>○ Floors</li> <li>○ Lighting</li> </ul> </li> <li>● Employee <ul style="list-style-type: none"> <li>○ Uniform</li> <li>○ Lifting procedures</li> </ul> </li> <li>● Equipment</li> </ul>

	<ul style="list-style-type: none"> <li>○ Knives</li> <li>○ Unguarded machines</li> <li>○ Lockout/tagout</li> </ul>
2.6 Describe an emergency/evacuation plan for food service operations	<ul style="list-style-type: none"> <li>● Plan and implement an emergency evacuation plan</li> </ul>

## Domain 2: Preparation Techniques and Cooking

### Instructional Time: 30-40%

#### STANDARD 7.0 INTERPRET FOOD PREPARATION TECHNIQUES

7.1 Identify and demonstrate standardized knife cuts	<ul style="list-style-type: none"> <li>● Knife anatomy</li> <li>● Proper holding technique <ul style="list-style-type: none"> <li>○ Claw grip</li> <li>○ Guiding hand</li> </ul> </li> <li>● Demonstrate common knife cuts <ul style="list-style-type: none"> <li>○ Mince</li> <li>○ Chop</li> <li>○ Small/medium/large dice</li> <li>○ Julienne</li> <li>○ Chiffonade</li> </ul> </li> </ul>
7.2 Define, implement, and practice Mise en Place	<ul style="list-style-type: none"> <li>● Define Mise en Place</li> </ul>
7.3 Identify common spices and herbs and guidelines for using them	<ul style="list-style-type: none"> <li>● Define the difference between spices and herbs</li> <li>● Dried vs fresh</li> </ul>
7.4 Identify oils and vinegars and their uses	<ul style="list-style-type: none"> <li>● Sources of oils/vinegars</li> <li>● Melting point, smoke point, and flash point</li> <li>● Nutrition</li> </ul>
7.5 Identify various categories of dressings and salads	<ul style="list-style-type: none"> <li>● Identify different types of dressings <ul style="list-style-type: none"> <li>○ Emulsification</li> <li>○ Vinaigrette</li> <li>○ Mayonnaise</li> </ul> </li> <li>● Identify different types of salads <ul style="list-style-type: none"> <li>○ Tossed</li> <li>○ Composed</li> <li>○ Bound</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Farinaceous</li> </ul>
7.6 Identify various marinades, brines, and rubs	<ul style="list-style-type: none"> <li>● Define the differences between a marinade, brine, and a rub and their intended purpose</li> </ul>
7.7 Identify dry heat, moist heat, and combination cooking methods	<ul style="list-style-type: none"> <li>● Define the difference between dry heat, moist heat, and combination cooking method and their expected outcomes</li> </ul>
<b>STANDARD 8.0 PREPARE HOT FOODS</b>	
8.1 Identify and prepare various meats, seafood, and poultry	<ul style="list-style-type: none"> <li>● USDA Grading and Inspection classifications</li> <li>● Fabrication</li> </ul>
8.2 Identify and prepare various stock, soups, and sauces	<ul style="list-style-type: none"> <li>● Identify the 5 mother sauces</li> <li>● Identify the difference between stock and broth</li> <li>● Mirepoix</li> <li>● Identify ways to thicken sauces and soups</li> </ul>
8.3 Identify and prepare various fruits, vegetables, starches, and grains	<ul style="list-style-type: none"> <li>● Identify different categories of fruits and vegetables</li> <li>● Season availability effect on freshness, quality, and cost</li> <li>● Difference between starches and grains</li> </ul>
8.4 Identify and prepare breakfast meats, eggs, grains, and batter products	<ul style="list-style-type: none"> <li>● Identify and prepare breakfast meats, eggs, grains, and batter products</li> </ul>
8.5 Demonstrate traditional and contemporary food presentation techniques	<ul style="list-style-type: none"> <li>● Explore a variety of plating techniques such as color, shapes, texture, spacing, temperature, etc. (elements and principles of design)</li> </ul>
<b>STANDARD 9.0 APPLY BASIC PRINCIPLES OF GARDE MANGER</b>	
9.1 Identify tools and equipment used in garde manger preparation	<ul style="list-style-type: none"> <li>● Identify tools and equipment used in garde manger preparation</li> </ul>
9.2 Demonstrate basic garnish techniques	<ul style="list-style-type: none"> <li>● Basic garnish techniques, such as <ul style="list-style-type: none"> <li>○ Peeling</li> <li>○ Zesting</li> <li>○ Curling</li> </ul> </li> <li>● Functional vs non-functional garnishing</li> </ul>

