MATHEMATICS
2025-2026

Prerequisites and corequisites are listed below any course where applicable. Please pay close attention and select courses accordingly.

Code	Title	Ability Level	Eligible Grade Levels	Credit	Pathway(s)
3020	**Algebra 1** Prereq: Teacher Rec	CP	9	1.0	STEM
3023	**Honors Algebra 1** Prereq: Qualifying placement scores and Teacher Rec	H	9	1.0	STEM
3030	**Geometry** Prereq: Alg 1 and Teacher Rec	CP	9, 10	1.0	STEM
3033	**Honors Geometry** Prereq: Alg 1 or Hon Alg 1 and Teacher Rec	H	9, 10	1.0	STEM
3050	**Algebra 2** Prereq: Geometry and Teacher Rec	CP	10, 11	1.0	STEM
3053	**Honors Algebra 2** Pre or coreq: Hon Geom and Teacher Rec	H	9, 10, 11	1.0	STEM
3054	**Advanced Quantitative Reasoning** Prereq: Alg 1, Geometry and Teacher Rec	CP	11, 12	1.0	STEM
3040	**Probability and Statistics** Pre or coreq: Alg 2, Hon Alg 2 or AQR and Teacher Rec	CP	10, 11, 12	1.0	AHC BLF HHS STEM
3044	**AP Statistics** Prereq: Alg 2 or Hon Alg 2 and Teacher Rec	AP	10, 11, 12	1.0	AHC BLF HHS STEM
3061	**Precalculus** Prereq: Alg 2 or Hon Alg 2 and Teacher Rec	CP	11, 12	1.0	AHC BLF HHS STEM
3063	**Honors Precalculus** Prereq: Hon Alg 2 and Teacher Rec	H	10, 11, 12	1.0	AHC BLF HHS STEM
3070	**Honors Calculus** Prereq: Precalc or Hon Precalc and Teacher Rec	H	11, 12	1.0	AHC BLF HHS STEM
3073	**AP Calculus AB** Prereq: Hon Precalc and Teacher Rec	AP	11, 12	1.0	AHC BLF HHS STEM
3074	**AP Calculus BC** Prereq: Hon Precalc and Teacher Rec	AP	11, 12	1.0	AHC BLF HHS STEM
3080	**Topics of Math** Prereq: Alg 2, Hon Alg 2 or AQR and Teacher Rec	CP	11, 12	1.0	STEM
23021SIN	**College Algebra** Prereq: Alg 2 or Hon Alg 2	CCP	11, 12	1.0	STEM

Ability Level: AP = Advanced Placement, CP = College Prep, H = Honors, N = Not Grouped, CCP = College Credit Plus
Pathways: AHC = Arts, Humanities, and Communication BLF = Business, Law, and Finance HHS = Health and Human Services STEM = Science, Technology, Engineering, and Math

***This course is linked with another course that must also be selected. See corequisite information below.**

Grade levels listed in course descriptions are guidelines only and may vary based upon teacher recommendation.

3020 Algebra 1

- Grade Levels: 9
- Credit: 1.0
- Length: Year
- Prerequisite: Teacher Recommendation
- Corequisite: Not applicable
- Algebra 1 is the first course in the three course high school core curriculum sequence. In this course the main focus is on linear, exponential and quadratic equations. Topics to be covered include: the relationship between quantities, linear and quadratic reasoning with equations and graphs, exponential equations, transformation of quadratic equations, and descriptive statistics. Upon successful completion of this course, students should enroll in Geometry.
- Some sections of this class are being developed specifically to provide additional support to students who may need it. Students will be placed based upon teacher recommendation.

3023 Honors Algebra I

- Grade Levels: 9
- Credit: 1.0
- Length: Year
- Prerequisite: Qualifying placement scores and Teacher Recommendation
- Corequisite: Not applicable
- Honors Algebra 1 is the first course in the three course high school core curriculum sequence. In this course the main focus is on linear, exponential and quadratic equations. Topics to be covered include: the relationship between quantities, linear and quadratic reasoning with equations and graphs, exponential equations, transformation of quadratic equations, and descriptive statistics. Upon successful completion of this course, students should enroll in Honors Geometry.
- This course is designed for students that would like to reach Calculus during their senior year of high school. In order to do so, students should plan to enroll in Honors Geometry and Honors Algebra 2 during their sophomore year.

3030 Geometry

- Grade Levels: 9, 10
- Credit: 1.0
- Length: Year
- Prerequisite: Algebra 1 and Teacher Recommendation
- Corequisite: Not applicable
- Geometry is the second course in the three course high school core curriculum sequence. This course focuses on proving and applying theorems of triangles, angles, and lines. Topics to be covered include: right triangle trigonometry, formal and informal proofs, coordinate geometry, circles, parallel and perpendicular lines, and probability. Upon successful completion of this course, students should enroll in Algebra 2 or Advanced Quantitative Reasoning.

