

STRANDS AND STANDARDS

CULINARY ARTS



Course Description

Students will be trained for career opportunities in the food service/culinary arts industry. Students will have the opportunity to learn and practice safety and sanitation procedures, and to use and maintain commercial food service equipment. They will perform quantity food preparation as it relates to catering, bakery, restaurant, hospitality, and fast food business operations. This course will strengthen comprehension of concepts and standards outlined in Sciences, Technology, Engineering and Math (STEM) education. Student leadership and competitive events (FCCLA) may be integrated into this course.

Intended Grade Level	11-12
Units of Credit	1.00
Core Code	34.01.00.00.170
Concurrent Enrollment Core Code	34.01.00.13.170
Prerequisite	Food and Nutrition I & II
Skill Certification Test Number	345
Test Weight	1.0
License Type	CTE and/or Secondary Education 6-12
Required Endorsement(s)	
Endorsement 1	FACS General Composite
Endorsement 2	CTE License: Food Services/Culinary Arts
Endorsement 3	NA

STRAND 1

Students will identify knives and food service equipment function, proper use and care. (STEM—Technology, Engineering, Math)

Standard 1

Identify types of knives, understand their proper use and care, and demonstrate proper knife safety.

- Types of knives, including chef, boning, paring, serrated
- Proper hold, sharpening, wash and storage

Standard 2

Identify common small ware food preparation equipment, and how it is to be safely used and cleaned. (i.e. knives, mandoline, piping tools, parisian scoop, scales)

Standard 3

Identify common food preparation and service equipment and how it is to be safely used and cleaned (e.g., convection oven, conventional oven, commercial dishwasher/sanitizer, ice machine, stand mixer, deep fat fryer, proofer, steam table, hotel pans, sheet pans, chafing dishes).

Standard 4

Identify and demonstrate different knife cuts, including:

- Batonnet—1/4 x 1/4 x 2-3 inch
- Julienne—1/8 x 1/8 x 1-2 inch, fine julienne- 1/16 x 1/16 x 1-2 inch
- Brunoise—1/8 x 1/8 x 1/8 inch
- Dice, small—1/4 x 1/4 x 1/4 inch; medium—1/2 x 1/2 x 1/2 inch; large—3/4 x 3/4 x 3/4 inch
- Chiffonade—stack leaves, roll and slice into thin shreds
- Diagonal—cut on a 45 degree angle

- Rondelle—also called coin cut
- Mince - to cut or chop into very small pieces.
- Chop - to cut into uniform size when shape is not important.

Standard 5

Identify the purpose of mise en place.

Performance Objective 1

Demonstrate competency with all the knife cuts listed in Strand 1 Standard 4.

Vocabulary

- Chafing Dish
- Convection Oven
- Conventional Oven
- Hotel Pan
- Mandoline
- Mise en Place
- Parisian Scoop
- Rondelle
- Steam Table

STRAND 2

Students will discuss the importance of sanitation and food safety in the flow of food. Apply basic workplace safety and first-aid procedures. (STEM—Science)

Standard 1

Identify the steps in the flow of food, including purchasing, receiving, storage, preparation, cooking, holding (hot/cold), cooling, reheating, and serving.

- Explain the purpose of the Hazard Analysis Critical Control Point (HACCP) system (i.e., to ensure keeping food safe through a system of identifying and monitoring critical control points).
- Discuss methods of purchasing, receiving, and storage.
 - Purchase from an approved reputable vendor.
 - FIFO (first-in first-out) rule (i.e., the food that has been in the holding area the longest will be used first).
 - Store food and cleaning supplies separately.
- Hot holding should be at 135°F or higher for no more than 4 hours.
- Refrigerator and freezer temperatures (refrigerator: 41°F or lower; freezer: 0°F or lower).
- Reheat foods to 165°F for 15 seconds.
- Explain how to serve food to guest.

Standard 2

Identify standards of personal grooming and hygiene.

- Establish and follow procedures to prevent human contamination (e.g., food handler permit requirements).
- Identify business standards for personal hygiene.
 - Wash hands with soap and warm water (minimum 20 seconds) and dry with single-use paper towel. Water temperature must be at a minimum of 100°F.
 - Wash hands after using the restroom, sneezing, coughing, or touching face or hair.
 - Wash hands before and after handling raw meat, poultry, and eggs.
 - Single-use gloves must be used for only one task (such as working with ready-to-eat food or with raw animal food), used for no other purpose, and discarded when damaged or soiled, or when interruptions occur in the operation.
 - Wear bandages and gloves or other protective barriers over any cuts or open sores.
 - Anyone preparing food must wear hair restraints such as hats, hair coverings or nets, beard restraints, and clothing to effectively keep their hair from contacting exposed food.
 - All food preparation workers must wear clean attire, this may include chef coats and/or aprons; bacteria from dirty attire could contaminate food.
 - Any activity involving eating, drinking or chewing gum needs to occur in a designated area away from food preparation areas.
 - When tasting food, use a clean spoon only once.

Standard 3

Identify proper sanitation techniques used with tools, equipment, and surfaces.

- Discuss three-compartment sink dishwashing and the order used when washing and sanitizing dishes (i.e., rinse and scrape, wash, rinse, sanitize and air dry).
- Containers for storing and mixing food are stored upside down.
- Differentiate between cross-contact and cross-contamination.
 - Cross-contact happens when one food containing allergens comes in contact with a surface or food, thereby posing a hazard for persons having that allergy.
 - Cross-contamination is the unintentional transfer of pathogens from people, surfaces or food to another food.

Standard 4

Identify the factors contributing to food-borne contamination, illness, and prevention strategies.

- Discuss general concepts of food-borne illness.
 - Food-borne illness results from eating foods contaminated with pathogens.
 - General conditions for bacterial growth include food, acidity, time, temperature, oxygen, moisture (FAT TOM).
 - Contaminated food does not always have an off odor or flavor, so it may look and smell normal.
- Three types of food contamination hazards.