9.3 Demonstrate fundamental skills in preparing soups, salads, sauces, dressings, marinades, relishes, sandwiches, canapés, hors d'oeuvres, cheese, and sausages	<ul style="list-style-type: none"> <li>• Prepare soups, salads, sauces, dressings, marinades, relishes, sandwiches, canapes, hors d'oeuvres, cheese, and sausages</li> </ul>
9.4 Identify food presentation techniques for banquet events	<ul style="list-style-type: none"> <li>• Service vs buffet presentation for banquets</li> </ul>
<b>STANDARD 10.0 PREPARE BAKERY AND PASTRY PRODUCTS</b>	
10.1 Define common baking terms, methods, and techniques	<ul style="list-style-type: none"> <li>• Baking Terms: scaling, confectionary, dust, sift, dough vs batter</li> <li>• Mixing Methods: beat, creaming, biscuit method</li> <li>• Baking Techniques: folding, whip, cut-in, bain-marie</li> </ul>
10.2 Identify and describe functions of baking ingredients and leavening methods	<ul style="list-style-type: none"> <li>• Basic Ingredients (flour, liquid, sweetener, binding agent, leavening, and flavor)</li> <li>• Chemical vs biological leavening agents</li> </ul>
10.3 Demonstrate techniques for preparing yeast breads	<ul style="list-style-type: none"> <li>• Identify the steps in yeast bread production</li> <li>• Prepare yeast breads</li> </ul>
10.4 Demonstrate techniques for preparing quick breads	<ul style="list-style-type: none"> <li>• Process and variations to prepare quick breads such as muffin and biscuit methods</li> </ul>
10.5 Demonstrate techniques for preparing pastry and baking goods	<ul style="list-style-type: none"> <li>• Process and variations to prepare pastries and baked goods such as pies, cookies, and cakes/cupcakes</li> </ul>
10.6 Identify types of finishing products and presentation techniques (e.g., icing, whipped cream, and chocolate)	<ul style="list-style-type: none"> <li>• Identify types of finishing techniques for baked products (e.g., icing, glaze, egg wash, and garnish)</li> </ul>

### Domain 3: Dining Operations

Instructional Time: 10-15%

#### STANDARD 11.0 PERFORM DINING AND BEVERAGE CATERING OPERATIONS IN A SCHOOL-BASED ENTERPRISE

11.1 Demonstrate the general rules of table setting and dining room layout	<ul style="list-style-type: none"> <li>• Formal vs informal</li> </ul>
11.2 Identify traditional and contemporary positions in food service	<ul style="list-style-type: none"> <li>• Front of the House (FOH) vs Back of the House (BOH)</li> </ul>

11.3 Practice professionalism and techniques in support of good customer relations	<ul style="list-style-type: none"> <li>• Workplace and employability skills</li> </ul>
11.4 Demonstrate cash handling procedures for processing guest checks, including point of sale systems (POS)	<ul style="list-style-type: none"> <li>• Cash handling</li> </ul>
11.5 Practice sales techniques for service personnel, including menu knowledge, suggestive selling, and special requests	<ul style="list-style-type: none"> <li>• Practice front of the house sales techniques</li> </ul>
11.6 Demonstrate fundamentals of acceptable dining etiquette	<ul style="list-style-type: none"> <li>• Proper serving and clearing of cover</li> </ul>
11.7 Perform side work for opening and closing food service shifts	<ul style="list-style-type: none"> <li>• Perform side work relative to job duties for front of house and back of house positions</li> </ul>
11.8 Identify various styles of service (e.g., buffet, fast casual, formal, and casual)	<ul style="list-style-type: none"> <li>• Identify various styles of service (buffet, fast casual, formal, casual, and family)</li> </ul>

## Domain 4: Meal Planning

Instructional Time: 10-15%

### STANDARD 3.0 APPLY BASIC NUTRITIONAL CONCEPTS

3.1 Identify food groups in the current USDA nutritional guidelines	<ul style="list-style-type: none"> <li>• Refer to current USDA nutritional guidelines</li> </ul>
3.2 Specify primary functions and sources for the six nutrients groups	<ul style="list-style-type: none"> <li>• Protein, carbohydrates, water, fat (lipid), vitamins, and minerals</li> </ul>
3.3 Identify cooking and storage practices for maximum retention of nutrient groups	<ul style="list-style-type: none"> <li>• Healthy cooking techniques</li> </ul>
3.4 Investigate common food allergies and appropriate substitutions	<ul style="list-style-type: none"> <li>• Top eight allergens (peanuts, fish, dairy, wheat, soy, eggs, tree nuts, and shellfish)</li> </ul>
3.5 Characterize common nutritional considerations (e.g., vegan/vegetarianism, restricted diets, and caloric intake)	<ul style="list-style-type: none"> <li>• Characterize common nutritional considerations (e.g., vegan/vegetarianism, restricted diets, and caloric intake)</li> </ul>

