

MATH 0500 FUNDAMENTALS OF MATHEMATICS

**3 Credits in house
Offered in Lab or Lecture Format**

Revised 3/26/93-0500 Name Change Fall 2006

SYLLABUS

I. WHOLE NUMBERS

- A. Place value and word names
- B. Expanded notation and place value
- C. Addition, subtraction, multiplication, and division
- D. Order of operations

II. PRIMES AND MULTIPLES

- A. Multiples
- B. Divisors and factors
- C. Divisibility tests: 2, 3, 5, 10
- D. Primes and composites
- E. Prime factorization
- F. Least common multiple

III. FRACTIONS AND MIXED NUMBERS

- A. Concept of a fraction
- B. Improper fractions to mixed numbers
- C. Mixed numbers to improper fractions
- D. Equivalent fractions
- E. Reducing fractions to lowest terms
- F. Multiplication with fractions and mixed numbers
- G. Division with fractions and mixed numbers
- H. Least common denominator
- I. Comparing fractions
- J. Addition with fractions and mixed numbers
- K. Subtraction with fractions and mixed numbers

IV. DECIMALS

- A. Place value and word names
- B. Expanded notation
- C. Changing decimals to fractions
- D. Changing fractions to decimals
- E. Comparing decimals
- F. Approximation by rounding
- G. Addition, subtraction, multiplication and division with decimals

V. RATIO AND PROPORTION

- A. Concept of ratio and proportion
- B. Solving a proportion for the unknown

VI. PERCENT

- A. Concept of percent
- B. Changing decimals to percents
- C. Changing percents to decimals
- D. Changing fractions to percents
- E. Changing percents to fractions
- F. Finding percentage
- G. Finding rate
- H. Finding base
- I. % increase/decrease problems

VII. DENOMINATE NUMBERS AND MEASUREMENT

- A. English units
- B. Metric units
- C. Conversion of units within each system
- D. Perimeter and circumference
- E. Areas of common geometric figures
- F. Volumes of common geometric figures

VIII. PROBLEM SOLVING

- A. Techniques for problem solving
- B. Problems involving whole numbers, fractions, decimals, percents, ratio and proportion, and measurement