- Physical - hair, glass, metal shards, fingernails.
- Chemical - cleaning supplies and pesticides.
- Biological - harmful micro-organisms (pathogens)
- Identify the four types of pathogen contaminants
 - Bacteria - tiny single cell micro-organism including Salmonella and E-coli.
 - Viruses - simple organism responsible for majority of foodborne illness - Norovirus and Hepatitis A.
 - Parasites - organism that must live in or on a host to survive ie. Giardia
 - Fungi - spore producing organism including yeast and mold. Typically, visible on spoiled food.
- Food-borne illness symptoms that exclude a worker from handling food include the following:
 - Sore throat with fever
 - Jaundice
 - Diarrhea
 - Vomiting
 - Open and infected sores
 - Food handlers need to be symptom-free for 24 hours before handling food.
- Discuss prevention strategies.
 - A large majority of foodborne illness can be prevented by avoiding cross contamination.
 - When in doubt, throw it out. Do not taste or use. Don't use bulging cans.
 - Frequently clean and sanitize work surfaces (i.e., counters).
 - Clean and sanitize cutting boards, dishes, tools, etc., after preparing each food item, or every four hours of continuous use.
 - All TCS (Time and Temperature Control for Safety) foods need to be covered and stored in the refrigerator with a label including a use-by date and if produced on site, store at 41°F or lower for no more than 7 days.
 - Food should be stored in the refrigerator according to the final cooking temperature.
 - Place ready-to-eat (RTE) foods on top and animal products toward the bottom according to cooking temperature.
 - Never place cooked food on a plate which has previously held raw meat, poultry or seafood without first cleaning and sanitizing the plate.
- Food should not be in the Danger Zone (the temperature range of 41-135°F), for longer than 4 hours total from start of preparation.
- Discuss the importance of cooking to proper temperatures internal food temps; be sure to use a clean and sanitized thermometer.
 - Seafood, pork, beef, veal, lamb—145°F (for a minimum of 15 seconds)
 - Ground meats (pork, beef, veal, lamb) and eggs—155°F (for a minimum of 15 seconds)
 - All Poultry (whole or ground)—165°F (for a minimum of 15 seconds)

- Reheat temp—165°F (for a minimum of 15 seconds)
- Discuss the importance of cooling and reheating foods to the correct temperature for the correct amount of time using proper equipment.
 - Keep hot foods hot and cold foods cold. (Hold hot 135°F and above. Cold 41°F or lower.)
 - Thoroughly cool hot foods. Food needs to be cooled below 70°F within two hours and below 41°F within four more hours.
 - Methods include ice water baths, ice paddles, and dividing large amounts of leftovers in small, shallow, covered containers for quick cooling.
 - Store foods in the refrigerator and freezer so that the cool air can circulate to keep food safe. Don't cover shelves or overcrowd.
 - Bring sauces, soups etc. to a boil when reheating; heat other TCS leftovers to 165°F (for a minimum of 15 seconds).
- Discuss how to safely thaw foods, including in the refrigerator, under cold running water, in the microwave, or as part of the cooking process.
 - Never defrost at room temperature.
 - Cold running water should not exceed 70°F.
 - The product should not exceed 41°F internal temperature.
 - If thawing food in the microwave, cook immediately.

Standard 5

Students will identify safe work practices.

- Identify common workplace/food service injuries/ accidents and their prevention.
 - Burns/scalds
 - Cuts/scrapes
 - Breaks
 - Strains/sprains and contusions
 - Fires
 - Chemicals
 - Ingested
 - Inhaled
 - Burns
- Identify basic first-aid procedures
 - Choking: treat with the Heimlich (abdominal thrust)
 - Do not interfere if the victim is coughing forcefully with a partial airway obstruction
 - Treating a burn:
 - First degree burn—cool with cold water
 - Second degree burn—soak in cool water or cold compress
 - Third degree burn—cover loosely with a dry, sterile cloth; seek medical help
 - Treat sprains, strains and contusions with RICE (rest, ice, compression and elevation).

- Cuts—for severe wounds, apply direct pressure.
- Allergic reactions:
 - Causes are generally one of the main 8 allergens (i.e., fish, shellfish, soy, wheat, peanuts, tree nuts, dairy and eggs); customers must be made aware of any of these ingredients in food.
 - Symptoms include itching, swelling, hives, respiratory difficulties, rash and headache.
- For chemical accidents, see SDS (Safety Data Sheets) for treatment recommendations

Performance Objective 2

Students will complete a sanitation and food safety training equivalent to that of a food handler’s permit or certificate.

Vocabulary

- Bacteria
- Clean
- Cross-Contact
- Cross-Contamination
- FAT TOM
- FIFO
- Fungi
- HACCP
- Parasite
- RTE
- Sanitize
- SDS
- TCS
- Virus

STRAND 3

Students will discuss the foodservice industry, history, evolution, trends, supply chains and sustainability. (STEM—Technology, Engineering)

Standard 1

Identify and discuss history and trends in the foodservice industry.

- Explain the history of food service.
 - Identify Marie-Antoine Careme
 - Master of the French grande cuisine
 - Implemented white chef coat and hats
- Identify Auguste Escoffier
 - Considered the father of modern cuisine

- During the late 1800 he simplified, updated, and popularized classical French cooking methods and organized kitchen management or brigade system
- Identify Julia Child
 - Revolutionized American cooking through attending French cooking school, creating cookbooks, and television shows
- Identify current trends and their influence on the food service industry, including government regulations and safety, cycles and popularity, media, and current events.
 - Government regulations and safety (Food Safety Modernization Act, Food Keeper App, foodsafety.gov)
 - Cycles and popularity (http://new.datassential.com/pdf/The_Menu_Adoption_Cycle.pdf)
 - Inception: originality in flavor, preparation, and presentation
 - Adoption: trend grows by using simpler preparation and lower price points
 - Proliferation: adjusted for mainstream appeal
 - Ubiquity: reached maturity and can be found across the food industry
 - Media and current events (<http://www.uniteforsight.org/conference/ppt-2014/ikelleher.pdf>, http://new.datassential.com/pdf/The_Menu_Adoption_Cycle.pdf, <http://www.bonappetit.com/entertaining-style/trends-news/article/food-trends-david-sax>,)
 - Fads
 - Media driven
 - Hyper growth
 - Retail catalyst
 - Limited true need
 - Trends (longer lasting and more impactful)
 - Restaurant driven
 - Organic Growth
 - Democratize-able
 - Greater underlying need
 - Food Blog
- Explore cultural influences on the food service industry.
 - Religion/culture
 - Health limitations (diabetes, heart disease, celiac disease, lactose intolerance, nut allergies)
 - Personal factor (social class, mood/personality)
 - Geographical
 - Age

Standard 2

Identify various food service industry segments such as quick service, family dining, fine dining, catering, and institutional/non-commercial food service.