### STANDARD 4.0 INTERPRET RECIPES

4.1 Define common culinary recipe terminology	<ul style="list-style-type: none"> <li>• Define common culinary recipe terminology</li> </ul>
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4.2 Identify the four major components of a recipe	<ul style="list-style-type: none"> <li>Title, yield, ingredients, method</li> </ul>
4.3 Read, follow, and execute a recipe	<ul style="list-style-type: none"> <li>Recipe formats: standardized, action, narrative</li> </ul>
4.4 Use proper scaling and measurement techniques	<ul style="list-style-type: none"> <li>Measuring equivalents</li> <li>Serving size</li> <li>Weight vs volume</li> </ul>
4.5 Identify and demonstrate mixing methods (e.g., stir, mix, cream, fold, and blend)	<ul style="list-style-type: none"> <li>Stir, mix, cream, fold, and blend</li> </ul>
4.6 Identify menu styles (e.g., A la carte, Prix Fixe, Table d'Hote, Du Jour)	<ul style="list-style-type: none"> <li>A la carte, Prix Fixe, Table d'Hote, Du Jour</li> </ul>
4.7 Plan a menu	<ul style="list-style-type: none"> <li>Identify the different components of a menu (appetizers, entree, sides, desserts, etc.)</li> <li>Psychological, inventory, seasonal, cost analysis</li> <li>Truth in menu principles</li> </ul>
<b>STANDARD 12.0 APPLY CULINARY MATHEMATICS</b>	
12.1 Compare as purchased quantity to edible quantity	<ul style="list-style-type: none"> <li>Compare as purchased quantity to edible quantity</li> </ul>
12.2 Scale recipes based on RCF (recipe conversion factor) calculations	<ul style="list-style-type: none"> <li>Scale recipes based on RCF (recipe conversion factor) calculations</li> </ul>
12.3 Convert standard measurement amounts to metric	<ul style="list-style-type: none"> <li>Convert standard measurement amounts to metric</li> </ul>
12.4 Calculate food cost for a recipe	<ul style="list-style-type: none"> <li>Calculate food cost for a recipe</li> </ul>
12.5 Calculate unit cost of products for purchasing or for food cost analysis	<ul style="list-style-type: none"> <li>Calculate unit cost of products for purchasing or for food cost analysis</li> </ul>

## Domain 5: Smallwares and Large Equipment

**Instructional Time: 5-10%**

### STANDARD 5.0 USE COMMERCIAL EQUIPMENT AND SMALLWARES

5.1 Describe the proper use and maintenance for different knives	<ul style="list-style-type: none"> <li>Honing vs sharpening</li> </ul>
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	<ul style="list-style-type: none"> <li>• Proper cleaning</li> </ul>
5.2 Demonstrate proper and safe use of smallwares	<ul style="list-style-type: none"> <li>• Demonstrate proper and safe use of smallwares</li> </ul>
5.3 Identify and demonstrate the selection of equipment and smallwares for specific applications	<ul style="list-style-type: none"> <li>• Differentiate between bakeware, cookware, and kitchenware</li> </ul>
5.4 Describe procedures for the care and maintenance of commercial equipment and smallwares	<ul style="list-style-type: none"> <li>• Cleaning, storage, maintenance</li> </ul>
<b>STANDARD 6.0 USE LARGE COMMERCIAL GRADE EQUIPMENT</b>	
6.1 Identify and operate different types of ovens, ranges, stoves, grills, and flattops	<ul style="list-style-type: none"> <li>• Identify and operate different types of ovens (conventional vs convection), ranges, stoves, grills, and flattops</li> </ul>
6.2 Identify and use types of refrigerator and freezer equipment	<ul style="list-style-type: none"> <li>• Reach-in vs Walk-in refrigerator</li> </ul>
6.3 Demonstrate the selection of large commercial equipment for specific applications	<ul style="list-style-type: none"> <li>• Demonstrate the selection of large commercial equipment for specific applications</li> <li>• Identify the uses of <ul style="list-style-type: none"> <li>◦ Proofer</li> <li>◦ Deep fat fryer</li> </ul> </li> </ul>
6.4 Identify procedures for the care and maintenance of large culinary and baking equipment	<ul style="list-style-type: none"> <li>• Cleaning, storage, maintenance</li> </ul>