



MASTER COURSE OUTLINE

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COURSE TITLE

Applied Math for Workforce Programs I

GENERAL COURSE INFORMATION

Dept.: MAP

Course Num: 117

(Formerly:)

CIP Code: 27.9998

Intent Code: 21

Program Code: 892

Credits: 1-5

Total Contact Hrs Per Qtr.: 11-55

Lecture Hrs: 11-55

Lab Hrs:

Other Hrs:

Distribution Designation:

COURSE DESCRIPTION (as it will appear in the catalog)

This course includes the study of basic arithmetic and algebraic concepts and operations including operations with integers, fractions, decimals and percents, order of operations, measurement, the metric system, algebraic expressions, formulas and simple linear equations. Students will complete exercises and problems providing practice in workforce program-specific applications. Credit cannot be earned in both MAP 117 and MATH 094.

PREREQUISITES

DVS 080 or placement into MATH 094

TEXTBOOK GUIDELINES

Appropriate text chosen by math faculty.

COURSE LEARNING OUTCOMES

Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills.

1. Uses properties of prime and composite numbers to find least common multiples and reduce fractions to lowest terms.
2. Applies appropriate methods add, subtract, multiply, divide, and find powers of integers, fractions, and decimals.
3. Uses order of operations to simplify arithmetic and algebraic expressions.
4. Solves application problems using ratios and proportion.
5. Solves application problems using percents.
6. Uses conversion factors when converting units of measure.
7. Uses formulas to compute length, area, and volume of geometric shapes.
8. Computes mean, median and mode of a data set.
9. Solves basic linear equations.

INSTITUTIONAL OUTCOMES

IO2 **Quantitative Reasoning:** Students will be able to reason mathematically using methods appropriate to the profession

COURSE CONTENT OUTLINE

1. Operations with Integers
2. Exponents and Order of Operations
3. Simplify Algebraic Expressions
4. Prime Factorization
5. Reduce Fractions
6. Multiply and Divide Fractions
7. Least Common Multiple
8. Add and Subtract Fractions
9. Order of Operations with Fractions
10. Mixed Numbers
11. One Step Equations
12. Two Step Equations
13. General Linear Equations
14. Equations with Decimals and Fractions
15. Averages
16. Probability and Plotting Points
17. Rates and Unit Rates
18. Proportions and Applications
19. Translate Percents and Applications
20. Percents as Proportion and Applications
21. Convert Units
22. Area, Volume, and Temperature
23. Pythagorean Theorem
24. Introduction to Polynomials
25. Scientific Notation

DEPARTMENTAL GUIDELINES *(optional)*

This course has been designed as an application-based Introduction to Algebra (MATH 094) course. By completing this course, students will have met the computation general education requirement for a workforce program certificate/degree OR students will continue to MATH098 depending on program or planned transfer major requirements. Students may not earn credit for both MAP 117 and MATH 094.

DIVISION CHAIR APPROVAL

DATE