- Non-commercial: healthcare, education, military, charity, and corrections.
- Commercial: restaurants, caterers, lodging, travel, concessions, and retail.
- Identify various types of restaurants, including quick service and full service.

Standard 3

Supply Chain (https://www.koganpage.com/media/project_kp/document/food-supply-chain-management-and-logistics-sample-chapter.pdf)

- Agriculture: grow the produce
 - Farmers/ranchers
- Processing: transform the food product
 - Caters to demands of consumers
 - Reduces waste
 - Increases shelf life
- Retailers and distributors
 - Distributors are the link between producers, processors, and markets
 - Generally buy in bulk
 - Retailers advertise or exhibit products to consumers
 - Small or large markets/supermarkets
- Hospitality: food service agency, restaurants, and hotels
 - Made to order service
- Consumers: purchase the goods or products

Standard 4

Sustainability

- Economic sustainability
- Food availability
- Reduce food waste

Vocabulary

- Brigade system
- Grande Cuisine
- Sustainability

STRAND 4

Students will identify various careers and professional standards in the Hospitality and Food Industry.

Standard 1

Identify various career opportunities and educational requirements.

- Identify various careers and training opportunities involved in culinary/food service industry and travel and tourism industry. (utahfutures.org)

- Front of the house—customer service
- Back of the house—support staff

Standard 2

Apply employability skills as they relate to culinary professionalism

- Develop a basic understanding of employability skills (see the CTE website for an interactive frame work and resources: <http://cte.ed.gov/employabilityskills/>).
- Applied knowledge
 - Critical thinking (problem solving)
 - Applied academic skills (including math)
- Effective relationships
 - Interpersonal skills (including teamwork, cooperation, and communication).
 - Personal qualities (honesty/integrity, initiative, positive attitude, loyalty, dependability, respect, punctuality, responsibility, pride, humility, working independently, creativity, passion and ability to accept professional constructive criticism)
- Workplace skills
 - Technology use
 - Business sense
 - Continuing education and training

Standard 3

Demonstrate or explain the various steps necessary to gaining employment

- Identify various ways to find employment
- Explore various tools used to apply for a job
 - Job Applications
 - Job Portfolio
 - Resume
 - Letter of request or cover letter
 - Job Interview
 - Thank you - follow-up

Performance Objective 3

Students will research a specific food service career creating a presentation of their findings. A resume/cover letter specific to that career must be included. Teachers might use STAR Event Career Investigation as a resource.

Vocabulary

- Back of the house
- Critical Thinking
- Front of the house
- Interpersonal Skills

STRAND 5

Students will explore nutritional guidelines. (STEM—Science, Math)

Standard 1

Consider the nutritional needs of individuals, including the following:

- Food guidance systems (i.e., MyPlate, U.S. Dietary Guidelines)
- Food allergies and intolerances
 - Common food allergens: eggs, milk, nuts
 - Food allergies produce histamine when a particular food is eaten.
 - Intolerances is the bodies inability to process or breakdown.
- Nutritional considerations:
 - Carbohydrates: 50-60% of calories (4 cal. per gram), Fiber
 - Protein: 15-20% of calories (4 cal. per gram)
 - Lipids/fats: no more than 30% of calories (9 cal. per gram)
 - Vitamins (ADEK are fat soluble, B and C are water soluble)
 - Minerals (macro: calcium, phosphorus, potassium, sodium and magnesium; trace: iron, zinc and iodine)
 - Water

Vocabulary

- Food Allergy
- Food Intolerance
- Lipid

STRAND 6

Students will explain basic culinary math concepts and its use in standardized recipes. (STEM—Math)

Standard 1

Utilize proper measuring techniques and tools.

- Measurements are either by volume or by weight.
- Volume measuring tools include teaspoons, tablespoons, cups, pints, quarts, gallons, and various sizes of ladles and scoops.
- Weight measuring tools include balance/baker scales, spring scale, and digital scale.
- Standardized recipes are used in the industry; these include a name, ingredients, detailed step-by-step preparation directions, portion sizes, recipe yield, pans and tools used in preparation, and often some nutrition information.

Standard 2

Identify measurement equivalents and apply by adjusting recipe yield.

- Identify measurement equivalents used in food preparation including, but not limited to:

3 t. = 1 T.	16 T = 1 c.	2c. = 1 pt.	4 qt. = 1 gal.
16 c. = 1 gal.	60 min. = 1 hr.	4 c. = 1 qt.	2 pt. = 1 qt.
8 fl. oz. = 1 c.	1 qt. = 32 oz.	1 lb. butter = 2 cups	16 oz. = 1 lb.
1/3 c. = 5 T.+ 1 t			

- Define a standardized recipe and identify components of a standardized recipe.
 - Standardized recipe - USDA definition “A recipe that has been tried, adapted, and retried several times for use by a given foodservice operation and has been found to produce the same good results and yield every time when the exact procedures are followed with the same type of equipment and same quantity and quality of ingredients”.
 - Define the term recipe - written instructions used to prepare a known quantity and consistent quality of a certain food.
 - Common recipe terminology, abbreviations and equivalencies used.
- Components of a recipe.
 - Title (name of the recipe)
 - Yield - how many servings the recipe will make.
 - List of ingredients and amounts, listed in order they appear in the recipe.
 - Step by step directions in order to be completed.
 - Equipment - container size and type.
 - Temperature and time
- Identify the importance/benefits of standardized recipes to a successful foodservice operation.
 - Customer Satisfaction - popular menu items are consistent in every detail of ingredient, quality, preparation and presentation.
 - Consistent nutrient content- ensure that nutritional values per serving are valid and consistent.
 - Food cost control - consistent and accurate food cost control as same ingredients and quantities per serving are used each production.
 - Efficient purchasing procedures- food quantity needed for production is calculated using standardized recipe.
 - Inventory control- predictable food quantities will be used each time recipe is used.
 - Labor cost control - written procedures promote efficiency of labor time and foodservice personnel needed for product preparation. Training costs are reduced due to specific preparation instructions on standardized recipes.
 - Increased employee confidence - standardized recipes decrease production problems and prevent food shortages.
 - Reduced record keeping - the amount of information needed on a daily food production record will be reduced. The food production record can reference the recipe, servings needed and predict leftover amounts.
(www.nfsmi.org/documentlibraryfiles/PDF/2008215091404.pdf)
- Correctly convert recipe yields.
 - Converting total yield: two-step method

