

SAN DIEGO COMMUNITY COLLEGE DISTRICT
CONTINUING EDUCATION
COURSE OUTLINE

SECTION I

SUBJECT AREA AND COURSE NUMBER

HSDP 467B

COURSE TITLE

UNIFYING ALGEBRA/GEOMETRY 2

TYPE COURSE

NON FEE

HSDP

CATALOG COURSE DESCRIPTION

Semester two of a two semester course is designed to review and strengthen the concepts taught in both Algebra 1-2 and (Geometry 1-2). After completing the two courses, students will be prepared to enroll in Intermediate Algebra 1-2. In algebra, students develop an understanding of the symbolic language of mathematics and the sciences as well as algebraic skills and concepts to be used in a wide variety of problem-solving situations. In geometry students will learn to construct formal, logical arguments and proofs in geometric settings and problems. (FT)

LECTURE HOURS

90

LABORATORY HOURS

ADVISORY

1st year Algebra or Algebra Explorations 9 and Geometry.

RECOMMENDED SKILL LEVEL

Students should have proficiency in basic mathematics and pre-algebra skills.

INSTITUTIONAL STUDENT LEARNING OUTCOMES

1. Social Responsibility
SDCE students demonstrate interpersonal skills by learning and working cooperatively in a diverse environment.
2. Effective Communication
SDCE students demonstrate effective communication skills.

INSTITUTIONAL STUDENT LEARNING OUTCOMES (CONTINUED)

3. Critical Thinking

SDCE students critically process information, make decisions, and solve problems independently or cooperatively.

4. Personal and Professional Development

SDCE students pursue short term and life-long learning goals, mastering necessary skills and using resource management and self advocacy skills to cope with changing situations in their lives.

COURSE GOALS

Students will obtain skills which will prepare them for Intermediate Algebra 1-2.

COURSE OBJECTIVES

At the completion of the course students will have demonstrated, through a variety of measures, an ability to meet the following state content standards in mathematics (Algebra 1 and Geometry):

1. Add, subtract, multiply and divide monomials and polynomials. Solve multi step problems, including word problems, by using these techniques.
2. Apply basic factoring techniques to second and simple third degree polynomials.
3. Solve a quadratic equation by factoring or completing the square.
4. Know the quadratic formula and be familiar with its proof by completing the square.
5. Use the quadratic formula to find the roots of a second degree polynomial and to solve quadratic equations.
6. Use and know simple aspects of a logical argument.
7. Graph quadratic functions and know that their roots are the x intercepts.
8. Construct and judge the validity of a logical argument and give counterexamples to disprove a statement.
9. Prove that triangles are congruent or similar, and be able to use the concept of corresponding parts of congruent triangles.
10. Know and be able to use the triangle inequality theorem.
11. Prove and Use theorems involving the properties of parallel lines cut by a transversal, the properties of quadrilaterals, and the properties of circles.
12. Know, derive, and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures.
13. Determine whether a relation defined by a graph, a set of ordered pairs, or a symbolic expression is a function and justify conclusion.

SECTION II

COURSE CONTENT AND SCOPE

1. Polynomials
2. Quadratic Functions
3. Probability and Statistics

COURSE CONTENT AND SCOPE (CONTINUED)

4. Similar Triangles
5. Right Angles and Circles
6. Trigonometry

APPROPRIATE READINGS

Text such as:

MathMatters3: An Integrated Program 2006, Glencoe, McGraw Hill
Supplemental learning packets

WRITING ASSIGNMENTS

Students will demonstrate competency of the above objectives through successful completion of packet work and exams.

OUTSIDE ASSIGNMENTS

Supplemental work as determined by the individual needs (based upon classroom performance).

EVALUATION

Students will be given chapter exams, as well as midterm and final exam. Sixty percent or higher required to achieve competency.

METHOD OF INSTRUCTION

Lecture, individual and group activity, including cooperative learning, field trips. Supplemental computer work may be used.

TEXTS AND SUPPLIES

Text:

MathMatters3: An Integrated Program, Glencoe, McGraw Hill
Supplemental Materials from MathMatters3
SkillsTutor (internet program)

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PREPARED BY: Gary Gleckman DATE: January 23, 2008

DATA REVISED BY Instructional Services/SLO's Added DATE January 24, 2014

Instructors must meet all requirements stated in Policy 3100 (Student Rights, Responsibilities and Administrative Due Process), and the Attendance Policy set forth in the Continuing Education Catalog.

REFERENCES:

San Diego Community College District Policy 3100
California Community Colleges, Title 5, Section 55002
Continuing Education Catalog