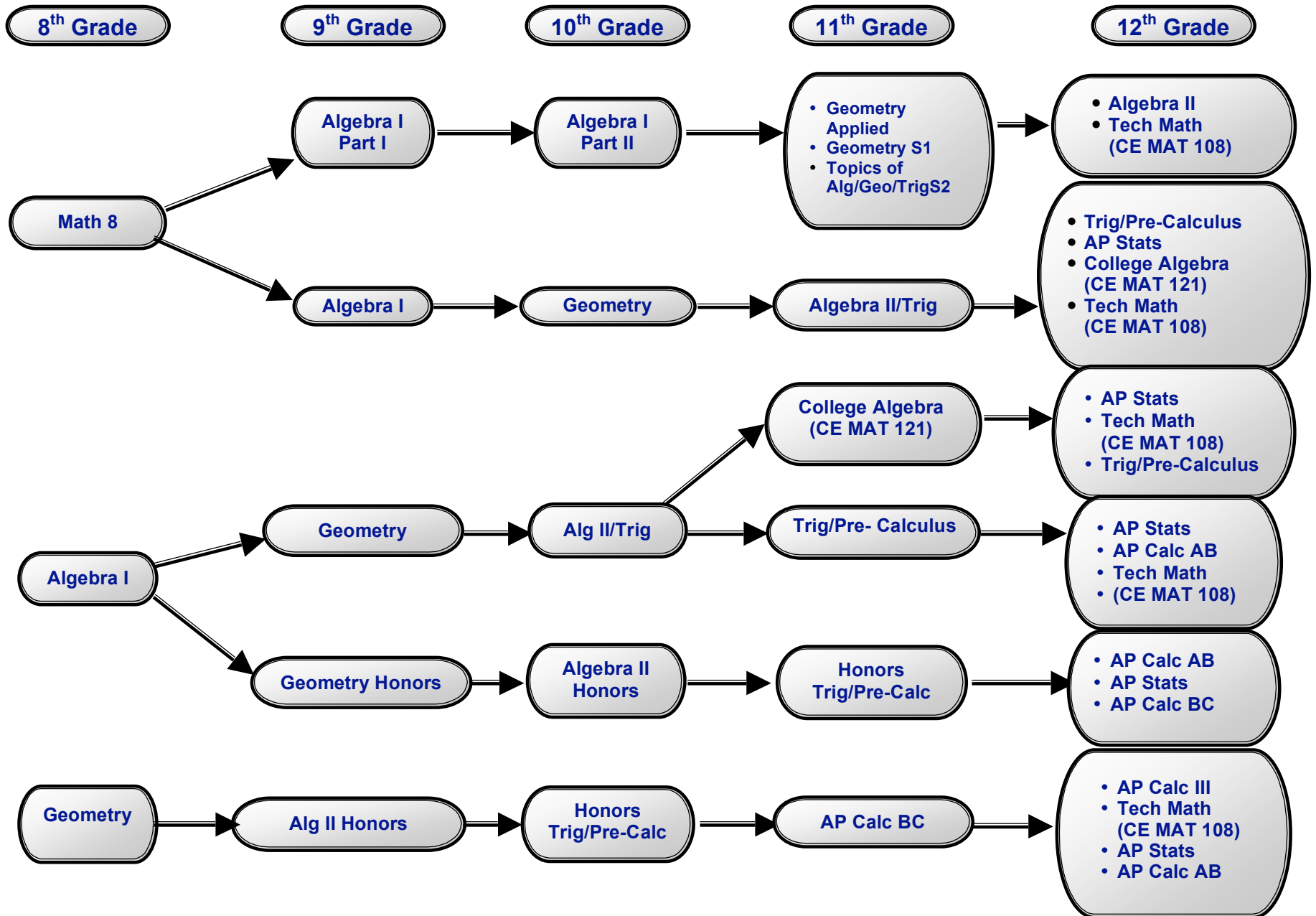


Mathematics Flow Chart

With teacher approval, students may take Geometry and Algebra II simultaneously leading to AP Calc AB/BC as a senior.