- Divide the new yield by the old yield to get the conversion factor:
 - $\text{New Yield} \div \text{Old Yield} = \text{Conversion factor}$
- Multiply every recipe ingredient by the conversion factor to get the new quantity needed for the new yield:
 - $\text{Old ingredient quantity} \times \text{Conversion factor} = \text{New quantity}$
- Yields in weight or fluid ounces are more uniform to work with.

Performance Objective 4

Students will create a short presentation explaining one culinary math concept in Strand 6. See FCCLA STAR Event Applied Math for Culinary Management for additional resources. (This can be a power point, oral or written presentation.)

Vocabulary

- Balance Scale
- Digital Scale
- Spring Scale
- Standardized Recipe
- Volume (measurement)
- Yield

STRAND 7

Students will compare and contrast various cooking techniques and how seasonings and flavorings create and enhance the natural flavors of food. (STEM—Science, Technology, Math)

Standard 1

Identify various cooking techniques and how they affect food.

- Cooking is the transfer of energy from a heat source to food. Cooking affects the following aspects of food; nutritional value, texture, color, aroma, and flavor
 - Dry cooking applies heat directly as with flame or indirectly by surrounding food with heated air or fat. These techniques include: bake, grill, broil, roast, sauté/stir-fry, pan fry, deep fry
 - Dry cooking concentrates flavors because moisture on the surface evaporates and can create caramelization or browning which produced a richness.
 - Moist cooking techniques apply heat to food by submerging it directly in hot liquid or steam. These cooking methods include;
 - poaching 160-180 degree F
 - simmering 185-205 degree F
 - boiling 212 degree F
 - steam 212 degree F or higher,
 - Blanching and parboiling are also done in boiling water, the food is submerged only for a short time to partially cook the food.

- These temperatures are based on water boiling at 212 degree F at sea level, they will need to be adjusted with altitude as will cooking time which would be increased.
- Moist heat cooking can help to tenderized less tender foods.
- Flavor and nutrients can be lost from food when using moist heat.
- Combination, (uses both dry and moist cooking methods): braise and stew
 - In both combination methods the first step is to brown the food using a dry heat method. The second step is to complete cooking by simmering the food in a liquid.
 - Used for less tender cuts of meat as well as some poultry and vegetables.
 - Braising is used for large pieces of food.
 - Stewing is used for small uniform size pieces that are dredged in flour before being sautéed.
 - Combination cooking methods create a richness in the flavor and also tenderizes meat.

Standard 2

Discuss the enhancement and creation of flavor when preparing food.

- Flavor can be defined as the sensory properties of food these are perceived with; taste, aroma, temperature, appearance (including color and arrangement), texture
 - There are four tastes that are universally agreed upon; sweet, sour, salty, bitter.
 - The Chinese recognize hot/spicy as a fifth taste
 - Indian cuisine tries to balance six taste including the previous tastes and the addition of astringent.
 - The taste umami, long recognized in Japan, and recently widely accepted by western cultures, is also called savory.
- Seasoning- ingredients that enhance the flavor of food without changing the natural flavor.
 - Salt is the most basic and most commonly used seasoning.
 - Monosodium Glutamate (MSG), comes from seaweed and intensifies the natural flavors of most of the foods it's added to, (no effect on milk or fruit)
- Flavoring- an item that adds a new taste to food and/or alters its' natural flavors
 - Herbs
 - The leaves, stems and flowers of aromatic plants.
 - Available fresh and dry. When using dry in the place of fresh, one third to one half the amount of fresh ask for should be used.
 - Fresh herbs are usually added at the end of cooking and dried are added at the beginning.
 - Store dried herbs in in airtight containers away from heat and light. Fresh herbs should be loosely wrapped in a damp cloth and refrigerated.
 - Spices

- bark, buds, fruit, roots, seeds or berries
- Usually used in dry form, available whole or ground, (add whole at the beginning of cooking and ground towards the end).
- Store in airtight containers and avoid light.
- Pepper is the most common spice used
- Vinegars- Thin, sour, acidic liquid that can be used to add flavor during cooking and/or as a condiment.
 - Vinegar is often named for the ingredient it is made from:
 - Wine vinegars are made from wine and contain no alcohol.
 - Cider=apples, Rice=rice
 - Balsamic vinegar is made from grapes, reduced and aged in wooden barrels for 4-50 years. It has a high acid level, but a sweetness that helps cover the tartness.
- Condiments- Sauces that are served as an accompaniment to foods. May be used to alter or enhance flavor.
 - Common condiments include: ketchup, mustard, salsa, soy sauce, fish sauce, barbecue sauce, hot sauce and even pickled foods.
- Extracts- Concentrated flavors that are used most often in baking.
 - Common extracts include: vanilla, almond, lemon.
- Onions including; scallions, leeks, shallots, chives and garlic. Used in many foods. Fresh are stronger than dried.
- Lemon-Use only the zest or juice. Use fresh whenever possible.
- Nuts- add, flavor, texture and color

Performance Objective 5

Students will explore flavor profiles using herbs and spices and produce a food item using those herbs and spices and an appropriate cooking method.

Vocabulary

- Blanching
- Braise
- Caramelization
- Condiment
- Dry Heat
- Extract
- Herb
- Moist Heat
- Poaching
- Spice

STRAND 8

Students will identify the components of various stocks, soups and sauces. (STEM—Science)

Standard 1

Identify various types of stocks (i.e., white, brown, fish, vegetable).

