

SAULT COLLEGE OF APPLIED ARTS AND TECHNOLOGY

SAULT STE. MARIE, ONTARIO



Sault College

COURSE OUTLINE

COURSE TITLE: Baking Theory – Basic

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

PROGRAM: Culinary Skills – Chef Training
Culinary Management

AUTHOR: Peter E. Graf MBA

DATE: May 2007 **PREVIOUS OUTLINE DATED:** May 2006

APPROVED:

		_____	_____
		Rick Wing, Dean	DATE
TOTAL CREDITS:	2		
PREREQUISITE(S):	NONE		
HOURS/WEEK:	2		

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For additional information, please contact
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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 as
- 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, 6th 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)**

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your instructor and/or the Special Needs office. Visit Room E1101 or call Extension 2703 so that support services can be arranged for you.

Retention of course outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Communication:

The College considers **WebCT/LMS** as the primary channel of communication for each course. Regularly checking this software platform is critical as it will keep you directly connected with faculty and current course information. Success in this course may be directly related to your willingness to take advantage of the **Learning Management System** communication tool.

Plagiarism:

Students should refer to the definition of “academic dishonesty” in *Student Code of Conduct*. Students who engage in “academic dishonesty” will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course outline amendments:

The Professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.