

# COURSE OUTLINE

**Course Name:** Aeration & Emulsification

**Department Head/Coordinator:** Department Head, Elizabeth Jang      **Effective Date:** January 28, 2013

School or Centre:	Department:
School of Hospitality	Baking and Pastry Arts

Course History:	Year of Study:
New Course	1st Year Post-secondary

<b>Name of Replacing Course (if applicable):</b>	<b>Course Number:</b>	BAKG 1245
	<b>Number of Credits:</b>	2

**Course Pre-requisites (if applicable):**

BAKG 1142, BAKG 1143, BAKG 1144, BAKG 1145, and BAKG 1241 (if in Combined Skills with ESL support program)

**Course Co-requisites (if applicable):**

**PLAR (Prior Learning Assessment & Recognition)**       No     Yes (details below):

**Course Description:**

Aeration and emulsification are two essential baking principles. This course allows the student to understand, apply and problem-solve these principles through the making of cakes, cookies, sponges, various pastry bases as well as icings, buttercreams, glazes and ganaches.

### **Instructional Strategies:**

Using an experiential learning approach, this course will also provide students with the opportunity to work independently and in cooperative teams to apply theory to practice and to reflect on their own performance and product outcomes. Demonstrations will be held to show the proper ways to achieve desired aeration and smooth emulsions, proper mixing methods, batter spreading techniques and product make up methods. Group discussions are facilitated to reflect on processes, product outcomes and learning.

### **Course Learning Outcomes:**

Students will be able to:

- Describe how air cells are properly developed and apply appropriate mixing methods to achieve desired aeration
- Describe different types of emulsions
- Produce a variety of smooth emulsions using proper and effective techniques
- Select ingredients and preparation methods to produce a variety of batters, fillings and icings
- Spread batters effectively and evenly
- Portion, make up, proof, bake and finish products according to specifications
- Prepare appropriate icing and practice basic piping techniques such as borders, rosettes, shells and roses
- Plan and execute daily production list to efficiently and confidently meet specific production criteria
- Evaluate product outcomes according to the theoretical principles and processes governing their production
- Apply mathematical principles to calculate formulas according to product specifications
- Adhere to industry health and safety standards in the preparation, handling and storage of products
- Comply with shop safety practices during production
- Practice professional etiquette and personal hygiene during production
- Work effectively as a team member during production
- Implement principles of bakery management and merchandising for inventory and cost control

### **Program Learning Outcomes:**

Upon completion of the program, students will be able to:

1. Adhere to industry health and safety standards in the preparation, handling and storage of baked goods
2. Comply with shop safety practices
3. Practice professional etiquette and personal hygiene as required by the food industry
4. Participate and communicate effectively as a team member
5. Implement principles of bakery management and merchandising for inventory and cost control
6. Plan and execute daily production lists to efficiently and confidently meet specific production criteria
7. Perform standard math functions to prepare baked goods
8. Prepare a variety of baked goods according to theoretical baking principles and processes which govern ingredient, methodology and environmental conditions
9. Evaluate product outcomes for consistency and accuracy in yield, flavor, texture and overall appearance according to product specifications and standards
10. Critically analyze and document performance to enhance comprehension and ongoing professional development

## Evaluation/Grading System

Grading System	Specify if 'Other':	Specify Passing Grade:
Letter Grades		B-

## Components and Weighting of the Assessment/Evaluation Plan:

Type	Percentage	Evaluation Plan (provide a brief explanation for each component especially if value exceeds 35%):
Lab Work	60	Instructor observation of daily hands-on skill development, organization and adherence to safety and sanitation practices
Quizzes/Tests	20	Theory quizzes
Participation	10	Self and peer evaluation, instructor evaluation, punctuality, attendance
Assignments	10	Online reflective journal
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<b>Total</b>		<b>100</b>

## Learning Environment/Type

Instruction Type	Hours Per Instruction Type	Comments
L - Classroom	10	
K - Shop/Teaching Kitchen	40	
<b>Enter Total Hours</b>	<b>50</b>	

## Resource Material(s):

Resources are items in addition to tuition that the student is responsible for purchasing. Course resource information will be supplied by the department/instructor.

**Course Topics and Sequence Covered:**

Aeration, air-cell development methods, emulsion, emulsification methods, ingredient characteristics and functions, specific gravity, batter spreading and panning, techniques to create different types of icings, fillings and glazes, baking of various types of batters, storage and handling; preparation of icing for practice piping; basic piping techniques; mathematical conversions, application of baker's percentage; interpretation of formulas; correct use of tools & equipment; supporting team members; writing and executing daily production lists; critical analysis of product outcomes; recording observations of performance and development; punctuality; health and safety rules and regulations; application of inventory and waste management

### **VCC Education and Education Support Policies**

There are a number of **Education** and **Education Support** policies that govern your educational experience at VCC, please familiarize yourself with them.

The policies are located on the VCC web site at:

**<http://www.vcc.ca/about-vcc/policies/index.cfm>**

To find out how this course transfers, visit the BC Transfer Guide at [www.bctransferguide.ca](http://www.bctransferguide.ca).

#### **FOR COMMITTEE USE ONLY**

<b>Date Approved by Education Council:</b>		<b>Date Approved by VCC Board (if applicable):</b>	
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