

DIET-1331: FOOD PRODUCTION FUNDAMENTALS

Cuyahoga Community College

Viewing: DIET-1331 : Food Production Fundamentals

Board of Trustees:

March 2021

Academic Term:

Fall 2021

Subject Code

DIET - Dietetic Technology

Course Number:

1331

Title:

Food Production Fundamentals

Catalog Description:

Application of scientific principles, techniques, and methods of food production for normal and medical nutrition therapy. Use of quantity food production equipment appropriate for different food service systems. Application of nutrition criteria and quality assurance standards.

Credit Hour(s):

4

Lecture Hour(s):

3

Lab Hour(s):

3

Requisites

Prerequisite and Corequisite

MATH-1100 Mathematical Explorations or higher, and DIET-1200 Basic Nutrition, and DIET-1320 Nutrition Applications.

Outcomes

Course Outcome(s):

Apply food safety and sanitation techniques.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Demonstrate steps to prevent the spread of foodborne illnesses.
2. Assess the safety of food preparation methods.
3. Demonstrate safe food storage principles.
4. Demonstrate safe food preparation methods.

Course Outcome(s):

Apply principles of food selection and preparation in foods considering optimal nutrient value, sensory qualities and microbiological safety.

Objective(s):

1. Recognize a variety of herbs, spices, oils, and other flavorings.
2. Identify, store and use a variety of dairy-based products and or dairy alternatives.
3. Compare various heat transfer methods.

4. Compare various cooking methods.
5. Propose best cooking methods for foods.
6. Compare various cooking methods.
7. Recognize and classify sauces.
8. Use thickening agents properly.
9. Recognize the structure and composition of meats, poultry, fish and shellfish.
10. Apply various cooking methods to meats, poultry, fish and shellfish.
11. Recognize the structure and composition of eggs.
12. Apply various cooking methods to eggs.
13. Recognize the structure and composition of vegetables.
14. Apply various cooking methods to vegetables.
15. Identify a variety of vegetables.
16. Recognize the structure and composition of cereals, starches, and flours.
17. Apply various cooking methods to cereals, starches and flours.
18. Identify a variety of salad greens.
19. Prepare a variety of salads and salad dressings.
20. Apply various cooking methods to fruits.
21. Identify a variety of fruits.
22. Prepare fruits for cooking or service.
23. Recognize and select ingredients for baked products.
24. Prepare baked products.
25. Properly use leavening agents.
26. Compare leavening agents.
27. Recognize and classify fats.
28. Use fats properly in various food preparation methods.

Course Outcome(s):

Apply portion control techniques.

Objective(s):

1. Recognize the purpose of standardized recipes.
2. Utilize standardized recipes.
3. Develop standardized recipes.
4. Convert recipe yield amounts.
5. Recognize the need for cost control and eliminate food waste in food service operations.

Course Outcome(s):

Work effectively as a team member.

Objective(s):

1. Prepare spaces for safe and effective food preparation.
2. Share and discuss food preparation processes and results.
3. Discuss and evaluate final products.
4. Take part in assessment of food textures, tastes and nutritional analysis.
5. Plan an inservice to illustrate uses for food equipment within a food service operation.

Course Outcome(s):

Apply socio-cultural and ethnic food consumption issues and trends to menu planning.

Objective(s):

1. Explore various cultures and the role of food.
2. Research and present cultural connections to practices with food.
3. Recognize cultural traditions and cuisines.
4. Consider religious and cultural practices for food applications.

5. Plan and deliver a cultural inservice to outline food applications and communication strategies consistent with foodservice practices.

Course Outcome(s):

Apply experimental procedures to test, compare and evaluate food products in relation to product expectations.

Objective(s):

1. Evaluate various food preparation techniques.
2. Evaluate baked products.
3. Present foods attractively.
4. Examine results from application of different food preparation techniques.
5. Examine results from incorporation of various food ingredients.
6. Design food-tasting experiments to examine the basic principles of the physiology of the sense of taste and smell.
7. Appreciate the flavor principles in a variety of cuisines.

Course Outcome(s):

Assess food preparation techniques within a professional kitchen.

