



COURSE OUTLINE: FDS142 - BAKE THEORY

Prepared: Peter Graf

Approved: Sherri Smith, Chair, Natural Environment, Business, Design and Culinary

Course Code: Title	FDS142: BAKE THEORY
Program Number: Name	1071: CULINARY SKILLS 2078: CULINARY MANAGEMENT
Department:	CULINARY/HOSPITALITY
Semesters/Terms:	18F
Course Description:	This course will provide the student with an understanding of the requirements and skills for the baking industry, hotels, restaurants, and bakeries. Familiarity with techniques and products will help assist in your future purchasing decisions.
Total Credits:	2
Hours/Week:	1
Total Hours:	15
Prerequisites:	There are no pre-requisites for this course.
Corequisites:	There are no co-requisites for this course.
This course is a pre-requisite for:	FDS162
Vocational Learning Outcomes (VLO's) addressed in this course:	1071 - CULINARY SKILLS VLO 2 apply basic food and bake science to food preparation to create a desired end product. 2078 - CULINARY MANAGEMENT VLO 2 apply basic and advanced food and bake science to food preparation to create a desired end product.
Essential Employability Skills (EES) addressed in this course:	EES 4 Apply a systematic approach to solve problems.
General Education Themes:	Science and Technology
Course Evaluation:	Passing Grade: 50%, D
Books and Required Resources:	Professional Baking by Wayne Gisslen Publisher: Wiley Edition: 7th ISBN: 9781119148449 handouts Student Study Guide by Wayne Gisslen Publisher: Wiley Edition: 7th ISBN: 9781119148487



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Course Outcomes and Learning Objectives:

Course Outcome 1	Learning Objectives for Course Outcome 1
1. Demonstrate a working knowledge of flour production and application.	1.1 Identify the botanical classification of wheat and rye. 1.2 List the plants used in the production of flours. 1.3 Identify the classes and varieties of wheat and rye flour. 1.4 Provide background information on flours. 1.5 Identify the parts of wheat berry. 1.6 Describe: bran, germ, and endosperm. Describe the relationships of these parts. 1.7 Define flour specifications and compositions. 1.8 State the constituents of wheat flour: moisture, starch, protein, fat, minerals, enzymes, fibre, and ash. 1.9 Describe the proper storage conditions for flour(s). 1.10 List temperature, relative humidity (perishable ingredient): Temperature on flour, Effect on performance, Moisture of flour, Effect on performance periods of flours.
Course Outcome 2	Learning Objectives for Course Outcome 2
2. Demonstrate a working knowledge of types of fat.	2.1 List and identify the different types of fat: All purpose shortening, high ratio (emulsified), margarine, lard, butter, oil, blended, animal shortening, vegetable shortening. 2.2 State the basic components of each fat. 2.3 State the chemical and physical reactions of each fat. 2.4 State the function of fat in baking.
Course Outcome 3	Learning Objectives for Course Outcome 3
3. Explain and understand the different types of sugar commodities.	3.1 List, identify and state the place of origin for different raw sugars. 3.2 List, describe, identify and state the use of each different type of refined sugar. 3.3 List the uses of honey, syrup, molasses, and glucose. State the types and uses of each. 3.4 State the function of sugar and sweetening agents in baking.
Course Outcome 4	Learning Objectives for Course Outcome 4
4. Demonstrate a working knowledge of the use of eggs in the baking.	4.1 List the uses of eggs 4.2 Identify the different forms of eggs: fresh, whole, dried, frozen, (whole, separated and liquid). 4.3 Describe the handling and storage of eggs
Course Outcome 5	Learning Objectives for Course Outcome 5
5. Demonstrate a working knowledge of the uses of dairy products in baking.	5.1 List the uses of cream. 5.2 Identify the different kinds of cream: 35-40%, 18%, and 10%. 5.3 State the physical properties of each cream. 5.4 List the uses of milk. 5.5 Identify the different kinds of milk and state the physical properties of each: homogenized, fortified, skimmed, buttermilk. 5.6 List the uses of cream and milk by-products. 5.7 Identify cream and milk by-products: skimmed milk powder, whey powder, bakers cheese.
Course Outcome 6	Learning Objectives for Course Outcome 6
6. Demonstrate a working	6.1 State the uses of sodium chloride (common salt).



knowledge of salt in baking.	6.2 State the sources of sodium chloride: mine (mineral), sea. 6.3 Identify different compositions of both processed and purified salt. 6.4 State the function of salt in baking.
Course Outcome 7	Learning Objectives for Course Outcome 7
7. Demonstrate a working knowledge of leavening agents.	7.1 State the uses, original source, storage and the effects of using of leavening agents in baking: baking powder, baking soda, ammonium compound. 7.2 State the use of air as a leavening agent. 7.3 Define creaming/foaming. 7.4 State the use of steam as a leavening agent 7.5 Define lamination - puff pastry 7.6 Define steam - popovers and choux pastry 7.7 Describe yeast: State the micro-organism group to which yeasts belongs. 7.8 State the basic fundamentals of growing yeast: living organisms, reproduction, budding, nutrients, environment. 7.9 Describe the different types of cultured and wild yeast (including manufactured types). 7.10 State the theory and use of fermentation. - Define fermentation - Describe the process of chemical and physical change - State the effects of temperature of fermentation: heat, extreme cold - State the recommended shelf life for each product - Describe the use of fermentation in bread making - State the effects and changes of flavour and taste
Course Outcome 8	Learning Objectives for Course Outcome 8
8. Demonstrate a working knowledge of chocolate and flavourings.	8.1 Explain how chocolate is produced. 8.2 Explain the functions of chocolate products. 8.3 Identify the basic production of chocolate coatings and chocolate products. 8.4 Explain the different tempering methods of couverture. 8.5 Describe storage requirements. 8.6 Identify natural, imitation, and artificial flavours. 8.7 Explain the method of obtaining essential oils and emulsions.
Course Outcome 9	Learning Objectives for Course Outcome 9
9. Apply basic and advanced food and bake science to food preparation to create a desired end product.	9.1 Apply the knowledge of the effects of cold and heat on ingredients. 9.2 Apply knowledge how various ingredients interact. 9.3 Use theoretical knowledge to prevent or solve food preparation problems. 9.4 Use national and international culinary terminology.
Course Outcome 10	Learning Objectives for Course Outcome 10
10. Apply a systematic approach to solve problems.	10.1 Identify why a baked good did not turn out as planned and use a systematic approach to identify at which stage of the production a mistake happened and correct.

Evaluation Process and Grading System:

Evaluation Type	Evaluation Weight	Course Outcome Assessed
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	Comprehensive Test	50%	
	Test 1	25%	
	Test 2	25%	

Date: August 7, 2018

Please refer to the course outline addendum on the Learning Management System for further information.