MATHEMATICS

Department Chair: Roger Miller

Course Offerings

Grade 9	<ul style="list-style-type: none">• Algebra I Part I• Algebra I• Algebra II/Trig• Algebra II Honors• AP Calculus BC	<ul style="list-style-type: none">• Geometry• Geometry Honors• Trig/Pre-Calculus• Trig/Pre-Calculus Honors
Grade 10	<ul style="list-style-type: none">• Algebra I Part I• Algebra I Part II• Algebra I• Algebra II/Trigonometry• Algebra II Honors	<ul style="list-style-type: none">• CE MAT 121 College Algebra• AP Calculus BC• Geometry• Trig/Pre-Calculus• Trig/Pre-Calculus Honors
Grade 11	<ul style="list-style-type: none">• Algebra I Part I• Algebra I Part II• AP Calculus BC• Algebra II/Trigonometry• Algebra II Honors• Applied Geometry S1	<ul style="list-style-type: none">• CE MAT 121 College Algebra• Geometry• Trig/Pre-Calculus• Trig/Pre-Calculus Honors• Topics of Algebra/Geometry/Trigonometry
Grade 12	<ul style="list-style-type: none">• AP Calculus III• AP Calculus BC• Algebra II	<ul style="list-style-type: none">• Algebra II/Trig• CE MAT 121 College Algebra• Trig/Pre-Calculus

Normal supplies will be needed in addition to a graphing calculator in some of the math courses. It is highly recommended that students who plan to continue in math purchase a TI83 Plus/TI84 or TI 84/NSpire (recommended). The TI 84 NSpire is a 2 in 1 calculator, which will serve as the last calculator you will buy for high school and beyond.

Course Descriptions

60380S1 & 60380S2 Algebra I Part I



Year: 1.0 credit

Grade: 9, 10

Prerequisite: Teacher recommendation.

Fee: Graphing Calculator TI-84 or TI-84 NSpire (recommended).

Algebra I Part I will require two-year commitment from the student. The course is designed for those who require extra time to become proficient in the Algebra math standards. If you have concerns or needs in the understanding of pre-algebra and number sense, then this is the course for you. This two-year course will review basic math skills from 8th grade, and move at a slower pace than the traditional Algebra I course. After completing Part I, the student will take Algebra I Part II.

This course will cover topics that include properties of algebra, solving and graphing linear equations, writing linear equations and inequalities, and graphing linear inequalities. Method of instruction includes the computer-based program "I Can Learn."

60385S1 & 60385S2 Algebra I Part 2



Year: 1.0 credit

Grades: 10, 11

Prerequisite: Algebra I Part I; teacher recommendation and signature.

Fee: Graphing Calculator TI-84 or TI-84 NSpire (recommended).

Students study the second half of Algebra I Part I, continuing their work with variables, real numbers, first and second degree equations and inequalities, factoring, polynomials, radicals, and graphing. Method of instruction includes the computer-based program "I Can Learn."

60400S1 & 60400S2 Algebra I



Year: 1.0 credit

Grade: 9, 10

Prerequisite: Teacher recommendation and signature

Fee: Graphing Calculator TI-84 or TI-84 NSpire (recommended).

This course will cover topics that include: manipulation of algebraic equations and inequalities; appropriate order of operations; application of linear models; quadratic and variation models; graphing linear, quadratic, and exponential functions; polynomials, factoring, and radicals; representation of data and utilization of ratios; proportions; percents; measurements; similarity; and probability in the context of real world problems. Integration of some Geometry topics may be introduced. This course is designed for students with average or better basic math skills. If your math skills are below average, then you should take Algebra I Part 1.

60475S1 & 60475S2 Geometry



Year: 1.0 credit

Grade: 9, 10, 11

Prerequisite: Teacher recommendation and signature.

Fee: Graphing Calculator TI-84 or TI-84 NSpire (recommended).

Geometry includes: inductive and deductive reasoning; properties of triangles, quadrilaterals, circles; triangle congruencies; transformations; area; volume; perimeter, and surface area. Other topics include coordinate geometry; capacity, similarity; relationships between triangles; quadrilaterals; polygons. A study of right triangle trigonometry and relationships will be included. Applications of real-world context with discovery will be used to apply geometric concepts. The course relies on Algebra I review. The course is for designed for students with at least average algebra skills. If your skills are below average, you should take Algebra I or Algebra I Part I.

60450S1 & 60450S2 Geometry Honors



Year: 1.0

Grade: 9

Prerequisite: Successful completion of Alg.I with a grade of A or B. Teacher recommendation & signature is required.

Fee: Graphing Calculator TI-84 or TI-84 NSpire (recommended).

Geometry is an accelerated geometry course for students who want a challenging, fast paced math course. In addition to the topics in Geometry, the honors course will place an emphasis on proof of geometric and algebraic properties and apply real world applications to geometric concepts. An audition test may be required for honors-level ability.

