

**JOLIET JUNIOR COLLEGE
DEPARTMENT OF MATHEMATICS**

COURSE SYLLABUS

Course Prefix and Number	Math 091
Course Title	Math Principles for Food Service Occupations
Curriculum	Mathematics
Semester Hours	3
Lecture	3
Lab	0
Prerequisites	JJC Placement Test needed.

Catalog Description

This course is designed to teach the concepts and facts of arithmetic that the student lacks and to develop the computational skills necessary to live and function in a professional food service kitchen. Topics included are daily cash receipts, bank deposits, recipe and food costing, menu pricing, inventory, financial statements, personal tax, payroll, simple and compound interest. Not intended for transfer.

Course Objectives: See attached.

Prepared by:

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Date

Revised 8/09
Revised 1/05
Adopted 1/03

STUDENT MATERIALS:

A. Textbooks

Title: Culinary Math, 3rd edition, 2007

Author: Hill/Blocker

Publisher: John Wiley & Sons, Inc.

B. Other Required Materials

Scientific calculators allowed after completion of addition, subtraction, multiplication and division of fractions and decimals.

The comprehensive final exam will be administered in two parts. Calculators will not be allowed for one part of the exam, but will be for the other.

Other Course Requirements

None

Student Evaluation (Type of Grading)

The individual instructor will establish grading policy. A comprehensive final exam is to be given.

TOPICAL OUTLINE

<u>Week</u>	<u>Topic or Class Activity</u>
1	Basic Math Review — Whole Numbers: Add, Subtract, Multiply, and Divide
2	Fractions
3	Decimals
4	Percents
5	Customary and Metric Units of Measure
6	Basic Conversions of Units of Measure
7	Advanced Conversions of Units of Measure
8	Yield Percent
9	Applying Yield Percent in the Kitchen
10	Finding Cost
11	Edible Portion Cost
12	Recipe Costing
13	Ignoring Yield Percent in Ordering and Costing
14	Beverage Costing
15	Recipe Size Conversion
16	Kitchen Ratios

OBJECTIVES

Upon completion of this course you will be able to:

1. Add, subtract, multiply and divide with whole numbers.
2. Identify the place value of a whole number.
3. Convert a whole number to a fraction.
4. Identify the types of fractions.
5. Convert a mixed number to an improper fraction.
6. Convert fractions to decimals and decimals to fractions.
7. Solve an equation with fractions and decimals.
8. Convert a percent to a decimal or fraction and a decimal or fraction to a percent.
9. Solve word problems for the part, whole, or percent.
10. Round given numbers based on the situation.
11. List the names and abbreviations of the units of measure most commonly used in the food service industry.
12. Demonstrate understanding of the relative sizes of the measuring tools used in the food service industry.
13. Recall the equivalents of volume measures without references.
14. Recall the equivalents of weight measures without references.
15. Explain the difference between weight and volume measurements.
16. Define a fluid ounce and explain how it differs from an ounce.
17. Identify areas in food service where the metric system may be used.
18. Apply the equivalents for the metric system and the U.S. standard system as used in the kitchen.
19. Determine the appropriate metric measure when given an ingredient in U.S. standard measure.
20. Demonstrate understanding of the bridge method to convert units of measure within weight.
21. Demonstrate understanding of the bridge method to convert units of measure within volume.
22. Convert mixed units of measure to a single unit.
23. Convert a single unit of measure to mixed units of measure.
24. Identify when to use the Approximate Volume to Weight Chart without error.
25. Convert unit measures from weight to volume and volume to weight.
26. Calculate the yield percent of a non-fabricated fruit or vegetable applying the steps to a yield test.
27. Apply the terms *as-purchased quantity* (APQ), *edible portion quantity* (EPQ), and *trim* correctly.
28. Calculate the yield percent when given the weights of the as-purchase quantity and edible portion quantity of a fruit or vegetable.
29. Distinguish the times when it is appropriate to use the Approximate Yield of Fruits and Vegetables Chart.
30. Calculate the as-purchased quantity when the edible portion quantity is given.
31. Calculate the edible portion quantity when the as-purchased quantity is given.
32. Apply the cost-per-unit formula.
33. Solve for the total cost.
34. Apply the definition of cost as used by the food service industry.
35. Define edible portion and as-purchase cost.
36. Calculate the edible portion cost when the as-purchased cost is given for an ingredient.
37. Explain why edible portion cost will always be equal to or greater than as-purchased cost.
38. State the major reasons for a strong recipe pre-costing program.
39. Identify the components of a food cost form.
40. Cost out a recipe by completing a food cost form correctly.
41. Calculate the cost to produce a given recipe and the cost per portion.
42. Calculate an estimated selling price given an estimated food cost percent.
43. Identify the circumstances when the yield percent does not need to be taken into account when calculating the as-purchased quantity.
44. Identify the circumstances when the yield percent does not need to be taken into account when calculating the edible portion cost.
45. Calculate the number of U.S. standard measure servings of wine or spirits that can be poured from a quantity given in metric measure.
46. Calculate the beverage cost percent given the cost per beverage and the selling price.
47. Calculate the selling price for a beverage given the beverage cost percent and the cost per beverage.
48. Calculate a recipe conversion factor to make a desired quantity of a given recipe.
49. Compute the new ingredient quantities using the recipe conversion factor.
50. Convert difficult-to-measure quantities into easier-to-measure quantities.
51. Calculate ingredient quantities for a given ratio when the total to be made is known.
52. Calculate the quantities for the remaining ingredients in a given ration when the quantity of one of the ingredients is known.