

OHLONE COLLEGE
Ohlone Community College District
OFFICIAL COURSE OUTLINE

I. Description of Course:

1. **Department/Course:** MATH - 152

2. **Title:** Algebra II

3. **Cross Reference:**

4. **Units:** 5

Lec Hrs: 5

Lab Hrs:

Tot Hrs: 90.00

5. **Repeatability:** No

6. **Grade Options:** Grade Only (GR)

7. **Degree/Applicability:**

Credit, Degree Applicable, Not Transferable (D)

8. **General Education:**

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 systems of equations, relations, functions and their graphs, conic sections, exponential and logarithmic functions, arithmetic and geometric sequences and series, and the binomial theorem.

13. **Class Schedule Description:**

Systems, graphs, conics, exponentials, logs, sequences, series, binomial theorem.

14. **Counselor Information:**

This is a prerequisite for trigonometry. The material covered in this course is more difficult and more advanced than that covered in Algebra I. If a student has taken two years of high school algebra in the recent past, ostensibly he/she has the background to take this course. One year of high school algebra would not usually be sufficient preparation.

II. Student Learning Outcomes

The student will:

1. Solve problems involving the mathematical concepts of function and functional inverse.
2. Show increased skill in setting up and solving applications.
3. Solve mathematical problems using concepts that may be useful for learning statistics: logarithms, sigma notation, and the binomial theorem.
4. Solve mathematical problems in topics useful for trigonometry: functions and inverses and their graphs, quadratic equations, and conic sections.

III. Course Outline:

A. Systems of Linear Equations and Problem Solving

B. Inequalities and Problem Solving

C. Exponents and Radicals

D. Relations, Functions and Graphs

E. Quadratic Functions, Equations, and Inequalities, including Geometric Applications

F. Inverse, Exponential, and Logarithmic Functions

G. Conic Sections

H. 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
2. Hawkes Learning System (This is the required textbook for the self-paced class). *Introductory Algebra (software)* First Edition, Hawkes Learning System, 2006 ISBN: 0-918091-26-8

Supplemental

VIII. Supplies:

A. Graph paper, \$2

CID 2229