

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

COURSE OUTLINE

COURSE TITLE: BAKING THEORY/DEMO

CODE NO.: FDS122 SEMESTER: ONE

PROGRAM: CHEF TRAINING

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DATE: SEPTEMBER, 1993

New: \_\_\_\_\_ Revision: X

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DEAN, SCHOOL OF BUSINESS &  
HOSPITALITY

93-07-05  
DATE

BAKING THEORY/DEMO

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COURSE NAME

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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

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 dough:

- 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

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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

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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 predetermined 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

OBJECTIVES FOR MODULE 4: (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

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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 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 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.



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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 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)

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.

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MODULE 7: (cont'd)

Proof dough at pre-determined temperature, humidity, and time to:

- double volume
- prevent shining

Bake yeast dough at pre-determined temperature and for specific time to achieve the desired colour.

Test yeast dough to ensure fully cooked:

- colour of dough
- hollow sound when tapped, 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
- sponge 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.

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MODULE 8: (cont'd)

Sequence the addition of ingredients to prevent:

- curdling
- loss of aeration

Fill and spread batter into greased or lined baking pans or trays with minimum loss of volume due to collapse of cells.

Bake batters at pre-determined 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:

- cream caramel
- bread and butter puddings

Select flavouring ingredients:

- extracts
- cooked sugar
- syrups
- citrus rind

Select type of milk according to cost, quality and test.

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

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MODULE 9: (cont'd)

Blend ingredients at pre-determined temperature  
Strain egg custard through a fine china cap to separate liquid from solids.

Cook egg custard in a water bath at pre-determined temperature and time.

Cover to prevent crusting.

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 pre-determined 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 pre-determined 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.

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MODULE 10: (cont'd)

Portion mixture into moulds:

- pipe
- spoon
- pour

Set bavarian creams by placing in refrigerator for pre-determined 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 pre-determined temperature and for specific time to achieve the desired:

- thickness
- consistency
- texture
- flavour

Thicken pie fillings by adding the pre-determined amount and tpe of thickening agents to obtain the desired:

- texture
- consistency
- smoothness

Flavour pie fillings by adding pre-determined 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

**MODULE 12:** (cont'd)

- 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%  |

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350% - this will be averaged out of 100%

**TEST DATES:**

October ?  
November ?  
December ?

**GRADING:**

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