- Mirepoix is a mix of coarsely chopped vegetables (onion, carrots, celery) used in stock to add flavor, nutrients, and color (no carrots in fish stock).
- To develop flavor, each needs to simmer for a minimum amount of time (do not boil).
- White/poultry: simmer 2-4 hours.
- Brown/beef or veal: roast the bone the bones first for best color and flavor; simmer for 6-8 hours.
- Fish: simmer 20-45 minutes.
- Vegetable: simmer 30-60 minutes.

Standard 2

Compare soup types, including their ingredients and preparation methods.

- Clear/stock (broth, consommé, clear vegetable and noodle soups such as chicken noodle)
- Thick (creamed, pureed, bisque, chowder)
- Unusual/Regional (gazpacho, gumbo, borscht, and many more)

Standard 3

Identify potential thickeners for soups.

- Roux: Equal parts fat and flour heated into a paste.
- Slurry: Cornstarch and liquid
- Starchy foods: ex. Potatoes and pasta
- Beurre manie: Equal parts flour and butter kneaded to make a paste.

Standard 4

Identify the five mother sauces, some common uses for them and some compound/ secondary or derivative sauces made from them.

- Béchamel (best when made using an onion pique to flavor the milk)
 - Used in some cream soups; also in moussaka, lasagna, soufflé, croquettes, on a Croque Monsieur and with vegetable and pastas
 - Mornay/cheese sauce, crème sauce, and soubise (diced sweated onions added)
- Veloute
 - With fish or chicken, depending on the stock used; creamed soups (any time you would use a light fish or poultry gravy)
 - Allemande (lemon juice, egg yolk and cream), supreme (cream and butter to finish), poulette (mushrooms, chopped parsley and lemon juice)
- Espagnole
 - Serve with roasted beef or veal dishes
 - Bourguignonne (red wine and onions/shallots), demi-glace, chasseur (mushrooms/shallots or tomato), and bordelaise (red wine and shallots)
- Tomato
 - Serve with pasta, fish, vegetables, poultry, ground meats and sausages, breads and dumplings such as gnocchi

- Marinara, creole sauce (onions, celery, green pepper)
- Hollandaise
 - Use with eggs (such as eggs benedict), vegetables, light poultry, fish and beef dishes
 - Béarnaise (addition of a reduction of vinegar and shallots and fresh tarragon), Dijon (addition of Dijon mustard), Chantilly (folded-in whipped cream)

Performance Objective 6

Students will make one of the five mother sauces or derivative to be incorporated with a complementary food item.

Vocabulary

- Béchamel
- Beurre Manie
- Espagnole
- Hollandaise
- Mire Poix
- Roux
- Slurry
- Tomato
- Veloute

STRAND 9

Students will identify different types of sandwiches and appetizers and their components.
(STEM: Engineering)

Standard 1

Give examples of different types of sandwiches.

- Closed: Two slices of bread or two halves of a roll with filling
- Open face: Filling is place on top of the bread
- Triple-decker: Three slices of bread with filling such as a club sandwich
- Hot Sandwiches:
 - Open Faced Hot Sandwich: Hot filling covered with a hot topping such as gravy or cheese.
 - Grilled Sandwich: Fat such as butter or mayonnaise on the outside and cooked on a griddle. Various fillings can be used.
 - Panini: Cooked in a panini press without adding fat
 - Fried Sandwich: Monte Cristo is a ham, turkey and cheese sandwich dipped in an egg batter and pan fried or deep fried.
 - Pizza: Thin yeast crust with a variety of toppings.
- Cold Sandwiches:
 - Sub (hero, hoagie, grinder, poor boy): Torpedo roll with various fillings and condiments.

- Wrap: Can be made with a variety of flat breads, spread with various fillings and rolled up.
- Canape: Small open face cold sandwich prepared on a variety of breads, crackers or other base with a variety of toppings. Garnishing is an important component.

Standard 2

Identify the three components of a sandwich

- Base: Bread or container for the sandwich. Examples: Pullman loaf, croissant, focaccia, Kaiser, torpedo, crepe, hard rolls, pita, French bread, tortillas, flat breads, wheat, white, multi grain, and rye bread.
- Spread: Helps prevent bread from soaking up moisture from filling. Adds flavor. Examples: Butter, mayonnaise, pesto, vegetable puree, mustards.
- Filling: Main attraction of the sandwich. Examples: beef, mayonnaise-based salads, fish and shellfish, pork, poultry, cheeses, pickled vegetables, vegetables, peanut butter, jelly, hard-cooked eggs, fruits, humus.

Standard 3

Explain why appetizers are used in a meal and identify and prepare various types of appetizers.

- Appetizers are served as the first course of a meal used to stimulate the appetite and complements the entrée and dessert.
- Hors d'oeuvres are small bites served prior to a meal or at a separate reception. Typically finger food such as canapes, crudites, deviled eggs or bruschetta.
- Other examples:
 - Brochettes: (Kabob) Food presented on a skewer
 - Filled Pastry Shells: Puff pastry or pastry shell with filling
 - Meatballs: Made from a variety of meat with a variety of sauces
 - Rumaki: Food item wrapped in bacon with or without sauce

Performance Objective 7

Students will prepare and present a nontraditional sandwich with emphasis on plating and garnishing.

Vocabulary

- Appetizer
- Brochettes
- Canape
- Crudites
- Hors d'oeuvres
- Rumaki

STRAND 10

Students will learn the concepts and importance of customer service and management skills as they pertain to Foodservice and Hospitality.

Standard 1

Discuss the importance of customer service

- Customer service can make or break an establishment
- Increases customer satisfaction, loyalty and employee moral
- Understand customer needs, age, families with children, first timers, special occasions, dietary needs, language barriers, dining alone

Standard 2

Identify front of the house job and duties.

- Host/hostess
 - Responsible to the customer, greets and seats customers, takes reservations, supervises service to customers, handles customer complaints.
- Server
 - Handles customer needs, knows menu items, checks tables, checks on food/drinks/water, corrects problems, presents the check, often acts as cashier, knows appropriate table settings, handles table service, maintains appropriate personal hygiene and sanitation, serves from the right, removes plates from the left, quickly cleans up spills, uses a tray properly, handles side work and filling table supplies
- Bus person
 - Clears and resets table covers and assists the server
- Cashier
 - Responsible for cash drawer, counts back change, knows procedure to follow if there is a discrepancy
- Dining room manager or maître d'hôtel
 - Controls overall food production, handles complaints, resolves problems, monitors customer service

Standard 3

Explore the characteristics needed to be a skilled employee.

