

SAULT COLLEGE OF APPLIED ARTS & TECHNOLOGY
SAULT STE. MARIE, ONTARIO

COURSE OUTLINE

Course Title: BAKING THEORY/DEMO

Code No.: FDS122

Program: CHEF TRAINING

Semester: ONE

Date: 1989 09 02

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New: X Revision:

APPROVED: 
Chairperson

Sept '89
Date

Course Name

Course Code

PHILOSOPHY/GOALS:

To provide the student with an understanding of the requirements for the baking industry, hotel, restaurants, bakeries, etc.

OBJECTIVES FOR MODULE 1: (1 HOUR)

TASK: Select baking ingredients according to required use and specifications and ensure quality, freshness and taste of product.

- Interpret reference materials and charts:
 - company specifications
 - government specifications
- Identify types of baking flours and their characteristics:
 - strong flours
 - soft flours
 - specialty flours
- Identify types of yeasts
- Identify the types and characteristics of sweetening products:
 - sugars
 - syrups
 - fondant
 - glucose
 - honey, etc.
- Identify the types and characteristics of fats used in baking
- Identify the types of egg products used in baking:
 - fresh
 - liquid
 - frozen
 - dried
- Identify types of milk used in baking:
 - fresh milk
 - dried milk
 - evaporated milk
 - cream

MODULE 1: (cont'd)

- Identify types and quality of flavouring ingredients:
 - extracts
 - spices
 - natural flavours
 - imitation/artificial flavours
- Store baking ingredients at the correct temperature and in an environment to maintain quality and prevent deterioration of product.

OBJECTIVES FOR MODULE 2: (1 HOUR)

TASK: Pastry Doughs

- Interpret recipe for:
 - amounts/volumes of ingredients
 - method of preparation
- Identify types and uses of pastry doughs:
 - pie dough
 - sugar dough
 - sweet paste
 - pies
 - tarts
- Select type and quality of flour according to gluten strength
- Select type of fat according to cost and qualifying taste
- Select utensils and equipment according to amounts/volumes of ingredients:
 - hand mixers
 - machine-type cutters
- Rub fat and flour to achieve the desired texture and quality in pie and pastry dough
- Cream fat and sugar to achieve the desired texture and quality in pastry dough and sweet paste
- Sequence the addition of other ingredients according to recipe specifications:
 - flour
 - flavouring
 - liquids

- Combine ingredients to achieve the qualities of specific pastry dough without toughening pastry dough
- Rest pastry dough in a cool place or refrigerator to improve its quality:
 - relax dough
 - firm dough
 - cover dough
- Roll pastry dough with a rolling pin on a smooth surface or board into predetermined shape, size and thickness
- Use only the required amount of pastry dough for desired product
- Dust with flour to prevent sticking
- Cut pastry dough with a pastry cutter into shapes and sizes.
- Line pastry dough into forms ensuring even thickness without any:
 - dents
 - folds
 - rips
- Fill pastry dough products with specific filling according to recipe:
 - butter tarts
 - fruit fillings
- Brush egg wash onto pastry dough to:
 - glaze dough
 - colour dough
 - secure double crust pies and prevent "bake out" of filling
- Bake pastry dough at predetermined temperature and for specific time to desired colour and full cooking
- Test pastry dough to ensure it is fully cooked:
 - shake
 - move in form
 - assess colour of pastry dough

OBJECTIVES FOR MODULE 3: (1 HOUR)

TASK: Tea Biscuits

- Interpret recipe for:
 - amounts/volumes of ingredients
 - method of preparation
- Select type and quality of flour according to gluten strength
- Select types of fat according to cost quality and taste
- Select utensils and equipment according to amounts/volumes of ingredients:
 - hand mixers
 - machine-type cutters
- Sift dry ingredients through a fine sieve to blend and thoroughly mix ingredients
- Rub/blend fat into dry ingredients to desired texture
- Dissolve flavouring ingredients, salt and sugar into cold liquid or eggs
- Mix cold liquid into blended ingredients to predetermined consistency:
 - soft
 - short
 - tender
 - slight "toughness"
- Rest dough to make it easier to handle:
 - relax dough
 - dry dough
 - cover dough
- Roll dough with a rolling pin on a smooth surface into pre-determined thickness
- Dust with flour to prevent sticking
- Cut dough with a pastry cutter into a specific shape and size with the minimum amount of waste
- Place on greased or lined pans or trays
- Brush egg wash onto tea biscuits to:
 - glaze tea biscuits
 - give tea biscuits rich brown colour

