



# COURSE OUTLINE

## FDS0142

Prepared: Peter Graf    Approved: Sherri Smith

| <b>Course Code: Title</b>                       | FDS0142: BAKE THEORY   |                 |                   |                    |     |        |     |        |     |
|---|--|-----------------|-------------------|--------------------|-----|--------|-----|--------|-----|
| <b>Program Number: Name</b>                     | 1120: COMMUNITY INTEGRATN  |                 |                   |                    |     |        |     |        |     |
| <b>Department:</b>                              | C.I.C.E.   |                 |                   |                    |     |        |     |        |     |
| <b>Semester/Term:</b>                           | 17F  |                 |                   |                    |     |        |     |        |     |
| <b>Course Description:</b>                      | 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.             |                 |                   |                    |     |        |     |        |     |
| <b>Total Credits:</b>                           | 2  |                 |                   |                    |     |        |     |        |     |
| <b>Hours/Week:</b>                              | 1  |                 |                   |                    |     |        |     |        |     |
| <b>Total Hours:</b>                             | 15   |                 |                   |                    |     |        |     |        |     |
| <b>Essential Employability Skills (EES):</b>    | #4. Apply a systematic approach to solve problems.   |                 |                   |                    |     |        |     |        |     |
| <b>General Education Themes:</b>                | Science and Technology   |                 |                   |                    |     |        |     |        |     |
| <b>Course Evaluation:</b>                       | Passing Grade: 50%, D  |                 |                   |                    |     |        |     |        |     |
| <b>Evaluation Process and Grading System:</b>   | <table border="1"> <thead> <tr> <th>Evaluation Type</th> <th>Evaluation Weight</th> </tr> </thead> <tbody> <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> </tbody> </table> | Evaluation Type | Evaluation Weight | Comprehensive Test | 50% | Test 1 | 25% | Test 2 | 25% |
| Evaluation Type                                 | Evaluation Weight  |                 |                   |                    |     |        |     |        |     |
| Comprehensive Test                              | 50%  |                 |                   |                    |     |        |     |        |     |
| Test 1  | 25%  |                 |                   |                    |     |        |     |        |     |
| Test 2  | 25%  |                 |                   |                    |     |        |     |        |     |
| <b>Books and Required Resources:</b>            | Professional Cooking Canadian edition by Gisslen<br>Publisher: Wiley Edition: 8th or newer<br>ISBN: 9781118636602<br>handouts  |                 |                   |                    |     |        |     |        |     |
| <b>Course Outcomes and Learning Objectives:</b> | Upon successful completion of this course, the CICE student, with the assistance of a Learning Specialist will acquire varying levels of skill development relevant to the following learning outcomes:  |                 |                   |                    |     |        |     |        |     |



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### **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, fiber, 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 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.**



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Explain and understand the different types of sugar commodities

### Learning Objectives 3.

- List and identify different raw sugars
- State their places of origin
- List and identify different types of refined sugar
- Describe the different types of refined sugar
- State the use of each
- List the uses of honey, syrup, molasses, and glucose.
- State the types of each
- State the uses of each
- 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

### 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.



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- 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
- 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



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- 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.

- Explain how chocolate is produced
- Explain the functions of chocolate products
- Identify the basic production of chocolate coatings and chocolate products
- ? Explain the different tempering methods of couverture
- ? Describe storage requirements
  - 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.

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





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### **Course Outcome 10.**

Apply a systematic approach to solve problems.

### **Learning Objectives 10.**

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.

#### **CICE Modifications:**

#### **Preparation and Participation**

1. A Learning Specialist will attend class with the student(s) to assist with inclusion in the class and to take notes.
2. Students will receive support in and outside of the classroom (i.e. tutoring, assistance with homework and assignments, preparation for exams, tests and quizzes.)
3. Study notes will be geared to test content and style which will match with modified learning outcomes.
4. Although the Learning Specialist may not attend all classes with the student(s), support will always be available. When the Learning Specialist does attend classes he/she will remain as inconspicuous as possible.

**A.** Further modifications may be required as needed as the semester progresses based on individual student(s) abilities and must be discussed with and agreed upon by the instructor.

#### **B. Tests may be modified in the following ways:**

1. Tests, which require essay answers, may be modified to short answers.
2. Short answer questions may be changed to multiple choice or the question may be simplified so the answer will reflect a basic understanding.
3. Tests, which use fill in the blank format, may be modified to include a few choices for each question, or a list of choices for all questions. This will allow the student to match or use visual clues.
4. Tests in the T/F or multiple choice format may be modified by rewording or clarifying statements into layman's or simplified terms. Multiple choice questions may have a reduced number of choices.

**C. Tests will be written in CICE office with assistance from a Learning Specialist.**

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### ***The Learning Specialist may:***

1. Read the test question to the student.
2. Paraphrase the test question without revealing any key words or definitions.
3. Transcribe the student's verbal answer.
4. Test length may be reduced and time allowed to complete test may be increased.

### **D. Assignments may be modified in the following ways:**

1. Assignments may be modified by reducing the amount of information required while maintaining general concepts.
2. Some assignments may be eliminated depending on the number of assignments required in the particular course.

### ***The Learning Specialist may:***

1. Use a question/answer format instead of essay/research format
2. Propose a reduction in the number of references required for an assignment
3. Assist with groups to ensure that student comprehends his/her role within the group
4. Require an extension on due dates due to the fact that some students may require additional time to process information
5. Formally summarize articles and assigned readings to isolate main points for the student
6. Use questioning techniques and paraphrasing to assist in student comprehension of an assignment

### **E. Evaluation:**

Is reflective of modified learning outcomes.

**NOTE:** Due to the possibility of documented medical issues, CICE students may require alternate methods of evaluation to be able to acquire and demonstrate the modified learning outcomes

### **Date:**

Wednesday, September 6, 2017

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