

MATHEMATICS

MATHEMATICS –3.0 CREDITS REQUIRED FOR GRADUATION (INCLUDING 1.0 IN ALGEBRA I)

200 ALGEBRA 1 A

Level 0

1 credit

This course is the first course in college-preparatory math. This section is for the advanced college-preparatory student. Topics covered will be the same as those covered in Algebra 1, but at a faster pace and in greater depth. A graphing calculator is required (TI-83+/84 graphing calculator is recommended). Enrollment limited to 25

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.
5 Develop skills for productive use of technology and information resources.
6 Develop career, educational, and life planning skills.

201 ALGEBRA 1 B

Level 1

1 credit

This course is the first course in college-preparatory math. It is intended that this course be stringent in nature and has been designed for the college-preparatory student. Topics will include signed numbers, polynomials, linear and other equations, word problems and others. A calculator is required for this course (TI-30 is recommended). Enrollment limited to 15.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.
5 Develop skills for productive use of technology and information resources.

202 PRE-ALGEBRA

Level 2

½ credit

This course is designed for the student requiring a stronger math foundation in order to be successful in Algebra 1. Algebraic concepts will be introduced at an elementary level in order to create a strong base in logic and reasoning necessary to take Algebra 1 the following year. A calculator is required for this course. Enrollment limited to 15.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.
5 Develop skills for productive use of technology and information resources.

203 PRE-GEOMETRY

Level 2

½ credit

This course is designed to introduce students to basic geometry concepts. Course content will be made up of generalized topics of area, perimeter, volume, shape, reflections, rotations, and transformations, as well as topics required by state frameworks. A calculator is required for this course. Enrollment limited to 15.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.
5 Develop skills for productive use of technology and information resources.

204 BASIC SKILLS MATH**Level 3****1 credit**

For the student whose educational plan specifies a need for intensive work with the fundamentals of arithmetic. Emphasis will be on drill in the fundamentals and will incorporate life skill topics including the unit on the hand-held calculator. A calculator is necessary for this course. Enrollment limited to 12.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.

205 GEOMETRY H**Level 0****1 credit**

Prerequisite: C average in Algebra 1 A, or permission from department chair. This course may be taken in conjunction with Algebra 2 Honors, with permission from department chair. This section is designed for the advanced college-preparatory student. The material covered will be the same as covered in geometry, but at a faster pace and in greater depth. A graphing calculator is required. (TI-83+/84 graphing calculator is recommended) Enrollment limited to 25.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.
5 Develop skills for productive use of technology and information resources.
6 Develop career, educational, and life planning skills.

206 GEOMETRY**Level 1****1 credit**

Prerequisite: Algebra 1. This course follows Algebra 1 and will be taught with the rigor necessary to classify it as a college preparatory class. Includes topics such as triangles, polygons, perpendicular and parallel lines, proof-deductive and inductive reasoning, areas and volumes, and analytic geometry. A graphing calculator is required. (TI-83+/84 graphing calculator is recommended) Enrollment limited to 25.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.
5 Develop skills for productive use of technology and information resources.

207 ALGEBRA 2 H**Level 0****1 credit**

Prerequisite: C average in Geometry Honors or permission from department chair. This course is for the advanced college-preparatory student. The material covered will be the same as in algebra 2, but will be covered at a faster pace and in greater depth. Also included will be units on basic trigonometry. This may be taken in conjunction with geometry honors with department approval. A graphing calculator is required. (TI-83+ /84 is recommended) Enrollment limited to 25.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.
5 Develop skills for productive use of technology and information resources.
6 Develop career, educational, and life planning skills.

208 ALGEBRA 2**Level 1****1 credit**

Prerequisite: Algebra 1 and/or Geometry. The course is a logical extension of algebra 1, and may be taken before or after geometry. The content of the course includes signed numbers, factoring, simultaneous equations, algebraic fractions, logarithms, exponents, complex numbers, quadratic functions and others. A graphing calculator is required. (TI-83+/84 calculator is recommended) Enrollment limited to 25.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.
5 Develop skills for productive use of technology and information resources.