- Positive Attitude
 - Pride in your job, friendly, problem solving, courtesy
- Personal Appearance
 - Clean uniform, nails clean and trimmed, minimal jewelry, clean and appropriate shoes, well groomed, well rested, hair tied back, breath is fresh, no heavy colognes or perfumes
- Communication skills
 - Verbal communication (speaking & listening)
 - Nonverbal communication
 - How you look (no gum, posture, no touching face or hair)
 - Written communication (write clearly and understandably)

Standard 4

Understand the order of front of the house service.

- Greet Customers
 - Make sure that the cover is clean and all the proper equipment is present. A cover is an individual place setting including all required equipment for the meal.
- Take the beverage order
 - Place beverage to the customer's right
 - Keep fingers away from the rim of the glass
 - Keep beverages refilled
- Sell the menu
 - Understand ingredients, dietary restrictions and allergies
 - Be prepared to recommend menu items
 - Ask open ended questions
 - Upsell – offer a larger size or better quality
 - Smile, maintain eye contact
 - Listen carefully, confirm order
- Serve the order
 - Watch hand placement on plate, stay away from food
 - Serve on customer's left side
 - Check during the meal for additional assistance
 - Clear from the right
- Alcohol service
 - Be familiar with state and local liquor laws.
- Processing Payment
 - Gather customer feedback

Standard 5

Categorize the main types of dining environments

- Quick Service
 - Fast food. Limited menu, low prices and fast service
- Casual Dining
 - Includes family style, neighborhood establishments, buffets and themed restaurants.
- Traditional or fine dining
 - Expensive, great locations, fine food
 - American Service: Plated in the kitchen
 - French Service: Tableside preparation, food is prepared in the kitchen and finished tableside. Requires skilled servers.
 - Russian Service Food is prepared in kitchen and placed on platters. Servers serve food off the tray to the guest's plate.
 - English Service is referred to as family style. Food is prepared in the kitchen and served in bowls or platters. Guest serve themselves from the bowls or platters.

Standard 6

- Identify various pieces of dining equipment and how they are used
- Knives: Dinner, butter, steak
- Forks: Dinner, salad or dessert, fish,
- Spoons: Soup, coffee or teaspoon, iced tea spoon
- Drinking Glasses: Water goblet, wine goblet, champagne flute, coffee cup, teacup, beverage glass
- Dinnerware: Charger, Dinner plate, salad plate, bread plate, soup bowl
- Table setting
 - Center of table: center piece, salt and pepper, condiment holders
 - Napkin in the center of the place setting or to the left
 - Forks on the left, knives and spoons on the right
 - All knife blades turn in to plate
 - Flatware 1" from edge of table
 - Dessert forks and spoons at the top of the place setting spoon above the fork
 - Bread plate on the left above the fork, butter knife on the top of the bread plate, blade facing down toward the plate
 - Water glass above the tip of the knife
 - Coffee cups to the right of the knives and spoons

Standard 7

List the qualities and duties of an effective manager

- Communication
- Time Management
- Resource management
- Employee selection
 - Job descriptions, applications and interviewing skills
 - use open ended questions
 - no illegal questions (race, gender, religion, national origin, birthplace, age, disability or marital status)
- Employee Training
- Orientation – learning about policies and procedures
- Cross training – learning others jobs so you can cover for them
- On the job training – learning while you work
- Employee supervision
 - Hold staff meetings, make sure employees follow all workplace rules and laws, resolve problems between employees
- Employee evaluation
 - Identify strengths and weaknesses.
 - Self-evaluations may be used.
- Leadership
- Working Together

- Help employees to understand diversity, stereotypes and prejudice.
- Build a team that works well together by understanding and valuing differences and individual strengths. Manager needs to set example to employees.
- Motivate others
 - Internal motivation or intrinsic personal drive
 - External motivation reward or recognition
- Problem solving
 - Define the problem, analyze the causes, develop and choose solutions, plan action steps, implement the plan, evaluate the results.

Vocabulary

- Charger
- Cover
- Cross Training
- Flatware
- Front of the House

STRAND 11

Students will discuss and participate in bakery food production, including concepts in chemistry, math and technology. (STEM: Science, Math)

Standard 1

Identify the function of each ingredient used in bakery products.

- Flour
 - Identify types, including non-wheat
 - Bread, all purpose, pastry (these each have different amounts of gluten—the protein found in wheat); whole wheat is the whole kernel fine or coarsely ground.
 - Non-wheat, usually made to be gluten free. These come from other starchy plants, such as corn, barley, oats, potatoes, beans, and rice. Often combined with each other to achieve a good protein and starch level.
 - Flour provides structure.
- Sugar
 - Includes syrups (honey, molasses, corn, maple), sugars (brown, turbinado/raw, course/sanding, granulated, super fine/bakers/caster, confectioners/powdered), and fruit juice.
 - Sugar provides flavor, color/browning, food for yeast; helps to retain moisture for longer shelf life, tenderizer, and a stabilizer for egg whites.
- Fats
 - Types:
 - Shortening (made from vegetable oil that is hydrogenated to make them solid and less likely to become rancid), good for frying, making cakes, pies and cookies.

