

Mathematics Department

MATHEMATICS DEPARTMENT

49 -ALGEBRA-B (36 Weeks)

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|------------|--------|------------------|--|
| Credit: | 1 Unit | Grade Placement: | 10 |
| Semesters: | 2 | Prerequisite: | Algebra A or Instructor/Counselor approval |

5 -ALGEBRA 1 (36 Weeks) (or Algebra A & B. *Required for Graduation*)

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|------------|--------|------------------|--------------------------------------|
| Credit: | 1 Unit | Grade Placement: | 9,10,11,12 |
| Semesters: | 2 | Prerequisite: | "C" Average or Consent of Instructor |

31 -PLANE GEOMETRY (36 Weeks)

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|------------|--------|------------------|---|
| Credit: | 1 Unit | Grade Placement: | 10, 11, 12 |
| Semesters: | 2 | Prerequisite: | Algebra 1 with "C" Average or consent of instructor |

61 -ALGEBRA 2 (36 Weeks)

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|------------|--------|------------------|--|
| Credit: | 1 Unit | Grade Placement: | 11, 12 |
| Semesters: | 2 | Prerequisite: | Geometry, Algebra 1 & permission of instructor |

117 -SURVEY OF GEOMETRY (36 Weeks)

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|------------|--------|------------------|------------------------------------|
| Credit: | 1 Unit | Grade Placement: | 11, 12 |
| Semesters: | 1 | Prerequisite: | Algebra 1 or Algebra A & Algebra B |

62 -SURVEY OF ALGEBRA 2 (36 Weeks)

| | | | |
|------------|--------|------------------|--------------------------------------|
| Credit: | 1 Unit | Grade Placement: | 11, 12 |
| Semesters: | 1 | Prerequisite: | Plane Geometry or Survey of Geometry |

80 -TRIGONOMETRY (18 Weeks)

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|------------|----------|------------------|--|
| Credit: | .5 Units | Grade Placement: | 12 |
| Semesters: | 1 | Prerequisite: | Algebra 2 and Plane Geometry, or instructor permission |

81 -STATISTICS AND PROBABILITY (18 Weeks)

| | | | |
|------------|----------|------------------|-----------|
| Credit: | .5 Units | Grade Placement: | 11, 12 |
| Semesters: | 1 | Prerequisite: | Algebra 2 |

83 -CALCULUS (36 Weeks)

| | | | |
|------------|--------|------------------|--|
| Credit: | 1 Unit | Grade Placement: | 12 |
| Semesters: | 2 | Prerequisite: | Algebra 2 and Trigonometry, or instructor Permission |

335—MATH FOR LIFE

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|------------|--------|------------------|---------------------------------|
| Credit: | 1 Unit | Grade Placement: | 12 |
| Semesters: | 2 | Prerequisite: | Instructor/Counselor permission |

MATHEMATICS DEPARTMENT

On the precedent that Mathematics is fundamental to every individual, the Mathematics Department exists to enlighten, encourage, assist, strengthen, instill, stimulate, and develop desirable attitudes, appreciations, and practical aspects of Mathematics.

- 5 - ALGEBRA 1 (36 Weeks)
 Credit: 1 Unit Grade Placement: 9,10,11,12
 Semesters: 2 Prerequisite: "C" Average or Consent of Instructor

Course Description: Students will learn the basic structure and techniques in algebra and how to apply them to a variety of mathematical situations. Algebra I is designed to lay the groundwork for future study in higher mathematics.