Objective(s):

1. Recognize and use a variety of professional kitchen tools and equipment
2. Select and care for knives and other kitchen tools.
3. Assess organization of a professional kitchen.
4. Prepare items needed prior to actual cooking.
5. Organize and plan work efficiently.

Course Outcome(s):

Identify product development trends and technologies in the food industry.

Objective(s):

1. Prepare food items that align with trends and technologies within the food industry.
2. Discuss popular food products and technologies from media and popular press.
3. Research new trends or technologies within the food industry.
4. Choose new products to implement within food labs based upon current trends.

Course Outcome(s):

Recognize the role of government in regulation of food quality, safety and labeling.

Objective(s):

1. Discuss and evaluate food labels.
2. Evaluate safety measures in place within the food lab environment.
3. Discuss team member performance based upon food safety behaviors.
4. Explore the role of government in food regulation.

Methods of Evaluation:

1. Examinations/quizzes
2. Student reports and assignments
3. Laboratory assignments
4. Class participation
5. Presentations

Course Content Outline:

1. Food safety and sanitation
 - a. Preventing foodborne illness
 - b. Food flow

- c. Vulnerable foods
 - d. Preparation
 - e. Proper use of thermometers
 - f. Sanitation
 - g. Food Safety Monitoring
 - i. Health Department inspection
 - ii. Hazard Analysis and Critical Control Point System (HACCP)
 - iii. Hazard Analysis and Risk Based Preventive Controls (HARPC)
 - iv. Foodborne Illness Surveillance
2. Fundamental concepts of food preparation
- a. Weights and measures
 - b. Food preparation terminology
 - c. Food evaluation
 - d. Heat transfer
 - e. Tools and equipment
 - f. Portion control
 - g. Allergies and food intolerances
 - h. Food composition-application to food production techniques
 - i. Carbohydrates
 - 1. Composition
 - 2. Functions
 - ii. Lipids
 - 1. Composition
 - 2. Functions
 - iii. Proteins
 - 1. Composition and quality
 - 2. Functions
 - iv. Vitamins and minerals
 - v. Nonnutritive food components
 - i. Recipes
 - i. Standardized recipes
 - ii. Modifications
 - iii. Computerized Systems
 - j. Quality assurance
 - k. Cost control
 - i. Formularies
 - ii. Modifications
 - 1. Yield
 - 2. Ingredients
 - 3. Modified consistencies
 - 4. Nutritional needs
3. Food preparation techniques
- a. Apply food preparation techniques and food safety and sanitation techniques to:
 - i. Fruits/vegetables/legumes
 - ii. Meat, poultry/fish/meat alternatives
 - iii. Dairy
 - iv. Eggs
 - v. Grains/cereals/flours/flour mixtures
 - vi. Soups/salads/gelatins
 - b. Apply alternate food preparation techniques that incorporate health guidelines for the prevention of disease
 - c. Product development trends and technologies within food industry
 - d. Roles and execution of team relationships within the kitchen
4. Socio-cultural and ethnic food implications
- a. Health implications
 - b. Food selection
 - c. Food preparation
5. Quality assurance

- a. Commercially prepared food
- b. In-house prepared food items
- 6. Quantity food production
 - a. Menu planning
 - b. Evaluation of menus
 - c. Food production; work schedules
 - d. Execution of meal
- 7. Government food regulations
 - a. Federal food laws
 - b. Food and drug administration
 - c. United States Department of Agriculture
 - d. Environmental Protection Agency
 - e. Centers for Disease Control and Prevention
 - f. Other Regulatory Agencies
 - g. International Agencies

Resources

Brown, A. *Understanding Food: Principles & Preparation*. 6th. Belmont, CA: Thomson Wadsworth, 2019.

Legvold, D. and Salisbury, K. *Foodservice Management- By Design*. St. Charles, IL: Association of Nutrition & Foodservice Professionals, 2015.

Lopez-Alt, J.K. *The Food Lab*. New York: WW. Norton & Company, Inc., 2015.

<https://nihsepa.org/FoodMASTER>, 2019

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