

**SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY**

**SAULT STE. MARIE, ONTARIO**



**COURSE OUTLINE**

**COURSE TITLE:** Baking Theory – Basic

**CODE NO. :** FDS142 **SEMESTER:** 1

**PROGRAM:** CULINARY SKILLS - CHEF TRAINING PROGRAM  
COOK APPRENTICES  
CULINARY MANAGEMENT PROGRAM

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**APPROVED:** "Penny Perrier" June/11

	CHAIR	DATE
<b>TOTAL CREDITS:</b>	2	
<b>PREREQUISITE(S):</b>	NONE	
<b>HOURS/WEEK:</b>	2	

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**I. COURSE DESCRIPTION:**

**To provide the student with an understanding of the requirements and skills for the baking industry, hotel, restaurant, and bakeries. Familiarity with techniques and products will help assist in your future purchasing decisions.**

**II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:**

Upon successful completion of this course, the student will demonstrate the ability to:

1. Demonstrate a working knowledge of **flour** production and application.  
Potential Elements of the Performance:
  - 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.
2. Demonstrate a working knowledge of types of **fat**.  
Potential Elements of the Performance:
  - 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.
3. Explain and understand the different types of **sugar** commodities.  
Potential Elements of the Performance:
  - 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.
4. Demonstrate a working knowledge of the use of **eggs** in the baking.
- Potential Elements of the Performance:
- 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.

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

Potential Elements of the Performance:

- 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.

State the recipe use of each.

6. Demonstrate a working knowledge of **salt** in baking.

Potential Elements of the Performance:

- 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,

7. Demonstrate a working knowledge of **leavening agents**.

Potential Elements of the Performance:

- 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
  - 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

8. Demonstrate a working knowledge of **chocolate** and **flavourings**.

Potential Elements of the Performance:

- 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.

**III. TOPICS:**

1. Flour production and application
2. Fats
3. Sugar commodities
4. Eggs in baking
5. Dairy products
6. Salt
7. Leavening agents
8. Chocolate

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:**

**Wayne Gisslen, Professional Cooking, 6<sup>th</sup> or 7th Edition**

**V. EVALUATION PROCESS/GRADING SYSTEM:**

Students will be graded as follows:

Theory test # 1	25%
Theory test # 2	25%
Final Assessment	<u>50%</u>
Total:	100%

**The following semester grades will be assigned to students in postsecondary courses:**

<u>Grade</u>	<u>Definition</u>	<u>Grade Point Equivalent</u>
A+	90 - 100%	4.00
A	80 - 89%	4.00
B	70 - 79%	3.00
C	60 - 69%	2.00
D	50 - 59 %	1.00
F (Fail)	49% or below	0.00
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field placement or non-graded subject areas.	
U	Unsatisfactory achievement in field placement or non-graded subject areas.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course	

without academic penalty

**VI. SPECIAL NOTES:**

Dress Code:

All students are required to wear their uniforms while in the Hospitality and Tourism Institute, both in and out of the classroom. **(Without proper uniform, classroom access will be denied)**

Attendance:

Sault College is committed to student success. There is a direct correlation between academic performance and class attendance; therefore, for the benefit of all its constituents, all students are encouraged to attend all of their scheduled learning and evaluation sessions. This implies arriving on time and remaining for the duration of the scheduled session.

**VII. COURSE OUTLINE ADDENDUM:**

The provisions contained in the addendum located on the portal form part of this course outline.