SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE MARIE, ON

COURSE OUTLINE

Course Title: ***BAKE THEORY AND DEMONSTRATION***

Code No.: ***FDS135*** **Semester:** ***One***

Program: ***Chef Training and Apprentices***

Author: ***Rex Leeson***

Date: ***September 1998***

Previous Outline Date: ***September 1997***

Approved: _____ 980730
Dean **Date**

Total Credits: **Prerequisite(s):**
Length of Course: **Total Credit Hours:**

COURSE DESCRIPTION

To provide the student with an understanding of the requirements and skills for the baking industry, hotel, restaurant, and bakeries.

TOPICS

1. Flour production and Application
2. Types of Shortenings
3. Sugar Commodities
4. Eggs in Baking
5. Dairy Products
6. Uses of Salts
7. Leavening Agents
8. Chocolate and Flavourings

LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE:

1. *Flour Production and Application*

A. **Learning Outcomes**:
- student must understand the different types of flours and their uses

B. **Elements of the Performance**:

Upon successful completion the student will have the ability to:

Identify the botanical classification of wheat and rye.
- list the plants used in production of flour

Identify the classes and varieties of wheat and rye.
- provide background information on flours

Identify the parts of wheat berry.
- describe bran, germ, endosperm, describe the relationship of these parts

Define flour specifications and compositions.
- state the constituents of wheat flour: moisture, starch, protein, fat, minerals, enzymes, fibre and ash

State when to use:
- hard wheat flour

- high protein flour
- low protein flour
- whole wheat flour
- rye flour
- light rye flour
- medium rye flour
- dark rye flour
- soft flour
- regular cake flour
- pastry flour
- corn flour – white, yellow
- cornstarch
- high ratio cake flour

State proper storage conditions for flour(s).

List temperature, relative humidity (perishable ingredients):
- temperature of flour
- effect on performance
- moisture of flour
- effect on performance period for flours

State shelf life under proper storage conditions.

2. *Types of Shortenings:*

A. Learning Outcome

- student must understand the different types of shortenings and uses

B. Elements of the Performance

Upon successful completion the student will have the ability to:

List and identify the different types of shortening:
- all purpose shortening
- high ratio (emulsified)
- margarine
- lard
- butter
- oil
- blended
- animal shortening
- vegetable shortening

State the basic components of each shortening.

State the basic chemical and physical reactions of each shortening.

3. *Sugar Commodities:*

A. Learning Outcomes

- student must understand the different types of sugar commodities

B. Elements of the Performance

Upon successful completion the student will have the ability to:

List and identify different raw sugars.
- state their places of origin

List and identify the different types of refined sugar.
- describe the different types and grades of refined sugar
- state the use of each

List the uses of honey, syrup, molasses and glucose
- state the type of each
- state the use of each

4. *Eggs in Baking:*

A. Learning Outcome

- student will understand the uses of eggs in baking

B. Elements of the Performance

Upon successful completion the student will have the ability to:

List the uses of eggs.

Identify the different forms of eggs:
- fresh
- whole
- dried
- frozen, whole, separated

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. *Dairy Products:*

A. Learning Outcomes

- the student will understand the uses of dairy products in baking

B. Elements of the Performance

Upon successful completion the student will have the ability to:

List the uses of cream.

Identify the different kinds of cream:
- 35%- 40%
- 18%
- 10%

State the physical properties for each.

List the uses of milk.

Identify the different kinds of milk:
- homogenized
- fortified
- skimmed
- buttermilk

State the recipe use of each.
State the physical properties of each.

Recognize the different forms of milk:
- evaporated
- condensed
- dried

List the uses of cream and milk products.

Identify cream and milk by-products:
- skimmed milk powder
- whey powder
- baker's cheese

State the recipe use of each.

6. *Uses of Salts:*

A. **Learning Outcome**
- student will understand the different types of salts and its uses.

B. **Elements of the Performance**

Upon successful completion the student will have the ability to:

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.

7. *Leavening Agents:*

A. **Learning Outcomes**
- the student will understand the different types of leavening agents

B. **Elements of the Performance**

Upon successful completion the student will have the ability to:

State the uses of leavening agents in cake baking:
- baking powder
- baking soda
- ammonium compound

State the original source of each.

State the usage of each in baking.

State the effect of using each.

State the botanical classification of yeast.

State the micro-organism group to which yeast 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).

State the theory and use of fermentation:
- define the meaning of the word "fermentation"
- describe the process of chemical and physical change
- state the effects of temperature on 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. *Chocolate and Flavourings:*

A. Learning Outcomes

- the student will understand the different types of chocolate and flavourings

B. Elements of the Performance

Upon successful completion the student will have the ability to:

Identify the botanical classification of cocoa beans.
- explain the function of chocolate products

Identify the basic production of chocolate coating and chocolate products.
- explain the different tempering method of couverture

Identify natural, imitation, and artificial flavours.
- explain the method of obtaining essential oils and emulsions

EVALUATION:

Student's final grade will consist of the following components:

Three tests will be given. Approximate dates:
October
November
December

Each test will be out of 100%

GRADING SYSTEM:

Chef Training:

A+	90-100%
A	80- 89%
B	70- 79%
C	60- 69%
R	Repeat – under 59%

Apprentices:

A	85-100%
B	75- 84%
C	60- 74%
D	50- 59%
F	0 – 49% - Failure

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.

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, learning disabilities), you are encouraged to discuss required accommodations with the professor and/or contact the Special Needs Office; Room E1204, extension 493, 717 so that support services can be arranged for you.

Plagiarism:

Students should refer to the definition of "academic dishonesty" in the "Statement of Student Rights and Responsibilities". Students who engage in 'academic dishonesty' will receive and

automatic failure for that submission and/or other penalty, up to and including expulsion from the course, as may be decided by the professor.

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 post secondary institutions.

The professor reserves the right to modify the course as deemed necessary.