**BIRZEIT UNIVERSITY**

**FACULTY OF NURSING, PHARMACY, AND HEALTH PROFESSIONS**

**DEPARTMENT OF NUTRITION AND DIETETICS**

**NUTD 233: PRINCIPLES OF FOOD PREPARATION**

**1st Semester 2021/2022**

**COURSE OUTLINE**

**Instructor:** Afaf Jaqaman

**Textbook:** Introductory Foods, Marion Bennion, Barbara Scheule, Prentice Hall, 13th ed. 2010.

**References:**

Illustrated Guide to Food Preparation, Margaret McWilliams, 2006.

Fox and Cameron’s Foods Science, Nutrition & Health, Lean، Michael E. J., 2006.

**Course description:**

The course is an introduction to the science of food. Students will study the chemical and physical properties of foods and the principles of food selection, storage, preparation and evaluation. Students will apply cooking techniques that preserve nutrients, color, texture, and flavor in food products. Students will develop the ability to recognize and produce safe quality food items. The course provides students with basic cooking skills and the major principles of food preparation.

**Leaning outputs**:

1. Identify the basic food preparation principles and techniques that preserve nutrients, color, texture, and flavor of food products.
2. Analyze the basic food science principles that affect the outcome of the finished food product.
3. Explain the terminology associated with food preparation.
4. Implement a variety of cooking methods.
5. Appreciate the scope of ingredient exchange in recipes.
6. Demonstrate the correct use of recipes.
7. Implement correct sanitation procedures.
8. Demonstrate correct sanitary and safety procedures when handling food products, utensils and equipment.
9. Demonstrate correct knife skills.
10. Demonstrate correct procedures for basic food preparation techniques.
11. Evaluate food products against quality standards.
12. Evaluate the general nutritional content of food products.
13. Understand the rational for dress/ work codes used in food preparation.
14. Abide by the dress/work codes for the laboratory sessions.

**Lab Work Dress Code**:

* 1. A white laboratory coat – clean, pressed and buttoned.
  2. Hair net covering all hair. Hair must be kept under control at all times.
  3. Flat, closed toe and heel shoes made with non-skid soles (open-toed or heeled shoes are not allowed).
  4. No jewelry of any type– this includes rings, necklaces, watches and bracelets of any kind.
  5. Short to moderate length unpolished fingernails and no false fingernails.

**Course evaluation**:

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| Midterm exam | 25% |
| Laboratory work | 30% |
| Final exam | 40% |
| Class participation | 5% |

**Course topics**:

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| **Chapter** | **Topic** |
| 5 | Basics in cooking – small equipment and tools, weights and measures, recipes. |
| 6 | Heat transfer in cooking – sources of heat, the use of heat in food preparation, changes in food caused by heat. |
| 10 | Fats – functions, properties, processing, refining, types, deterioration, sources, uses in food preparation, fat replacers. |
| 11 | Sweeteners – properties of sugar, syrups, molasses, and honey, low calorie sweeteners, sugar alcohols, bulking agents. |
| 13 | Starches – types of starches used in food preparation, the effects of heat, acids, sugar and stirring has on starches, use of dry heat (dextrinization), use of moist heat (gelatinization), prevention of lumping, weeping, skin formation, sauces. |
| 14 | Cereals - Structure and composition, classification of cereals, ratio of water to different types of cereal, preparation techniques. Rice & Pasta - origin, varieties, cooking and serving techniques. |
| 15 | Bakery products – batters and doughs: main ingredients and their functions. |
| 16 | Quick breads – types: popovers, cream puffs, pancakes, waffles, muffins, biscuits, scones. |
| 17 | Yeast breads - ingredients, mixing and handling, fermentation and proofing, baking. |
| 18 | Cakes and cookies: shortened and un-shortened. |
| 19 | Pastry: ingredients, rolling and baking. |
|  | **Midterm Exam**  **Thursday 11/11/2021** |
| 20 | Vegetables - classification, changes that occur in texture, color, flavor and nutrients when preparation techniques are applied, vegetable proteins. |
| 21 | Fruits - composition, changes during ripening, enzymatic browning, the effects of adding sugar, cooking and/or freezing fruits, dried fruits, canned fruits. |
| 22 | Salads & Salad Dressings - ingredients, preparation, emulsions, salad dressings, use in meals. |
| 23 | Milk and Dairy Products – composition and properties, processing, storage, effects of heat, acid and enzymes on milk, cheese making. |
| 24 | Eggs - structure, composition, changes as the egg ages, storage, use of eggs as thickening agents, gelling agents, structural ingredients, leavening agent, source of liquid, coagulation, factors affecting egg white foams. |
| 25 | Meat - beef, pork, veal & lamb, composition, structure, effects of dry and moist heat, variety meats, stocks. |
| 26 | Poultry - composition, classification, production, storing, cooking with dry and moist heat, stocks. |
| 27 | Fish and Seafood - composition, market form, buying tips, principles of cooking fish and seafood. |
|  | **Final Exam** |