- Oil (extracted from plants and usually liquid at room temperature), blends easily in a mixture.
- Butter (made from cream), butter has a distinct flavor. It can be purchased salted or unsalted. Only 80% fat, so it produces a less tender product than shortening.
- Margarine (made from hydrogenated vegetable oil with color, flavor and water added). Less likely to spoil than butter. Lower cost than butter. Make sure to use one with at least 50% fat; usually the high the better.
- Fats/lipids provide tenderness, flavor, moisture, browning, and flakiness.
- Leavening
 - Yeast (organic): microscopic fungus eats carbohydrates and produced carbon dioxide.
 - Compressed/cake/fresh: often used in bake shops, it needs to be hydrated in warm water before adding other ingredients. It has a short shelf life making less useful for home cooks.
 - Active dry: granules of dormant/asleep yeast, activate in warm water. Stores well for an extended time. Best kept in freezer.
 - Instant/rapid rise: leavening action happens very quickly. Should be added to dry ingredients, then have warm water added to activate. Last at least one year when frozen.
 - Starter: a mixture of flour, yeast, lactobacilli, sugar and liquid. It gives bread a unique, mildly sour taste. A portion of the starter is used to leaven and the remainder is refreshed and can be used indefinitely in the future.
 - Chemical
 - Baking soda/sodium bicarbonate: needs an acid such as buttermilk, sour cream, yogurt, fruits, syrups, and chocolate to make a chemical reaction that produces carbon dioxide.
 - 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. Most are double acting, which cause more rising when baked.
 - Physical
 - Eggs (air is introduced by creaming or whisking and is trapped in the protein then it expands when it gets hot)
 - Steam (during baking water evaporates to steam and expands)
 - Leavening agents are what make baked goods rise and have a light tender texture and good volume.
 - Salt:
 - Gives flavor to food and brings out the flavor of the other ingredients. Also acts on gluten to soften the texture, and can slow down or control the growth of yeast.
 - Eggs
 - In baked goods they can have several different functions.

- Structure: The protein in eggs contributes to the structure much like the gluten, which is also a protein.
- Emulsification: Helps to blend ingredients smoothly.
- Leavening: Air is trapped in the protein, which expands when heated.
- Flavor: Adds distinct flavor, especially when used in large amounts, such as in pate' choux and challah bread.
- Color: Adds a rich yellow color, and adds color to crusts during the browning process.
- Eggs can be purchased in several different forms.
 - Shell eggs: Eggs still in their shells. Usually sold in flats that hold 30 eggs and in packages of 2 or more flats. If stored properly at 41°F or below, they will last up to four weeks beyond the packing date.
 - Egg products: Eggs that have been removed from the shell and pasteurized. Popular in the bake shop because of convenience.
- Liquids
 - Water—most common, especially for breads
 - Milk and cream
 - Also found in eggs, sugar syrups, fruits and juices, butter, and margarine
 - Functions of liquids:
 - form the gluten structure
 - activate leavening agents
 - some give flavor, tenderize, add moisture, and help with browning
- Flavorings
 - Extracts—liquid flavorings
 - Spices—bark, roots, flower buds, berries or seeds of aromatic plants.
 - Nuts
- Chocolate
 - 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.
 - Types
 - Unsweetened—a mixture of chocolate liquor and cocoa butter
 - Semisweet—a mixture of chocolate liquor, cocoa butter and sugar
 - Milk chocolate—chocolate liquor, cocoa butter, sugar and powdered, sweetened condensed or liquid milk.
 - White—sweetened cocoa butter
 - Cocoa powder—ground cocoa solids
 - Dutch-processed cocoa powder—treated with alkali to reduce acidity

Standard 2

Identify the types, mixing, and storage methods of various bakery products, including cookies and quick breads.

- Cookies
 - Identify the types of cookies:
 - Texture
 - Crisp—very little moisture and a high ration of sugar. Spread more than other cookies. Store in air-tight containers without refrigeration.
 - Soft—low amount of fat and sugar, high ratio of liquid such as eggs, corn syrup, molasses or honey is often used. Store in an airtight container without refrigeration.
 - Chewy—high ration of eggs, sugar and liquid, but a low amount of fat. Use pastry flour for an ideal chewy cookie, and develop the gluten during mixing.
 - Shaping or baking methods
 - Drop—chocolate chip and oatmeal
 - Rolled—sugar and gingerbread
 - Molded and pressed—spritz, almond crescents and lace
 - Icebox/refrigerator—dough is made ahead of time and stored in the refrigerator, then sliced and baked as needed
 - Sheet or pan—brownies and lemon bars
 - Bar cookies—biscotti and fruit bars (like fig newtons)
- Most cookies are made using the creaming method of mixing.
- Discuss the proper storage of cookies.
 - Cool completely before storing
 - Keep in an airtight package
 - Can be frozen for up to three months
- Quick breads
 - Identify the types of quick breads:
 - Pour batter (1 part flour to 1 part liquid)—crepes and pancakes
 - Drop batter (2 parts flour to 1 part liquid)—muffins
 - Soft dough (3 parts flour to 1 part liquid)—biscuits and scones. Can be rolled and cut prior to baking.
 - Identify the proper mixing methods of quick breads.
 - Biscuit method—cut the fat into the dry ingredients, then add the liquids.
 - Blending/muffin method—combines liquids, including fat and eggs, in one container and combine dry ingredient in a separate container and then combine the two mixtures.
 - Creaming method—cream solid fat and sugar until light and fluffy, add eggs one at a time, then add dry and liquid ingredients alternately. This results in more cake-like muffins.
 - Discuss the proper storage of quick breads.
 - Most are best when served fresh. When storing, put in airtight packaging. Use within a few days or freeze for up to three months.

Performance Objective 8

Plan, calculate cost, prepare and present a bakery item for a minimum of 30 people.

Vocabulary

- Biscuit Method
- Blended/Muffin Method
- Chocolate Liquor
- Cocoa Butter
- Creaming
- Drop Batter
- Emulsification
- Flats (egg)
- Gluten
- Leavening
- Nibs
- Pasteurized
- Pour Batter
- Rancid
- Soft Batter
- Starter (sour dough)

STRAND 12

Students will explore various cuisines from North and South America

Standard 1

Discuss cuisine.

- Cuisine: A style or method of cooking specific to a country, region, or establishment.

Standard 2

Identify common foods from regional North American cuisine.

