FN A180: PRINCIPLES OF FOODS

Item	Value
Curriculum Committee Approval Date	11/04/2020
Top Code	130600 - Nutrition, Foods and Culinary Arts
Units	3 Total Units
Hours	90 Total Hours (Lecture Hours 36; Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	Yes
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)

Course Description

Basic knowledge of food science principles and food preparation techniques. Emphasis on ingredient interaction, technique and production standards, food safety, sanitation, nutrient values, and food representations. Recommended for students transferring to the CSU in Nutrition. Transfer Credit: CSU. C-ID: NUTR 120.**C-ID:** NUTR 120.

Course Level Student Learning Outcome(s)

1. Prepare foods from each of the categories covered and explain the scientific principles demonstrated.

Course Objectives

- 1. Prepare and present a variety of products from each major category of food (ex, dairy, grains, meat, etc.)
- 2. Apply basic food science principles which are essential in the preparation of high quality products.
- 3. Identify and practice proper sanitation, safety and work simplification techniques which relate to successful food preparation.
- 4. Identify and compare preparation methods to optimize nutrient content.
- 5. Demonstrate basic knowledge of food preparation terminology and techniques.
- 6. Demonstrate basic knowledge of weights, measures and conversions.
- 7. Demonstrate ability to adjust and use standardized recipes.
- 8. Evaluate sensory attributes of food.
- 9. Demonstrate proper use and care of ordinary cooking utensils and larger pieces of kitchen equipment.

Lecture Content

Food Safety and orientation Foodborne illness, and food safety Food Selection and Evaluation Sensory Evaluation of food products using descriptive terms Heating and equipment Energy transfer Food preparation basics Cutlery Techniques, measuring ingredients, mixing techniques Meat, poultry , fish and shellfish: Types of meats, poultry and fish Composition Purchasing guidelines Preparation techniques Storage Milk and Cheese Composition and purchasing Types/classifications of milk and cheese Food preparation Storage Eggs Composition of eggs and purchasing Preparation Storage Vegetables and fruits Classification Composition and purchasing Preparation and storage Enzymatic oxidative browning Vegetable pigments Cereal grains, flours and pastas Composition and uses Preparation and storage Starches and sauces Sources of starch and structure Starch characteristics, gelatinization, gel formation, retrogradation, dextrinization and modified sauces Sauces, thickened and unthickened Flour and flour mixtures Quick breads, preparation and sensory characteristics Yeast breads, preparation, types and sensory characteristics Cakes, preparation, types and sensory characteristics Pastry, preparation, types and sensory characteristics Fats and oils Functions of fats in foods Types of fats Food preparation with fats

Lab Content

Laboratory sessions reinforce the content covered in lecture. Lab exercises for each week align with the content covered in the lecture. Labs topics include: Food Safety and orientation Food preparation basics Meat, poultry , fish and shellfish: Milk and Cheese Eggs Vegetables and fruits Cereal grains, flours and pastas Starches and sauces Flour and flour mixtures Fats and oils

Method(s) of Instruction

- Lecture (02)
- DE Online Lecture (02X)
- Lab (04)
- DE Online Lab (04X)

Instructional Techniques

Lecture, demonstration, discussion, laboratory discussion and critiques (instructor/student)

Reading Assignments

Reading assignments in the textbook as outlined in the syllabus. Additional reading material from appropriate outside resources may be assigned. Students are expected to spend 2 hours per week on reading assignments.

Writing Assignments

Students are assigned weekly pre-laboratory questions. After the lab session, students complete weekly laboratory reports and product evaluation (sensory). Students are expected to spend 2-3 hours per week on writing assignments.

Out-of-class Assignments

Students are assigned a research paper and presentation. Weekly chapter quizzes are assigned on Canvas. Students are expected to spend 1 hour per week on out-of-class assignments.

Demonstration of Critical Thinking

Participation in class discussions; Demonstrated use of equipment, demonstrated ability in product preparation; organization of workplace; extension of recipes; final products; written and online quizzes and exams

Required Writing, Problem Solving, Skills Demonstration

Written weekly laboratory reports and product evaluation (sensory) Recipe modification and extension report to the class

Eligible Disciplines

Nutritional science/dietetics: Masters degree in nutrition, dietetics, or dietetics and food administration OR bachelors degree in any of the above AND masters degree in chemistry, public health, or family and consumer studies/home economics OR the equivalent. (Note: A bachelors degree in nutrition, dietetics, or dietetics and food administration, and certification as a registered dietician, is an alternative qualification for this discipline.) Masters degree required. Title 5, section 53410.1

Textbooks Resources

1. Required Brown, Amy. Understanding Food Principles and Preparation, 6th ed. Cengage, 2019