



COURSE OUTLINE

FDS142

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Prepared: Peter Graf Approved: Sherri Smith

Course Code: Title	FDS142: BAKE THEORY								
Program Number: Name	2078: CULINARY MANAGEMENT								
Department:	CULINARY/HOSPITALITY								
Semester/Term:	17F								
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								
This course is a pre-requisite for:	FDS162								
Vocational Learning Outcomes (VLO's): Please refer to program web page for a complete listing of program outcomes where applicable.	#2. apply basic and advanced food and bake science to food preparation to create a desired end product.								
Essential Employability Skills (EES):	#4. Apply a systematic approach to solve problems.								
General Education Themes:	Science and Technology								
Course Evaluation:	Passing Grade: 50%, D								
Evaluation Process and Grading System:	<table><tr><th>Evaluation Type</th><th>Evaluation Weight</th></tr><tr><td>Comprehensive Test</td><td>50%</td></tr><tr><td>Test 1</td><td>25%</td></tr><tr><td>Test 2</td><td>25%</td></tr></table>	Evaluation Type	Evaluation Weight	Comprehensive Test	50%	Test 1	25%	Test 2	25%
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Comprehensive Test	50%								
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Books and Required Resources:

Professional Cooking Canadian Edition by Gisslen
Publisher: Wiley Edition: 8 or newer
ISBN: 9781118636602
handouts

Course Outcomes and Learning Objectives:

Course Outcome 1.

Demonstrate a working knowledge of flour production and application.

Learning Objectives 1.

- a. Identify the botanical classification of wheat and rye
 - List the plants used in the production of flours
- b. Identify the classes and varieties of wheat and rye flour
 - Provide background information on flours
- c. Identify the parts of wheat berry
 - Describe: bran, germ, and endosperm
 - Describe the relationships of these parts
- d. Define flour specifications and compositions
 - State the constituents of wheat flour: moisture, starch, protein, fat, minerals, enzymes, fibre, and ash
- e. Describe the proper storage conditions for flour(s)
 - List temperature, relative humidity (perishable ingredient):
 - Temperature on flour
 - Effect on performance
 - Moisture of flour
 - Effect on performance periods of flours

Course Outcome 2.

Demonstrate a working knowledge of types of fat.

Learning Objectives 2.

- a. List and identify the different types of fat:
 - All purpose shortening, high ratio (emulsified), margarine, lard, butter, oil, blended, animal



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- shortening, vegetable shortening
- b. State the basic components of each fat
- c. State the chemical and physical reactions of each fat
- d. State the function of fat in baking

Course Outcome 3.

Explain and understand the different types of sugar commodities.

Learning Objectives 3.

- a. List and identify different raw sugars
- b. State their places of origin
- c. List and identify different types of refined sugar
- d. Describe the different types of refined sugar
- e. State the use of each
- f. List the uses of honey, syrup, molasses, and glucose
- g. State the types of each
- h. State the uses of each
- i. State the function of sugar and sweetening agents in baking

Course Outcome 4.

Demonstrate a working knowledge of the use of eggs in the baking.

Learning Objectives 4.

- a. List the uses of eggs
 - Identify the different forms of eggs: fresh, whole, dried, and frozen (whole, separated), liquid
- b. Describe the handling and storage of eggs
 - Describe the safe, sanitary handling of eggs
 - State the correct temperature and optimum conditions for storage of eggs

Course Outcome 5.

Demonstrate a working knowledge of the uses of dairy products in baking.



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Learning Objectives 5.

- a. List the uses of cream
 - Identify the different kinds of cream: 35-40%, 18%, and 10%
 - State the physical properties of each cream
- b. List the uses of milk
 - Identify the different kinds of milk: homogenized, fortified, skimmed, buttermilk
 - State the physical properties of each
- c. List the uses of cream and milk by-products
 - Identify cream and milk by-products: skimmed milk powder, whey powder, baker's cheese

Course Outcome 6.

Demonstrate a working knowledge of salt in baking.

Learning Objectives 6.

- a. State the uses of sodium chloride (common salt)
 - State the sources of sodium chloride: mine (mineral), sea
 - Identify different compositions of both processed and purified salt
- b. State the function of salt in baking

Course Outcome 7.

Demonstrate a working knowledge of leavening agents.

Learning Objectives 7.

- a. State the uses of leavening agents in baking: baking powder, baking soda, ammonium compound
 - State the original source of each
 - State the use of each in baking
 - State the effect of using each
 - State the storage of chemical leaveners
- b. State the use of air as a leavening agent



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- Define creaming/foaming
- c. State the use of steam as a leavening agent
- Define lamination – puff pastry
- Define steam – popovers, choux pastry
- d. Describe yeast
- State the micro-organism group to which yeasts belongs
- State the basic fundamentals of growing yeast: living organisms, reproduction, budding, nutrients, environment
- Describe the different types of cultured and wild yeast (including manufactured types)
- e. 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.

Demonstrate a working knowledge of chocolate and flavourings.

Learning Objectives 8.

- a. Explain how chocolate is produced
- b. Explain the functions of chocolate products
- c. Identify the basic production of chocolate coatings and chocolate products
- Explain the different tempering methods of couverture
- Describe storage requirements
- d. Identify natural, imitation, and artificial flavours
- Explain the method of obtaining essential oils and emulsions

Course Outcome 9.

Apply basic and advanced food and bake science to food preparation to create a desired end product.

Learning Objectives 9.



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- a. Apply the knowledge of the effects of cold and heat on ingredients
- b. Apply knowledge how various ingredients interact.
- c. Use theoretical knowledge to prevent or solve food preparation problems
- d. Use national and international culinary terminology

Course Outcome 10.

Apply a systematic approach to solve problems.

Learning Objectives 10.

- a. 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.

Date:

Thursday, August 31, 2017

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