

# STRANDS AND STANDARDS

## CULINARY 1



### Course Description

This course is the second step in the Culinary Arts Pathway. Experiences will highlight food safety and sanitation, careers, introduce knife skills and cooking techniques, and basic culinary skills related to stocks, sauces, and yeast breads. There will be a focus on career readiness. Student leadership and competitive events (FCCLA) may be integrated into this course.

<b>Intended Grade Level</b>	9-12
Units of Credit	0.5
Core Code	34.01.00.00.170
Concurrent Enrollment Core Code	N/A
Prerequisite	N/A
Skill Certification Test Number	343
Test Weight	0.5
<b>License Area of Concentration</b>	CTE and/or Secondary Education 6-12
<b>Required Endorsement(s)</b>	
Endorsement 1	Family Consumer Sciences (CTE/General)
Endorsement 2	Culinary Arts
Endorsement 3	

## STRAND 1

Students will consistently demonstrate workplace safety, food safety, and sanitation techniques. (Suggested 5 days)

\*Performance Skills for this strand included below.

### Standard 1

Apply established safety rules and guidelines in a work environment.

- Identify prevention, protocol and treatment for cuts.
  - Prevention
    - Use sharp knives, dull knives are more dangerous
    - Hold knife correctly, using the claw hand position on guide hand.
    - Use a stabilized cutting board.
    - Hold onto the knife handle while cleaning, do not soak.
  - Protocol
    - Clean and sanitize the affected area and equipment as soon as possible.
  - Treatment
    - Minor cuts clean wound, apply bandage and wear glove.
    - Sever cuts apply pressure and seek medical attention.
- Identify prevention, protocol and treatment for fires, chemical and heat related incidents.
  - Prevention
    - Avoid flammable materials or clothing on or near the range.
    - Turn handles away from the front of the range.
    - Lift lids on hot foods away from you.
    - Use hot pads or oven mitts for handling hot baking pans.
    - Keep equipment clean.
    - Keep chemicals away from food.
  - Protocol
    - To extinguish a fire use the correct fire extinguisher. (A, B, C, or K)
    - To extinguish a grease fire, cover/smother the pan, pour baking soda/salt. Avoid water, flour or sugar on grease fires.
    - Follow manufactures directions for all chemical use and storage, do not mix chemicals.
  - Treatment
    - First Degree Burn and Second Degree Burn: immerse burn in cool water or use cool compress for 10-15 minutes.
    - Third Degree Burn: seek medical treatment
    - For Chemical Burn: seek medical treatment or call poison control.
- Identify prevention, protocol and treatment for break, strains and sprains.
  - Prevention
    - Keep floors clean and dry.
      - Post caution signs for wet floors.
      - Store heavy items on lower shelves.
      - Use ladders or step stools appropriately.
      - Lift heavy items appropriately.
      - Wear non-slip shoes.
  - Treatment
    - Seek medical attention.

## Standard 2

Identify health and hygiene requirements for food handling.

- Identify proper hand washing.
  - Wash hands with soap and warm water for a minimum of twenty seconds.
  - Wash hands before and after handling raw meat, poultry or eggs.
  - Wash hands after using restroom, sneezing, coughing, changing diapers, etc.
- Identify appropriate clothing and hair restraints.
  - Appropriate clothing includes clean clothing.
  - Cover and tie back hair with appropriate hair restraints before working with food.
- When tasting foods, always use a clean spoon and use only once.
- Discuss appropriate use of gloves.
  - Single use gloves only.
  - Wash hands before putting on gloves.
  - Change gloves when they get dirty, torn, or changing task.
  - Wear gloves when handling ready-to-eat (RTE) foods.
  - Wear gloves and bandage for an open cut or wound.

## Standard 3

Recognize food-borne illness and prevention.

- Identify the ways food becomes unsafe.
  - Physical: fingernail, hair, metal shard, band aid
  - Chemical: cleaning chemicals, sanitizers
  - Biological: pathogens
- Define food-borne illness.
  - Food-borne illness results from eating foods containing pathogens.
  - Pathogens are any bacteria, virus, parasite, or fungi that can cause illness.
    - Bacteria need certain conditions to grow. FATTOM: Food, Acid, Time, Temperature, Oxygen, and Moisture.
  - Common symptoms of a food borne illness include fever, headache, nausea, vomiting and diarrhea.
  - Common food borne illnesses include: Campylobacter, Clostridium Perfringens, E-coli, Norovirus, Salmonella, Staphylococci
  - Food will often look and smell normal.
  - When in doubt, throw it out.
- Controlling time and temperature
  - Foods like milk/dairy, meat, fish, eggs, poultry, shellfish/crustaceans, baked potatoes, tofu, sprouts, cooked rice, beans and vegetables, sliced melons or tomatoes and lettuce are susceptible to pathogens. These are known as TCS foods (Time/Temperature Control for Safety).
  - Temperature Danger Zone: 41-135 degrees
    - Foods held in the danger zone for longer than 4 hours should be thrown out.
      - Time in the danger zone includes: shopping, transportation, preparation, and holding for service.
  - Frozen foods: 0°F
  - Refrigerator/Cold Food: 41°F or below
  - Holding Hot Foods: 135°F