60590S1 & 60590S2 Algebra II/Trig



Year: 1.0

Grade: 9, 10, 11

Prerequisite: Successful completion of Algebra I and Geometry; teacher recommendation & signature.

Fee: Graphing Calculator TI-84 or TI-84 NSpire (recommended).

This course will integrate the topics of advanced functions, linear systems, matrix operations, advanced probability and statistics, rational, exponential and logarithmic functions, right triangle trigonometry, periodic functions, quadratic models, conic sections, sequences and series, as well as early trig relations and identities.

60550S1 & 60550S2 Algebra II Honors



Year: 1.0

Grade: 9, 10, 11

Prerequisite: Successful completion of Algebra I and Geometry; teacher recommendation & signature.

Fee: Graphing Calculator TI-84 or TI-84 NSpire (recommended).

Algebra II/ Trig Honors is an accelerated Algebra II course for students who want a challenging, fast-paced math course and intend to attend college in a math – or – science related major. Students who plan to take Advanced Placement Calculus should take this course. This course will integrate the topics of advanced functions, linear systems, matrix operations, advanced probability and statistics, rational, exponential and logarithmic functions, right triangle trigonometry, periodic functions, quadratic models, conic sections, sequences and series, as well as early trig relations and identities. A pre-test audition for honors-level ability and aptitude may be required.

60752S1 & 60752S2 Honors Trig/Pre-Calc **Year:** 1.0 credit**Grade:** 10, 11**Prerequisite:** Teacher recommendation & signature.**Fees:** Legend recommends the TI/84 "NSpire" Graphing Calculator. This is a 2 in 1 calculator which will serve as the last calculator you will buy for high school and beyond.**Note:** Students who have completed Algebra 2 and Honors Geometry will take Trig/Pre-Calc or College Algebra/Trig. Students who have completed Honors Geometry but not Algebra 2 will take Algebra 2

This course covers the study of trigonometric and circular functions and their applications, analytical geometry, and other advanced analytical topics to prepare for the study of Calculus.

60611S1 & 60611S2 Trig/Pre-Calculus **Year:** 1.0 credit**Grade:** 9, 10, 11**Prerequisite:** Teacher recommendation & signature.**Fee:** Graphing Calculator TI-84 or TI-84 NSpire (recommended).**Note:** Students who have completed Algebra II and Honors Geometry will take Trig/Pre-Calc or College Algebra/Trig. Students who have completed Honors Geometry but not Algebra 2 will take Algebra 2

This course covers the study of trigonometric and circular functions and their applications, analytical geometry, and other advanced analytical topics to prepare for the study of Calculus.

60625S1 Applied Geometry **Year:** 0.5 credit (1st Semester)**Grade:** 10, 11**Prerequisite:** Algebra I or equivalent.

The focus of this course is geometric foundations, measurement, and applications. Students taking this course will use a variety of tools and techniques to communicate the reasoning involved in solving problems.

**60340S2 Topics of Algebra/
Geometry/Trigonometry****Year:** 0.5 credit**Grade:** 10, 11**Prerequisite:** Applied Geometry or teacher recommendation.**Expenses:** **Fee:** Graphing Calculator TI-84 or TI-84 NSpire (recommended).

This course is an extension of algebra and applied geometry and will include major concepts of trigonometry. Students will study test taking strategies.

60650S1 & 60650S2 AP Calculus BC **Year:** 1.0 credit**Grade:** 9, 10, 11**Prerequisite:** Honors PreCalculus/ Calculus A and/or teacher recommendation.**Fee:** AP Exam \$86, Graphing Calculator TI83 Plus/TI-84 or TI-84 NSpire (recommended).

Major topics covered include differentiation, integration, and problem solving involving calculus concepts. This course is the equivalent of two semesters college calculus course and leads to the national AP exam in May.

69030S1 & 69030S2 CE MAT121 College Algebra **Year:** 1.0 credit**Grade:** 11**Prerequisite:** Algebra II/Trig with a grade of C or higher or teacher recommendation**Fee:** Graphing Calculator TI83 Plus/TI-84 or TI-84 NSpire (recommended).

This course is for the college bound student and will cover algebra and trigonometry concepts, functions, graphs and applications.

40450 Math Tutor**Year:** 0.5 credit (elective credit)**Grade:** 11**Prerequisite:** Teacher recommendation

This course is for students with an A in Algebra II or above and can provide help in Algebra and Algebra II classes as a peer tutor.