MODULE 3: cont'd

- Bake tea biscuits at predetermined temperature and for specific time to achieve desired colour and full cooking
- Test tea biscuits to ensure they are fully cooked:
 - check colour of tea biscuits
 - touch to assess spring back

MODULE 4 OBJECTIVES: (1 HOUR)

TASK: Muffins

- Interpret recipe for:
 - amounts/volumes of ingredients
 - method of preparation
- Select type and quality of flour according to gluten strength
- Select type of fat according to cost, quality, and taste
- Identify types of leavening agents:
 - baking soda
 - emulsifying agents
- Select utensils and equipment according to amounts/volumes of ingredients:
 - hand mixers
 - machine-type cutters
- Cream ingredients to thoroughly blend and aerate mixture
- Mix ingredients to specific consistency:
 - soft
 - light
 - aerated
- Sequence the addition of ingredients to prevent:
 - curdling
 - loss of aeration
- Fill lined muffin tins by:
 - hand
 - piping bag
 - scoop
- Bake muffins at predetermined temperature and for specific time to achieve the desired colour and full cooking
- Test muffins to ensure they are fully cooked:
 - check colour of muffins
 - touch to assess spring back

OBJECTIVES FOR MODULE 5: (1 HOUR)

TASK: Choux Paste

- Interpret recipe for:
 - amounts/volumes of ingredients
 - method of preparation
- Select type and quality of flour according to gluten strength
- Select type of fat according to cost, quality, and taste
- Select type of liquid according to cost, quality, and taste
- Select utensils and equipment according to amounts/volumes of ingredients:
 - hand mixers
 - machine-type cutters
- Boil liquid, fat, and flavouring to:
 - melt fat completely
 - dissolve flavourings
- Stir briefly and consistently when adding flour to form a paste while cooking at predetermined temperature and time:
 - paste will leave sides of the pan
 - forms ball
 - loss of wet appearance
 - bottom of pan shows white lining
 - allow to cool
- Beat in predetermined quantity of egg to:
 - thoroughly incorporate
 - prevent lumps
- Test dripping consistency of choux paste
- Pipe choux paste, using a piping bag and tube onto a greased or lined baking tray in predetermined shapes and sizes:
 - eclairs
 - swans
 - profiteroles, etc.
- Cook choux paste at predetermined temperature and for specific time to achieve the desired:
 - colour
 - dryness
 - full cooking

MODULE 5: (cont'd)

- Test choux pastry to ensure fully cooked:
 - colour
 - texture
- Fill the coat choux pastry with ingredients according to recipe requirements:
 - whipped cream
 - custards
 - fondant
 - chocolate
 - icing sugar dusting
 - ice cream

OBJECTIVES FOR MODULE 6: (2 HOURS)

TASK: Puff Pastry

- Interpret recipe for:
 - amounts/volumes of ingredients
 - method of preparation
- Select type and quality of flour according to gluten strength
- Select type of fat according to cost, quality and taste
- Identify various acids used to make the gluten in flour more elastic:
 - lemon juice
 - vinegar
 - cream of tartar
- Select utensils and equipment according to amount/volumes of ingredients:
 - hand mixers
 - machine-type cutters
- Portion and blend ingredients to form dough
- Knead dough to develop the gluten
- Rest dough in a cool area or refrigerate to:
 - relax gluten
 - lessen elasticity
 - make it easier to roll
- Cover dough to prevent drying out

MODULE 6: (cont'd)

