

Revised Fall 2016

# HRI 251

## Food and Beverage Cost Control

### COURSE OUTLINE

**Prerequisites:**  
**MTH 120**

### **Course Description:**

Presents methods of pre-cost and pre-control as applied to the menu, purchasing, receiving, storing, issuing, production, sales and service which result in achievement of an operation's profit potential. Emphasizes both manual and computerized approaches.

**Semester Credits: 3 Lecture Hours: 3 Lab/Recitation Hours: Select Hours**

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## Food and Beverage Cost Control

### Course Outcomes

#### **At the completion of this course, the student should be able to:**

Describe how math is used everyday in a foodservice operation both inside and outside of the kitchen.

1-2 Explain why the success of a foodservice operation depends on the use of math skills.

1-3 Explain how to add and subtract whole numbers.

1-4 Explain how to multiply and divide whole numbers.

#### **Chapter 2 - Measuring in the Professional Kitchen**

2-1 Explain the role of standardized measures in the success of foodservice operations.

2-2 Identify the two systems of measurement used by foodservice operations.

2-3 List the common units of measure for volume and for weight that are used in the professional kitchen.

2-4 Define measurement equivalents and explain how they are used in a professional kitchen.

2-5 Change a measurement given in one unit of measure to an equivalent measurement in another unit of measure.

2-6 Explain how to use professional kitchen tools to measure volume and weight.

2-7 Explain how time, temperature, and distance are measured in a foodservice operation.

#### **Chapter 3 - Calculating Measurements**

3-1 Add, subtract, multiply, and divide measurements involving whole numbers.

3-2 Convert between improper fractions and mixed numbers.

3-3 Add, subtract, multiply, and divide fractions.

3-4 Add, subtract, multiply, and divide decimals.

3-5 Convert between fractions and decimals.

3-6 Calculate the area of a rectangular surface and a circular surface.

3-7 Calculate the volume of a rectangular solid and a cylinder.

3-8 Explain how angles are used in food service.

3-9 Calculate the average (mean), median, and mode from a range of numbers.

3-10 Generate a data table and a graph.

#### **Chapter 4 - Converting Measurements and Scaling Recipes**

4-1 Convert measurements within the customary or metric measurement system.

4-2 Convert measurements between the customary and metric measurement systems.

4-3 Convert between volume and weight measurements.

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- 4-4 Identify the most common elements of a standardized recipe.
- 4-5 Calculate scaling factors based on recipe yield.
- 4-6 Calculate scaling factors based on product availability.
- 4-7 Explain how other elements of a recipe are affected when the yield is changed.

### **Chapter 5 - Calculating Percentages and Ratios**

- 5-1 Calculate percentages using a percentage circle.
- 5-2 Calculate yield percentages.
- 5-3 Explain how to conduct yield tests.
- 5-4 Calculate as-purchased quantities.
- 5-5 Calculate edible-portion quantities.
- 5-6 Calculate baker's percentages.
- 5-7 Create a formula from a recipe.
- 5-8 Explain how ratios are used in the professional kitchen.

### **Chapter 6 - Calculating Food Costs and Menu Prices**

- 6-1 Identify as-purchased costs on invoices.
- 6-2 Calculate as-purchased unit costs.
- 6-3 Calculate edible-portion unit costs.
- 6-4 Calculate as-served costs of menu items.
- 6-5 Calculate food cost percentages of menu items.
- 6-6 Calculate overall food cost percentages of foodservice operations.
- 6-7 Calculate menu prices using the food cost percentage pricing method.
- 6-8 Explain perceived value pricing.
- 6-9 Calculate menu prices based on the contribution margin pricing method.
- 6-10 Use pricing forms to help establish menu prices.

### **Chapter 7 - Calculating Revenue and Expenses**

- 7-1 Explain how a guest check is processed.
- 7-2 Calculate discounts, sales taxes, guest check totals, and gratuities.
- 7-3 Explain the purpose of a point-of-sale (POS) device.
- 7-4 Demonstrate how to return change to a customer who pays with cash.
- 7-5 Explain how daily sales revenue is calculated and recorded.
- 7-6 Describe the different expense categories of a foodservice operation.
- 7-7 Calculate the value of inventory.



- 7-8 Calculate the cost of goods sold.
- 7-9 Explain how payroll expenses are calculated.
- 7-10 Explain the difference between variable and fixed expenses.

### **Chapter 8 - Analyzing Profit and Loss**

- 8-1 Explain the difference between profit and loss.
- 8-2 Calculate percent increase of revenue and percent decrease of revenue.
- 8-3 List the ways a foodservice operation can minimize expenses.
- 8-4 Explain the purpose of a purchase specification.
- 8-5 Calculate gross profit and net profit.
- 8-6 Interpret a standard profit and loss statement.
- 8-7 Interpret a pie chart.
- 8-8 Calculate expenses and net profit as a percent of revenue.
- 8-9 Estimate the break-even point for a foodservice operation.
- 8-10 List topics that are discussed with a customer when estimating the cost of a special event.
- 8-11 Use the food cost percentage and contribution margin pricing methods to price special events.



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## Food and Beverage Cost Control

### Required Materials:

1. Supplies and/or tools:

- a. Culinary Math Principles and Applications Course book:  
9780826942111

Textbook:

- .Culinary Math Principles and Applications Course book:  
9780826942111

The following supplementary materials are available:

- 1.
- 2.



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## Food and Beverage Cost Control

Topical Description: (Outline chapters and sections to be covered in the book – may include timeline)

- **Chapter 1 Using math in foodservice operations**
  - How math is used in food service
  - Performing basic math calculations
- **Chapter 2 Measuring in the professional kitchen**
  - 2.1 Using standardized measures
  - 2.2 Measuring Volume
  - 2.3 Measuring weight
  - 2.4 Measuring time and temperature
  - 2.5 Measuring distance
- **Chapter 3 Calculating measurements**
  - 3.1 Whole numbers measurements
  - 3.2 Fraction measurements
  - 3.3 Decimal measurements
  - 3.4 Calculating area, volume, and angles
  - 3.5 Basic statistics
- **Chapter 4 Converting measurements and scaling recipes**
  - 4.1 Converting measurement s
  - 4.2 Scaling recipes
- **Chapter 5 Calculating percentages and rations**
  - 5.1 Calculation percentages
  - 5.2 Using yield percentages
  - 5.3 Using baker's percentages
  - 5.4 Calculating rations
  - 5.5 Using rations



- **Chapter 6 Calculating food cost and menu prices**
  - 6.1 Identifying as-purchased cost
  - 6.2 Calculating unit cost
  - 6.3 Calculation as served cost
  - 6.4 Calculation menu prices
  - 6.6 Using pricing forms
- **Chapter 7 Calculating revenue and expenses**
  - 7.1 Calculating revenue
  - 7.2 Calculating expenses
- **Chapter 8 Analyzing profit and loss**
  - 8.1 Making profit
  - 8.2 Standard profit and loss
  - 8.3 Special events profit and loss



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Notes to Instructors

(List information about optional topics, departmental exams, etc)

- 1.
- 2.
- 3.
- 4.

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