209 PRE-CALCULUS**Level 1****1 credit**

Prerequisite: Algebra 1, 2 and Geometry. Advanced math is the fourth in a series of college preparatory mathematics. It is designed to further the student's knowledge of mathematics beyond algebra and trigonometry. Topics are designed to help college bound students prepare for courses in analytic geometry, matrices, determinants, limits, continuity, etc., as well as a review of the basic algebra and geometry. The TI-84+ graphing calculator is required. Enrollment limited to 25.

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1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.
5 Develop skills for productive use of technology and information resources.
6 Develop career, educational, and life planning skills.

210 STATISTICS**Level 1****Grades 11-12****½ credit**

Prerequisite: Algebra 1. A first course in statistics and basic probability concepts. Emphasis is on applications throughout the course. Students will learn to read, write and speak effectively with statistical concepts. It is expected that students will have the following skills: rounding numbers, calculating percentages, converting between decimals and percentages, converting between fractions and decimals, using powers and roots, using formulas – plugging in numbers and solving for the missing variable, creating graphs. Enrollment limited to 25.

Student Learning Expectations
1 Develop skills in literacy across content areas.
2 Develop critical thinking skills across the content areas.
3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.
5 Develop skills for productive use of technology and information resources.

211 PRE-CALCULUS H**Level 0****1 credit**

Prerequisite: C average in Algebra 2 honors, or permission from math department chair. This is the fourth course in the college preparatory honors program. It is designed to further the talents of advanced mathematics students. It will deal with topics that will be of use to students in post secondary courses. Topics shall include a review of trigonometry, functions and limits and a strong introduction to calculus. The graphing calculator is required. Enrollment limited to 25.

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212 AP CALCULUS**Level 0****1 credit**

Prerequisite: C average in Pre-Calculus. This course is intended as a fifth math course for students planning to study math or related subjects at the college level. Prepares students for entry into college calculus courses and possibly allow students to test out of one or two semesters of college calculus. The advanced placement test will be an option to the student at the end of the course. This option is at the student's own expense and will be given at the school. The graphing calculator is required for this course.

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4 Develop communication skills across content areas.
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6 Develop career, educational, and life planning skills.

213 STATISTICS: RUNNING START Grades 11-12 Level 0 ½ credit

Prerequisite: Algebra 2. This is a college level statistics course offered in conjunction with NHCTC. Students can earn college credit in addition to ½ credit toward graduation. Statistical topics covered include measures of central tendencies, various statistical graphs, probability theorems, and higher level statistics. Enrollment limited to 20.

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214 INDEPENDENT STUDY Level 0 1 credit

Prerequisite: four years of mathematics, including calculus. For the student who wishes to pursue further math studies. The content is to be determined via conferences with the student and instructor. All work will be done on an individual basis and on a time schedule set up by the instructor.

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215 CONSUMER MATH Level 2 & 3 ½ credit

Prerequisite: Passing grade in Algebra 1. “Real life” math concepts, including banking, discounts, percentages, credit cards, and insurance, etc., will be covered, along with review of concepts already learned. Students who have passed Algebra 2 are not eligible for this course. Enrollment limited to 18.

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1 Develop skills in literacy across content areas.
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3 Develop problem-solving skills across content areas.
4 Develop communication skills across content areas.
5 Develop skills for productive use of technology and information resources.

220 INDIVIDUALIZED MATH SKILLS Level 3 1 credit

This is a modified level 3 course, designed for students whose identified needs are not being met by the course outlines or time restrictions of current course offerings. Students are admitted only with permission from the math department chair. Topics that may be included: money, shopping, using a calculator, writing checks, ordering from a menu and totaling a bill, bank accounts budgeting and paychecks. Enrollment limited to 12.

Student Learning Expectations – PER DESIGN

216 & 217 ACCELERATED MATH 1 & 2 ½ credit

This course is an individualized math program for students who demonstrate gaps in skill development in math. Course work is designed to fit individual needs. **This course does not count as one of the required math courses**, but can be used as an elective credit. Enrollment limited to 12.

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See description under Industrial Technology.

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