- Roll dough with a rolling pin on a smooth surface or board into desired shape, size, and thickness
- Dust with flour to prevent sticking
- Brush off excess flour
- Place or spread fat at the predetermined consistency and thickness of dough
- Encase fat completely with dough
- Sequence the rolling and folding or turning of the dough to achieve the desired layers of fat
- Rest between turns
- Dust with flour to prevent sticking
- Brush off excess flour
- Roll and cut dough into predetermined shapes, sizes, and thickness
- Assemble puff pastry into specific items according to recipe specifications:
 - bouchies
 - vol-au-vent
 - turnovers, etc.
- Allow pastry to rest in a cool place to avoid excessive shrinkage
- Bake puff pastry at predetermined temperature and for specific time to achieve the desired:
 - colour
 - dryness
 - full cooking
- Test puff pastry to ensure that it is fully cooked to desired:
 - colour
 - texture

MODULE 7 OBJECTIVES: (2 HOURS)

TASK: Yeast Doughs

- Interpret recipe for:
 - amounts/volumes of ingredients
 - method of preparation
- Identify types of yeast dough:
 - sweet dough
 - bread dough
- Select type and quality of flour according to gluten strength
- Select type of fat according to cost, quality and taste
- Select type of yeast:
 - fresh yeast
 - "active dry yeast"
 - "instant dry yeast"
- Select utensils and equipment according to amounts/volumes of ingredients:
 - hand mixers
 - machine and hook
- Portion the mixed ingredients to form dough:
 - temperature of ingredients
 - amounts/volumes of ingredients
 - desired consistency
 - gluten contents
- Ferment dough at the predetermined temperature and for specific time to:
 - develop yeast
 - form leavening gases
- Cover dough
- Form dough into predetermined shapes and sizes
- Punch down dough
- Mould into desired shapes
- Place on greased-lined trays
- Brush dough with egg wash

MODULE 7: (cont'd)

- Proof dough at predetermined temperature, humidity, and time to:
 - double volume
 - prevent shining
- Bake yeast dough at predetermined temperature and for specific time to achieve the desired colour
- Test yeast dough to ensure fully cooked:
 - colour of dough
 - hollow sound when taped, e.g. bread

MODULE 8 OBJECTIVES: (1 HOUR)**TASK: Cake Batters**

- Interpret recipe for:
 - amounts/volumes of ingredients
 - method of preparation
- Identify types of cakes:
 - pound cake
 - spong cake
- Select type and quality of flour according to gluten strength
- Select type of fat according to cost, quality and taste
- Identify types of leavening agents:
 - baking soda
 - baking powder
 - emulsifying agents
- Select utensils and equipment according to amount/volume of ingredients:
 - hand mixers
 - machine-whippers or paddles
- Aerate ingredients at the correct temperature by:
 - whipping
 - beating
 - creaming
- Combine ingredients by folding or blending to predetermined consistency

MODULE 8: (cont'd)

- Sequence the addition of ingredients to prevent:
 - curdling
 - loss of aeration
- Fill and spread batter into grased or lined baking pans or trays with minimum loss of volume due to collapse of cells
- Bake cake batters at predetermined temperature and by specific time to achieve the desired colour and full cooking
- Test cake batter to ensure it is fully cooked:
 - check colour
 - touch to ensure spring back

MODULE 9 OBJECTIVES: (1 HOUR)

TASK: Baked Custard Desserts

- Interpret recipe for:
 - amounts/volumes of ingredients
 - method of preparation
- Identify types of custard desserts:
 - creme caramel
 - bread and butter puddings
- Select flavouring ingredients:
 - extracts
 - cooked sugar
 - syrups
 - citrus rind
- Select type of milk according to cost, quality and taste
- Select type and size of mould or container for custard desserts according to:
 - volume
 - individual
 - type of service
- Prepare mould or container in which to cook custard desserts:
 - grease and sugar to prevent sticking
 - add flavouring
 - add other ingredients

MODULE 9: (cont'd)

