

**FDNT 75 Course Outline as of Fall 2008****CATALOG INFORMATION**

Dept and Nbr: FDNT 75 Title: PRINCIPLES OF FOOD

Full Title: Principles of Food

Last Reviewed: 2/10/2020

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	17.5	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00

Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable

Grading: Grade or P/NP

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

**Catalog Description:**

Introduction to food science principles and whole food preparation techniques for food production settings. Emphasis on food sanitation and safety, nutrient values, sensory evaluation, food standards, ingredient functions and interactions, and whole food production techniques.

**Prerequisites/Corequisites:****Recommended Preparation:**

CSKLS 371 or equivalent.

**Limits on Enrollment:**

None

**Schedule of Classes Information:**

Description: Introduction to food science principles and whole food preparation techniques for food production settings. Emphasis on food sanitation and safety, nutrient values, sensory evaluation, food standards, ingredient functions and interactions, and whole food production techniques. (Grade or Cr/NC) Transfer Credit: CSU (Grade or P/NP)

Prerequisites/Corequisites:

Recommended: CSKLS 371 or equivalent.

Limits on Enrollment: None

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

## **ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
<b>CSU Transfer:</b>	Transferable	Effective: Fall 2007	Inactive:
<b>UC Transfer:</b>		Effective:	Inactive:

**CID:**

**Certificate/Major Applicable:**

Both Certificate and Major Applicable

## **COURSE CONTENT**

### **Outcomes and Objectives:**

Upon completion of this course, students will be able to:

1. Describe and follow proper safety procedures in the kitchen.
2. Identify the main types of food borne hazards and follow accepted sanitary food receiving, storage, and production procedures in meal preparation.
3. Demonstrate basic knowledge of weights, measures and conversions.
4. Select, use and maintain kitchen equipment and utensils appropriately.
5. Describe uses of a variety of equipment used in institutional cooking.
6. Demonstrate proper cleaning and sanitizing techniques for various equipment, and maintain a clean, organized work area in the kitchen.
7. Identify components of food products.
8. Demonstrate basic knowledge of food preparation terminology and techniques.
9. Understand and apply basic scientific principles in the preparation and storage of safe, high quality food products.
10. Produce acceptable food products using standardized recipes and recipes scaled up or down from the originals.
11. Safely evaluate sensory attributes of food.
12. Prepare and present a variety of high quality food products made with whole nutrient dense food products, demonstrating knowledge of basic methods, ingredients, and nutritional value.
13. Plan menus using a variety of whole foods that maintain high levels of flavor, color and nutrient value.
14. Prepare a variety of nutritious baked goods, including ones with reduced fat and sugar levels.
15. Identify and compare qualitative standards for food prepared in

the laboratory.

16. Compare the effects of food preparation methods on the nutritive Value of foods.

## **Topics and Scope:**

### **I. Introduction to Quantity Food Production**

#### **A. Safety and Sanitation**

1. Kitchen attire
2. Hand washing
3. Cleaning and sanitizing equipment, utensils, and work surfaces
4. Safe food sampling
5. Food storage

#### **B. Kitchen Equipment and Terminology; Use of Standardized Recipes**

1. Writing and using standardized recipes
2. Weighing and measuring ingredients, including dry vs. wet ingredients; equivalencies; conversions; yields
3. Pots, pans, different knives
4. Conventional vs. convection oven; steamer; commercial mixer
5. Tilt skillet, other quantity equipment, as available

#### **C. Introduction to Knife Skills**

1. Types and uses of different knives
2. Knife sharpening, cleaning and storing
3. Slicing, dicing, chopping, pureeing

#### **D. Introduction to Basic Stocks, Soups, Sauces**

1. Ingredients
2. Preparation techniques

#### **E. Introduction to Sensory Evaluation Techniques**

1. Aroma
2. Taste
3. Mouth feel
4. Influence of environment on perceptions: light, noise

#### **F. Introduction to Components of Foods, Basic Cooking Methods and Nutrient Retention**

1. Roasting
2. Braising
3. Sautéing
4. Steaming
5. Stir frying
6. Use of microwave

#### **G. Menu Planning/Putting it Together**

1. Introduction to basic nutrition and nutritional concerns
2. Textures, colors, flavors
3. Seasonality

### **II. Plant Foods: Whole Vegetables, Fruits, and Grains**

#### **A. Vegetables and Fruits**

1. Components
2. Nutritive value
3. Role in planning nutritious menus
4. Standards and selection considerations
5. Safety and sanitation concerns; selection and storage