- Seafood, Beef, Pork, Lamb: 145°F
- Ground Meats: 155°F
- Poultry Whole or Ground and Reheated food: 165°F
- Identify the ways to safely thaw TCS foods.
  - In the refrigerator.
  - In a sink of cold, running water or a sink full of cold water, changing the water every 30 minutes. Prepare and use food immediately.
  - In the microwave. Prepare and use food immediately.
  - As part of the cooking process.
- Identify correct cooling of TCS foods.
  - Shallow containers or reduce portion size in refrigerator
  - Ice bath
  - Blast chiller
- Preventing cross contact and cross contamination
  - Cross contact is when food item containing an allergen comes in contact with another food.
    - The big 8 allergens include: tree nuts, eggs, milk, soy, wheat, peanuts, fish, and shell fish
  - Cross contamination is the transfer of pathogens from people, surfaces or food to food.
    - Store food 6 inches off the ground, label stored food correctly, store ready-to-eat (RTE) food separately or above raw food.
- Equipment Storage: Store service-ware and food containers upside down on a clean, sanitized surface, and store utensils with handles up.
- Food Preparation: clean and sanitize work area and equipment, wash hands between task, never place cooked food on a plate which has previously held raw meat, poultry or seafood.
  - Serving food: no bare hand contact with RTE food.
  - Cleaning and Sanitizing
    - Clean removes food and other dirt from surface.
    - Sanitize reduces pathogens on surface.
    - Steps to cleaning and sanitizing:
      - Scrape and rinse
      - Wash
      - Rinse
      - Sanitize
      - Air dry
    - Clean and sanitize after completing a task or after 4 hours of constant use.
    - Remove garbage from prep area as soon as possible.
    - To reduce pest/insects, avoid crumbs or spills, keep staples in airtight containers and dispose of garbage properly.

## STRAND 2

**Students will explore career opportunities and employment skills required in the food service industry. (Suggested 5 days)**

### Standard 1

Identify career opportunities and educational requirements.

- Career paths
  - Such as: dietician, food stylist, chef, pastry chef, food scientist, event planner

- Education opportunities
  - College or tech, apprentices, work-based learning, CTE internships
  - On the job training
  - Industry certifications
    - Such as: National Restaurant Association, American Culinary Federation

## Standard 2

Investigate and apply professional work behavior and employability skills.

- Communication
- Collaboration
- Creativity
- Critical Thinking
- Citizenship
- Character

## STRAND 3

**Students will identify knives and food service equipment; function, proper use and care. (Suggested 6 days)**

**\*Performance Skills for this strand included below.**

### Standard 1

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

- Types of knives, including chef, paring, serrated
- Correct holding technique, sharpening, washing and storing

### Standard 2

Identify common small-ware food preparation equipment and how it is to be safely used and cleaned. (i.e. peeler, micro plane (zester), whisks, spatula, tongs, bench scraper, stock pot, sauce pan, sauté pan)

### Standard 3

Identify common food preparation and service equipment and how it is to be safely used and cleaned (e.g., scales, immersion blender, food processor, microwave, sheet pan, speed rack, hotel pan).

### Standard 4

Identify and demonstrate different knife cuts, including:

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

### Standard 5

Identify the process of mise en place.

- Mise en place (to put in place): organizing equipment and preparing ingredients (measuring, doing knife cuts) before you begin cooking.

## STRAND 4

Students will apply basic culinary math concepts and use in standardized recipes. (Suggested 2 days)

\*Performance Skills for this strand included below.

### Standard 1

Utilize 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.

### Standard 2

Identify measurement abbreviations and equivalents.

- Measurement Abbreviations:
  - Tablespoon = T. or Tbsp.
  - Teaspoon = t. or tsp.
  - Gallon = gal.
  - Quart = qt.
  - Pint = pt.
  - Cup = c.
  - Pound = lb. or #
  - Ounce = oz.
  - Fluid oz. = fl. oz.
- Equivalents:
  - 3 t. = 1 T.
  - 16 T = 1 c.
  - 8 fl. oz. = 1 c.
  - 2c. = 1 pt.
  - 4 qt. = 1 gal.
  - 1 lb. butter = 2 c
  - 16 c. = 1 gal.
  - 4 c. = 1 qt.
  - 16 oz. = 1 lb.

### Standard 3

Define and identify components of a standardized recipe.

- Standardized recipe - specifically describes the exact, measurable amount of ingredients and the method of preparation needed to consistently produce a high-quality product.
- Components of a standardized 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

## Standard 4

Convert recipe yields.

- Converting total yield: two-step method
  - Divide the new yield by the old yield to get the conversion factor. (New Yield ÷ Old Yield = Conversion factor)
  - Multiply every recipe ingredient by the conversion factor to get the new quantity needed for the new yield. (Old ingredient quantity x Conversion factor = New quantity)

## STRAND 5

**Students will compare and contrast cooking techniques as applied to food preparation. (Suggested 10 days)**

**\*Performance Skills for this strand included below.**

### Standard 1

Moist heat cooking methods

- Boil: Cooking in liquid at boiling point. (Not oil)
- Blanch: Partially cooking by boiling and immediately cooling.
- Simmer: Cooking in liquid just below the boiling point.
- Poach: Cooking in a flavorful liquid in a temperature just below simmering.
- Steam: Cooking food in closed environment with steam.