- Blend ingredients at predetermined temperature
- Strain egg custard through a fine china cap to separate liquid from solids
- Cook egg custard in a water bath at predetermined temperature and time
- Cover to prevent crust
- Test egg custard to ensure fully cooked

MODULE 10 OBJECTIVES: (1 HOUR)

TASK: Bavarian Creams

- Interpret recipe for:
 - amounts/volumes of ingredients
 - method of preparation
- Select flavouring ingredients for:
 - extracts
 - fruit puree
- Select type of mould for bavarian creams:
 - volume
 - individual
- Portion and blend ingredients to thoroughly combine
- Cook ingredients at predetermined temperature and for specific time to obtain:
 - consistency (e.g. coat back of a spoon)
 - smoothness
- Do not boil mixture
- Stir to prevent curdling
- Cool custard to predetermined temperature and consistency:
 - refrigerate
 - place on ice
 - stir occasionally
- Fold whipped ingredients gently into cooled custard with minimum disturbance of the cell structure and no loss of volume

- pipe
- pour
- Set bavarian creams by placing in refrigerator for predetermined length of time
- Unmould bavarian cream by placing mould in hot water with minimum loss of:
 - shape
 - firmness

MODULE 11 OBJECTIVES: (1 HOUR)**TASK: Fillings for Pies**

- Interpret recipe for pies and pastries:
 - amounts/volumes of ingredients
 - method of preparation
- Identify types of fillings:
 - creams, custards
 - fruits
 - fresh, frozen
 - canned, prepared
- Assess the quality of canned or prepared pie fillings for:
 - flavour
 - colour
 - ratio of fruit to sauce
- Select type of thickening agents for fruit filling that give clarity and brilliance to the fruit and a soft consistency to the sauce when cold
- Prepare fruits by washing, peeling, and cutting to remove:
 - skin
 - core
 - stem
 - pit
- Cook pie filling at predetermined temperature and for specific time to achieve the desired:
 - thickness
 - consistency
 - texture

MODULE 11: (cont'd)

- Thicken pie fillings by adding the predetermined amount and type of thickening agents to obtain the desired:
 - texture
 - consistency
 - smoothness
- Flavour pie fillings by adding predetermined amounts of flavouring ingredients:
 - sugar
 - spices
 - extracts or concentrates
- Fold whipped cream and egg whites into starch thickened or gelatine-thickened pie filling to ensure:
 - texture
 - consistency
 - lightness
- Fill pies and pastries with the appropriate filling according to recipe requirement

MODULE 12 OBJECTIVES: (1 HOUR)

TASK: Decorate Pastries, Cakes, and Desserts

- Interpret recipe for:
 - amounts/volumes of ingredients
 - method of preparation
- Identify types of coating and fillings:
 - icings
 - fondants
 - butter creams
 - whipped cream
 - glazes
- Identify types of decorating items:
 - glazed fruits
 - toasted and coloured nuts
 - chocolate products
- Select type of fat according to cost, quality, and taste for butter creams
- Select type of cream according to cost, quality and taste

- Select tools and equipment to decorate pastries, cakes and desserts
- Wire and whip ingredients to incorporate air and increase volume to a specific thickness
- Add flavouring ingredients and maintain temperature of ingredients
- Beat fondant to predetermined consistency
- Add colours/flavours
- Cost pastries, cakes and desserts with:
 - fondants
 - creams
 - icings
- Pipe cream ingredients into pastries, cakes and desserts according to recipe:
 - specific designs
 - rosettes
- Decorate pastries, cakes, and desserts according to recipe and/or picture:
 - cherries
 - chocolate shavings

EVALUATION:

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

First Test	-	100%
Second Test	-	100%
Third Test	-	100%
Demo/Quizzes	-	50%

350% - this will be averaged out of 100%

TEST DATES:

October ? 1989
November ? 1989
December ? 1989

GRADING:

A+ 95-100%
A 75- 95%
B 65- 74%
C 55- 64%
R Repeat