#### **B. Types of Vegetables and Fruits**

1. Roots
  2. Greens
  3. Fruits
  4. In-season selections
  5. Salads, including green and fruit and mixed
- C. Vegetable and Fruit Cooking Methods and Food Science Principles; Nutrient Retention
1. Caramelization
  2. Baking and roasting
  3. Steaming
  4. Blanching
  5. Sautéing
  6. Stir frying
  7. Use of oils; smoke points; flavor; nutrition
  8. Soups, stocks
- D. Vegetable and Fruit Problem Solving
1. Sauces
  2. Maintaining color; batch cooking
  3. Selection and storage; choice of fresh vs. frozen vs. canned
- E. Grains
1. Components
  2. Nutritive value
  3. Role in planning nutritious menus
  4. Safety and sanitation concerns; selection and storage
- F. Types of Grains: long grain, short grain, brown rice; risotto; quinoa; pastas; others
- G. Cooking Methods and Food Science Principles of Primarily Whole Grains; Nutrient Retention
1. Basic techniques, including steaming and pilafs
  2. Cooked cereals
  3. Problem solving: avoiding lumps, stickiness, sogginess
- III. High Protein Foods: Meat, Poultry, Fish, Legumes, Dairy
- A. Beef and Pork Basics
1. Components and food science principles
  2. Nutritive value
  3. Role in menu planning
  4. Safety and sanitation concerns; selection and storage
- B. Beef and Pork Preparation
1. Choosing cuts for intended use and for budget
  2. Tenderizing
  3. Flavor development
  4. Cooking methods and nutrient retention
    - a. Braising, poaching
    - b. Breading/Baking (vs. frying)
    - c. Roasting
    - d. Rubs
- C. Poultry and Fish Basics
1. Components and food science principles
  2. Nutritive value
  3. Role in menu planning
  4. Safety and sanitation concerns; selection and storage
- D. Poultry and Fish Preparation

1. Choosing types for intended use, including age of poultry and pieces
2. Tenderizing
3. Flavor development
4. Cooking Methods and nutrient retention, with focus on lowering fat in meal
  - a. Braising, poaching
  - b. Breading/Baking (vs. frying)
  - c. Roasting
  - d. Rubs
- E. Milk, Egg and Legume Basics
  1. Components and food science principles
  2. Nutritive value
  3. Role in menu planning
  4. Safety and sanitation concerns; selection and storage
- F. Milk, Egg and Legume Preparation
  1. Choosing types, including different grades of eggs and milk alternates for intended use, budget, and nutritional concerns
  2. Custards
  3. Cheese sauces
  4. Use of legumes in entrees; use of legumes in side dishes
- G. Problem Solving
  1. Garnishes
  2. Soups/Stocks
- IV. Baked Goods
  - A. Main Ingredients, Ingredient Interactions and Food Science Principles
    1. Use of fat, sugar, or fat/sugar substitutes, for flavor, aeration, tenderizing
    2. Nutritive value
    3. Role in menu planning
    4. Safety and sanitation concerns; selection and storage
  - B. Chemically Leavened Products
    1. Biscuits, scones
    2. Cookies, cakes
    3. Quick breads
  - C. Yeast Leavened Products
    1. Yeast Breads
    2. Breakfast rolls
  - D. Pastry
    1. Sweet
    2. Savory
  - E. Use of Fruits in Baked Goods
    1. Variety
    2. Selection
    3. Storage

### **Assignment:**

1. Weekly preparation of foods from raw materials, including scaling recipes and maintaining clean work areas.
2. Quizzes (approximately 4).

3. Final food presentations at end of each 4 week module.
4. Maintenance of personal cookbook to include terminology, flavor charts, conversion charts and recipes.
5. Menu development project.
6. Text reading of approximately 5-10 pages per week.

### Methods of Evaluation/Basis of Grade:

**Writing:** Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing  
0 - 0%

**Problem Solving:** Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Menu development project, scaling recipes.

Problem solving  
10 - 20%

**Skill Demonstrations:** All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Food prep., maint. clean work areas; presentations

Skill Demonstrations  
50 - 60%

**Exams:** All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Short answer.

Exams  
10 - 20%

**Other:** Includes any assessment tools that do not logically fit into the above categories.

Personal cookbook. Attendance and participation.

Other Category  
10 - 20%

### Representative Textbooks and Materials:

Instructor prepared material.

Understanding Food: Principles and Preparation, 3rd Edition, 2008, Brown, Amy Christine, Wadsworth Cengage Learning.