AREAS OF STUDY:

- | | |
|--|----------------------------------|
| 1. Exponents | 9. Rational & irrational numbers |
| 2. Operations with integers | 10. Square roots & quadratics |
| 3. Solving equations and applications in problem solving | |
| 4. Working with polynomials and factoring | |
| 5. Operations and equations with algebraic fractions | |
| 6. Solving inequalities and applications to problem solving | |
| 7. Graphing lines and graphing systems of equations in two variables | |
| 8. Graphing inequalities | |

EXPECTATIONS FROM STUDENTS:

- | | |
|------------------------------|--|
| 1. Willingness to learn | 4. Take notes in class |
| 2. Responsible attitude | 5. Complete required work satisfactory |
| 3. Exhibit good study skills | |

- 31 - PLANE GEOMETRY (36 Weeks)
 Credit: 1 Unit Grade Placement: 10, 11, 12
 Semesters: 2 Prerequisite: Algebra I with "C" average or consent of instructor

Course Description: A study which deals with figures made up of points, lines, angles, and planes. This course integrates content with meaningful applications and connections to real life. Students become logical stressing proofs and measurements using algebraic computations.

- 61 - ALGEBRA 2 (36 Weeks)
 Credit: 1 Unit Grade Placement: 11, 12
 Semesters: 2 Prerequisite: Geometry, Algebra 1 with "C" average, or consent of Instructor

• **Graphing Calculator strongly recommended**

Course Description: The study of more advanced Algebraic topics, such as quadratic equations, imaginary numbers, progressions, inequalities, the binomial theorem, logarithms, and graphing calculators

- 117 - SURVEY OF GEOMETRY (36 Weeks)
 Credit: 1 Unit Grade Placement: 11, 12
 Semesters: 2 Prerequisite: Algebra 1 or Algebra B

Course Description: This course is designed for students not pursuing math-related careers. This is an informal approach to Geometry stressing applications and constructions rather than deductive proofs.

- 62 - SURVEY OF ALGEBRA 2 (36 Weeks)
 Credit: 1 Unit Grade Placement: 11, 12
 Semesters: 2 Prerequisite: Geometry or Survey of Geometry

Course Description: This course is designed for college bound students not pursuing math-related careers. Basic algebraic concepts are reviewed and extended with emphasis on A.C.T. problems.

- 80 - TRIGONOMETRY (18 Weeks)
 Credit: .5 Units Grade Placement: 12
 Semesters: 1 Prerequisite: Alg 2 and Plane Geometry with "C" average or consent of instructor

Course Description: Designed for students interested in pursuing Math or Science-related careers. Topics include angles and their trigonometric functions, identities, trigonometry equations, graphs and solutions of right and oblique triangles.

81 – STATISTICS & PROBABILITY

Credit: .5 Units Grade Placement: 11, 12
 Semesters: 1 Prerequisite: Algebra 2 with "C" average or consent of instructor

Course Description: This is a basic Statistics course that will prepare students for college programs in their specific disciplines. Upon completion of this course the student will be able to formulate questions that can be addressed with data and collect, organize, and display relevant data to answer them; Select and use appropriate statistical methods to analyze data; Develop and evaluate inferences and predictions that are based on data; and Understand and apply basic concepts of probability.

83 - CALCULUS (36 Weeks)

Credit: 1 Unit Grade Placement:
 12
 Semesters: 2 Prerequisite: Algebra 2 and Trigonometry with "C" average or consent of instructor

Course Description: Students whose first college math is expected to be Calculus are advised to take this course. Analytic Geometry is distributed throughout the course, and a knowledge of plane and solid geometry is necessary to work word problems. Some of the topics covered are functions and derivatives, differentiation of algebraic functions, applications of the derivative, differentials, the indefinite integral, and the definite integral, differentiation of transcendental functions, and methods of integration.

49 ALGEBRA B (36 Weeks)

Credit: 1 Unit Grade Placement: 10
 Semesters: 2 Prerequisite: Algebra A or Instructor/Counselor Approval

Course Description: This course is designed to be the second half of the Algebra 1 content. It is approximately the same content as would be covered during the second semester of the traditional Algebra 1 class. See the course description for Algebra 1 for more details

335 Math for Life (36 Weeks)

Credit: 1 Unit Grade Placement: 12
 Semesters: 2 Prerequisite: Instructor/Counselor approval

This course is designed to apply mathematics to real-life applications. Monthly budgeting, taxes, credit cards, apartment, home, car finance, insurance, etc. are among the topics covered.