FDNT 75 Course Outline as of Fall 2020

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	6	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 including whole food preparation techniques for healthy food production. Emphasis on food sanitation and safety, nutrition, sensory evaluation, food standards and quality, ingredients and their functions and interactions.

Prerequisites/Corequisites:

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: Introduction to food science principles including whole food preparation techniques for healthy food production. Emphasis on food sanitation and safety, nutrition, sensory evaluation, food standards and quality, ingredients and their functions and interactions. (Grade or P/NP)
Prerequisites/Corequisites:
Recommended:

Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 2007	Inactive:	
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Plan high quality nutrient dense menus using a variety of whole foods.
2. Use appropriate safety and sanitation procedures in food preparation.
3. Prepare and present a variety of nutritious high quality meals made with whole food ingredients.

Objectives:
At the conclusion of this course, the student should be able to:
1. Describe and follow proper safety procedures in the kitchen.
2. Identify the main types of food borne hazards and follow appropriate 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 the composition 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 food to ensure safe, high quality products.
10. Produce acceptable food products using standardized recipes and scale recipes up or down from the originals as needed.
11. Safely evaluate sensory attributes of food.
12. Prepare and present a variety of high quality food products made with nutrient dense food products, demonstrating knowledge of basic methods, ingredients, and nutritional value of whole foods.
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. Compare the effects of food preparation methods on the nutritive value of foods.

Topics and Scope:

I. Introduction to 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. Identification and appropriate use of standard kitchen equipment.
    2. Writing and using standardized recipes
    3. Weighing and measuring ingredients, including dry vs. wet ingredients; equivalencies; conversions; yields
  C. Introduction to Knife Skills
    1. Types and uses of different knives
    2. Knife sharpening, cleaning and storing
    3. Slicing, dicing, and chopping
  D. Introduction to Sensory Evaluation Techniques
    1. Aroma
    2. Taste
    3. Mouth feel
    4. Influence of environment on perceptions: light, noise
  E. Introduction to Components of Foods, Basic Cooking Methods and Nutrient Retention
    1. Roasting/grilling
    2. Braising/poaching
    3. Sautéing
    4. Steaming
    5. Stir frying
    6. Use of microwave
  F. Introduction to Basic Stocks, Soups, Sauces
    1. Ingredients
    2. Preparation techniques
  G. Menu Planning and Presentation
    1. Introduction to basic nutrition and nutritional concerns
    2. Textures, colors, flavors
    3. Seasonality
II. Plant Foods: Vegetables, Fruits, Grains and Legumes
  A. Vegetables and Fruits
    1. Food composition and effect of processing
    2. Nutritional 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. Seasonality of fruits and vegetables
5. Use in salads, including green, 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 Uses
1. Sauces
2. Maintaining color; batch cooking
3. Selection and storage; choice of fresh vs. frozen vs. canned
4. Texture modified diets; pureed

E. Grains
1. Types of whole grains and grain products
2. Food composition and the effect of processing
3. Nutritive value
4. Role in planning nutritious menus
5. Safety and sanitation concerns; selection and storage

F. Cooking Methods and Food Science Principles of Primarily Whole Grains
1. Basic techniques, including steaming and pilafs
2. Considerations for retaining nutrient content
3. Problem solving: avoiding lumps, stickiness, sogginess
4. Appropriate use in texture modified diets; pureed

III. Animal Products: Meat, Poultry, Seafood, Dairy and Eggs

A. Meats, Poultry and Seafood Basics:
1. Food composition and food science principles
2. Nutritive value
3. Role in menu planning
4. Safety and sanitation concerns; selection and storage
5. Production, seasonality and sustainability issues

B. Meats, Poultry and Seafood Preparation
1. Identifying different cuts and appropriate uses including cost considerations
2. Use of pre-cooking techniques for improving flavor and texture
3. Cooking methods and nutrient retention
   i. braising, poaching
   ii. breading/baking (vs. frying)
   iii. roasting/grilling
4. Texture modified diets; pureed

C. Egg and Dairy Basics
1. Food composition and food science principles
2. Nutritive value
3. Role in menu planning
4. Safety and sanitation concerns; selection and storage
5. Production and sustainability issues

D. Egg and Dairy Preparation
1. Choosing types, including different grades of eggs and milk alternatives based on intended use, budget, and nutritional concerns

2. Cheese making and food science principles
3. Cooking methods and nutrient retention
4. Texture modified diets; pureed

IV. Baked Goods
A. Ingredients, Ingredient Interactions and Food Science Principles
1. Use of fat, sugar, or fat/sugar substitutes, including effect on flavor, and texture.
2. Nutritive value
3. Role in menu planning
4. Safety and sanitation concerns; selection and storage

B. Chemically Leavened Products
1. Types of chemical leaveners
2. Effect on different flours on texture and taste
3. Preparation of products using standard techniques
i. biscuits/scones
ii. cookies
iii. cakes
iv. quick breads

C. Yeast Leavened Products
1. Role and requirements of yeast for proper flavor and texture
2. Effect of different flours on texture and taste
3. Preparation of products using standard techniques

D. Pastry
1. Role of fat or fat substitutes in development of flavor and texture
2. Effect on different flours on texture and taste
3. Preparation of products using standard techniques

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 (weekly)
3. Menu development project and final food presentation at end of the semester
4. Maintenance of notebook to include terminology, flavor charts, conversion charts and recipes
5. Text reading of approximately 20-40 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.

Preparation of food, maintaining clean work areas; food presentation	Skill Demonstrations 50 - 60%

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

Weekly quizzes	Exams 10 - 20%

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

Notebook. Participation	Other Category 10 - 20%

Representative Textbooks and Materials:
Introductory Foods. 15th ed. Schuele, Barbara and Frye, Amanda. Pearson. 2020