OHLONE COLLEGE
Ohlone Community College District
OFFICIAL COURSE OUTLINE

I. **Description of Course:**

1. **Department/Course:** MATH - 153
2. **Title:** Intermediate Algebra
3. **Cross Reference:**
4. **Units:** 3
   Lec Hrs: 3
   Lab Hrs:
   Tot Hrs: 54.00
5. **Repeatability:** No
6. **Grade Options:** Grade Only (GR)
7. **Degree/Applicability:**
   Credit, Degree Applicable, Not Transferable (D)
8. **General Education:** District General Education (Plan A)
   IV-B. Analytical Thinking and Oral Communication IV-C. Math Proficiency
9. **Field Trips:** Not Required
10. **Requisites:**
    Prerequisite
    MATH 151 Algebra I or MATH 151A and B with a grade of C or better or equivalent or Placement Evaluation
12. **Catalog Description:**
    This course includes the study of relations and functions and their graphs, quadratic equations, parabolas, exponential and logarithmic functions, and sigma notation.
13. **Class Schedule Description:**
    Functions, graphs, quadratics, parabolas, exponentials, logs, sigma notation.
14. **Counselor Information:**
    Math 153 follows Math 151 or Math 151B and serves as a prerequisite for Math 156 (Math for Liberal Arts) or Math 159 (Statistics). Math 153 is a three-unit course intended to meet the intermediate algebra requirement for Liberal Arts and Humanities students. It is NOT appropriate for business or science majors, or students who may need finite mathematics, trigonometry, discrete math, or calculus.

II. **Student Learning Outcomes**

The student will:

1. Solve problems involving the mathematical concepts of function and functional inverse.
2. Demonstrate increased skill in setting up and solving problems requiring the application of mathematics (word problems).
3. Solve mathematical problems using concepts that may be useful for learning statistics: logarithms, sigma notation, and the binomial theorem.
4. Solve mathematical problems using concepts that may be useful for learning math for the liberal arts: functions, quadratic equations, parabolas, exponentials, logarithms, and sigma notation.

III. **Course Outline:**

A. Inequalities and Problem Solving

B. Exponents and Radicals

C. Relations, Functions, and Graphs

D. Quadratic Functions (Parabolas) and Equations

E. Inverse, Exponential, and Logarithmic Functions

F. Sequences, Series, Sigma Notation, and the Binomial Theorem

IV. **Course Assignments:**

A. Reading Assignments

1. Selected chapters in assigned textbook, per instructor

B. Projects, Activities, and other Assignments

C. Writing Assignments

1. Selected homework from course outline

V. **Methods of Evaluation:**

A. Exams
B. Quizzes
C. Homework

VI. **Methods of Instruction:**

A. Lecture
B. Discussion
C. Audiovisual
D. Self-Paced
E. Computer Assisted Instruction
F. Collaborative Learning

VII. **Textbooks:**

Recommended

1. Bittinger, Ellenbogen, and Johnson *Elementary and Intermediate Algebra: Concepts and Applications, Volume 2* Second Edition, Pearson Custom Publishing, 2007

Supplemental

VIII. **Supplies:**

A. Graph paper, $2