- Flavor Profile of North Atlantic (CT, ME, MA, NH, RI, VT)
 - Common Foods
 - Boston Cream pie, clam chowder, lobster, lobster rolls, oysters, Johnny cakes, maple syrups, whoopie pies
- Flavor Profile of Mid-Atlantic (DE, MD, NJ, NY, PA, D.C.)
 - Common Foods
 - Philly cheese steaks, shoofly pie, Manhattan clam chowder
- Flavor Profile of South Atlantic (AL, AR, FL, GA, MS)
 - Common Foods
 - Shrimps and grits, sweet tea, catfish, collard greens, hush puppies, fried chicken
- Flavor Profile of Northwest (AK, OR, WA, ID, MT)
 - Common Foods

- Salmon, berries, crab, oysters, clams, apples, cherries, pears
- Flavor Profile of the West Coast (CA)
 - Common Foods
 - Cobb salad, fish, citrus, avocado, cilantro, poultry, fish,
- Flavor Profile of the Southwest (AZ, NM, UT, TX)
 - Common Foods
 - Chili, quesadillas, guacamole, salsa, enchiladas, scones, brisket, tortillas
- Flavor Profile of the Mid-west (CO, IA, KS, MO, NE, ND, SD, OK)
 - Common Foods
 - Beef, corn, country fried steak, soybeans, barbeque
- Flavor Profile of the Great Lakes (WI, MI, OH, IN, IL)
 - Common Foods
 - Cheese, German Sausage, Popcorn, pierogis, chili, Danish kringle,

Standard 3

Explore cuisine influences, foods, and tools used in Central America.

- Flavor Profile of the Mexico
 - Overall cuisine influence
 - Influenced by Spain
 - Commonly used ingredients/foods
 - Corn, beans (frijoles), avocado, tomato, chili peppers, rice, tortillas, guacamole, salsa, chocolate, mole (complex sauce)
 - Culinary Tools
 - Tortilla press, Molcajete (traditional stone mortar and pestle), A comales
- Flavor Profile of the Caribbean
 - Overall cuisine influence
 - Influenced by Indian, Dutch, French, Spanish, British, and Amerindian food
 - Commonly used ingredients/foods
 - Lechon asado, pepperpot, conch, cuban sandwich, goat stew, callaloo, papaya, keylime pie, garlic, lime, seafood, rice, beans, banana, jerk spice
 - Culinary Tools
 - Caldero: a huge cast iron pot that has a tight fitting lid on the top, Plantain Press, Mortar and Pestle, Flan mold, Charcoal Grill/Smoker/BBQ, Yubba
- Flavor Profile of the Central America (Costa Rica, Guatemala, El Salvador, Belize, Honduras, Nicaragua, Panama)
 - Overall cuisine influence
 - Afro-caribbean and Spanish influences
 - Commonly used ingredients/foods
 - Rice, beans, fresh fruits/vegetables, mondongo, picadillo, chifrijos, granizados, ceviche tico, trits, Casado, horchata, pupusasa
 - Culinary Tools
 - Wooden stoves, plantain leaves

Standard 4

Explore cuisine influences, and foods used in South America

- Flavor Profile Argentina and Chile
 - Overall cuisine influence
 - European flavors and indigenous foods
 - Influenced by Italian and Spanish Cuisines
 - Commonly used ingredients/foods
 - Argentina:
 - Beef, chimichurri (olive oil and spice rub), provoleta (grilled herbed cheese), milanesa (pounded chicken or beef, breaded and either fried or baked), empanada (hand pie), tarta (similar to a quiche, but with less egg and more filling), locro (stew with grains, meat, vegetables and corn), mate (tea)
 - Chile
 - Seafood, empanadas (hand pie), caldillo de congrio (eel, tomatoes, potatoes, onions, and spices), pastel de choclo (meat pie with sweet corn crust), Corn, humitas (pureed corn cooked in husks), olives, chirimoya—fruit, tomatitan (corn and tomato stew), ensalada chilena (salad with fresh vegetables, sprinkled with lemon and cilantro)
- Flavor Profile of Brazil
 - Overall cuisine influence
 - Influenced by Europe, especially Portugal, as well as Italy and Germany
 - East-fish
 - West-vende oil
 - North-cassava
 - South-Meat and sushi
 - Commonly used ingredients/foods
 - Feijoada--stewed beef, pork and beans, Feijao—Beans, Coconut, cassava/manioc/yuca root, lemon (green and very tart), shrimp, rice (arroz-flavored with garlic and black olives/tomatoes), plantains,
 - Culinary Techniques
 - churrasco--type of barbeque
- Flavor Profile of Columbia, Ecuador, Peru, Venezuela
 - Overall cuisine influence
 - Influenced by Spanish, African, Arab cultures, Inca and Spanish, European
 - Commonly used ingredients/foods
 - Columbia
 - Bandeja paisa (steak, sausage, rice, beans, pork rinds, topped with fried eggs and avocado), tubars, coffee, Lechona (stuffed pork), tamales, asado
 - Ecuador

- ceviche (raw seafood dish), hornado (Potatoes and Roasted pig), banana's, soup and rice
- Peru
 - ceviche (seafood dish), papa rellena (mashed potatoes stuffed with olives, ground meat, eggs and spices and then deep fried), Pollo a la brasa (chicken grilled or roasted after being marinated), corn, potatoes, amaranthaceaes (quinoa, kiwicha), legumes
- Venezuela
- Empanadas (hand pie), cachitos (croissant and pistachios), Pabellion Criollo (rice, beans, and shredded beef), corn

Vocabulary

- Ceviche
- Chimicurri
- Churrasco
- Cuisine
- Empanada
- Mole
- Mortar and Pestle
- Plantains

Skill Certificate Test Points by Strand

Example table below. Refer to instructions for specifics.

Test Name	Test #	Number of Test Points by STRAND												Total Points	Total Questions
		1	2	3	4	5	6	7	8	9	10	11	12		
Culinary Arts	345	6.5	8	6	0	3.5	8	7	5	4.5	3	8	3	62.5	48

Performance Objective

FCCLA Integration into Culinary Arts:

STAR Events: Career Investigation, Entrepreneurship, Environmental Ambassador, Illustrated Talk, Interpersonal Communications, Job Interview, Leadership, Life Event Planning, Nutrition & Wellness, Advocacy, Chapter Service Project Display, Chapter Service Project Portfolio, National Programs in Action, Applied Math for Culinary Management, Culinary Arts, Food Innovations, Hospitality, Tourism and Recreation, Sports Nutrition.

Skill Demonstration Events: Culinary Chicken, Culinary Food Art, Culinary Knife Skills, Consumer Math, Culinary Math, Hospitality, Tourism and Recreation, Nutrition, Science in FACS.

National Programs: Career Connection, Leadership Service in Action, Power of One, Student Body