### Standard 2

Dry heat cooking methods

- Bake/Roast: Cook with dry heat in a closed environment, usually in an oven.
- Broil: To cook food directly under heat source.
- Grill: To cook food directly above heat source.
- Sauté/Stir Fry: Quickly cooking an item in a small amount of hot fat or oil, over moderate heat.
- Pan Fry: Cooking in a moderate amount of hot fat or oil.
- Deep Fat Fry: Completely submerge food in hot fat or oil.

### Standard 3

Combination cooking methods

- Braise: Sear food. Add some liquid and cover pan to create a moist cooking environment.
- Stew: Small pieces of food are seared then covered completely with a liquid and simmered.

## STRAND 6

**Students will explore and prepare stocks and sauces. (Suggested days 4)**

### Standard 1

Vocabulary used in making stocks and sauces.

- Mire poix: 50% onion, 25% carrots, 25% celery
- Roux: equal parts fat and flour
- Stock: flavored liquid made from simmering bone and/or vegetables in water.
- Aromatics: mire poix, herbs, and spices

## Standard 2

Apply concepts of making a stock.

- Start with cold water; never boil; never add salt.
- Meat based stock includes bones, aromatics, and water
- Vegetable based stocks include vegetables, aromatics, and water
- Simmering time is based on type of stock.
- Skim stock often to remove impurities.
- Strain stock, cool correctly, and remove fat after cooling.

## Standard 3

Identify the five Mother Sauces.

- Béchamel is a white sauce made from milk or cream and thickened with a roux.
- Velouté is made from veal, chicken, or fish stock and a white or blond roux.
- Espagnole, often referred to as brown sauce, uses a brown stock, such as beef, as a base and is thickened with a brown roux.
- Tomato is made with sautéed aromatic vegetables and a tomato product.
- Hollandaise is made by whisking egg yolks with clarified butter and an acid such as lemon juice.

# STRAND 7

**Students will explore preparation principles of breads (Suggested days 6)**

**\*Performance Skills for this strand included below.**

## Standard 1

Types of breads.

- Quick and Yeast
- Review information from Foods and Nutrition 1 on Quick breads
- Compare and contrast quick breads and yeast breads including ingredients, preparation methods, texture/crumb and appearance.

## Standard 2

Types of yeast dough.

- Lean Dough contains only small amounts of sugar and fat, if any.
  - Products made from lean dough tend to have a chewier texture and an open crumb.
  - Examples include: Hard rolls, soft pretzels, and French bread
- Rich Dough may have fat, dairy, eggs, or sugar added.
  - Products made from rich dough tend to have a softer and finer texture. They may be golden in color because of the use of eggs and sugar.
  - Examples include: sandwich breads, sweet rolls, and soft rolls

## Standard 3

Identify ingredients in baked goods.

- Function of each ingredient.
  - Flour: structure.
  - Liquid: moisture and activates leavening agents.
  - Leavening Agents: makes the product rise.

- Yeast works by fermentation, using sugar and producing carbon dioxide and alcohol.
- Yeast are living organisms.
- In extreme hot or cold temperatures, they can die or slow down.
- Fat: tenderness, richness and some flavor.
- Salt: flavor and controls yeast.
- Sugar: flavor and browning

## Standard 4

Principles of yeast dough production.

- Kneading is combining liquid and flour combine to form gluten. As the dough is kneaded the gluten-strands line up creating a structure trapping carbon dioxide, allowing the dough to rise.
- Fermentation is the process of breaking down sugar to create carbon dioxide and alcohol, which-causes the dough to rise.
- Proofing is the final rising of the dough prior to baking
- Oven spring is the expansion of carbon dioxide when put into a preheated oven.

## Performance Skills

### Performance Skill 1

Investigate food safety and complete an assessment in preparation for a Food Handlers Permit.

### Performance Skill 2

Demonstrate competency with at least 4 of the knife cuts listed in STRAND 3.

### Performance Skill 3

Adjust a recipe to yield 1/2, double and quadruple the servings.

### Performance Skill 4

Actively participate in both a moist heat and dry heat food preparation experience.

### Performance Skill 5

Actively participate in the preparation of a mother sauce.

### Performance Skill 6

Actively participate in the preparation of a bread product.

## Workplace Skills

Students will develop professional and interpersonal skills needed for success in industry.

Determine the difference between hard skills and soft skills.

- Hard Skills: Hard skills are specific, teachable abilities that can be defined and measured
- Soft Skills: Personal attributes that enable someone to interact effectively and harmoniously with
- other people.

Identify soft skills needed in the workplace

- Professionalism
- Respect legal requirements/expectations
- Good communication skills
- Resourcefulness and creativity
- Work ethic