- Some sections of this class are being developed specifically to provide additional support to students who may need it. Students will be placed based upon teacher recommendation.

3033 Honors Geometry
- Grade Levels: 9, 10
- Credit: 1.0
- Length: Year
- Prerequisite: Honors Algebra 1 or 3020 Algebra 1, and Teacher Recommendation
- Corequisite: Not applicable
- Student eligibility for this course is based on a high level of previous mathematical achievement and a strong teacher recommendation. This is the second course in the three course high school core curriculum sequence. This course focuses on proving and applying theorems of triangles, angles, and lines. Topics to be covered include: right triangle trigonometry, formal and informal proofs, coordinate geometry, circles, parallel and perpendicular lines, and probability. Upon successful completion of this course, students should enroll in Honors Algebra 2.

3050 Algebra 2
- Grade Levels: 10, 11
- Credit: 1.0
- Length: Year
- Prerequisite: 3030 Geometry
- Corequisite: Not applicable
- Algebra 2 is the third course in the three course high school core curriculum sequence. This course focuses on functions of all varieties. Topics include: polynomial, trigonometric, exponential and logarithmic functions, complex numbers, systems and quadratics. Upon successful completion of this course, student should consider enrolling in Precalculus, Topics of Math, Probability and Statistics or CCP College Algebra.

3053 Honors Algebra 2
- Grade Levels: 9, 10, 11
- Credit: 1.0
- Length: Year
- Prerequisite or corequisite: 3033 Honors Geometry and Teacher Recommendation
- Corequisite: Not applicable
- Student eligibility for this course is based on a high level of previous mathematical achievement and a strong teacher recommendation. Honors Algebra 2 is the third course in the three course high school core curriculum sequence. This course focuses on functions of all varieties. Topics include: polynomial, trigonometric, exponential and logarithmic functions, rational expressions, complex numbers, and systems and quadratics. Upon successful completion of this course, student should consider enrolling in Honors Precalculus, Precalculus, and/or AP Statistics, and/or Probability and Statistics.

3054 Advanced Quantitative Reasoning (AQR)
- Grade Levels: 11, 12
- Credit: 1.0
- Length: Year
- Prerequisite: 3020 Algebra 1, 3030 Geometry and Teacher Recommendation

- Corequisite: Not applicable
- This course is designed to promote reasoning, problem-solving and modeling through thematic units focused on mathematical practices while reinforcing and extending content in Number and Quantity, Algebra, Functions, Statistics and Probability, and Geometry. It is a yearlong course taught using student-centered pedagogy.
- **This course can be taken in place of Algebra 2**. Upon successful completion of this course students should consider enrolling in Topics of Math or Probability and Statistics.

3040 Probability and Statistics

- Grade Levels: 10, 11, 12
- Credit: 1.0
- Length: Year
- Prerequisite or corequisite: 3050 Algebra 2, 3053 Honors Algebra 2, or 3054 Advanced Quantitative Reasoning and Teacher Recommendation
- Corequisite: Not applicable
- This course is an elective math course that can satisfy your fourth math credit. Probability and Statistics can be taken at the same time as any other math course after Geometry. This course introduces students to fundamentals of both probability and statistics and focuses on collection and analysis of real-world data. Topics include (but are not limited to): data analysis, probability, sampling methods, confidence intervals, and hypothesis tests.

3044 AP Statistics

- Grade Levels: 10, 11, 12
- Credit: 1.0
- Length: Year
- Prerequisite: 3050 Algebra 2 or 3053 Honors Algebra 2, and Teacher Recommendation
- Corequisite: Not applicable
- Fee: $96.00 AP Exam fee
- AP Statistics is a rigorous college level course designed to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes: exploring data, planning a study, anticipating patterns and statistical inference. This course can be taken at the same time as any other math course after Algebra 2.
- Students are required to take the AP exam in May.

3061 Precalculus

- Grade Levels: 11, 12
- Credit: 1.0
- Length: Year
- Prerequisite: 3050 Algebra 2 or 3053 Honors Algebra 2, and Teacher Recommendation
- Corequisite: Not applicable
- This course may be used to satisfy the fourth math credit requirement. Topics in this course will cover (but not be limited to) modeling mathematics with the following functions: power, polynomial, exponential, logarithmic, rational, and trigonometric. Also included in this course are connections to physics and linear algebra. Upon completion of this course, students can consider enrolling in Probability and Statistics, Topics of Math, Honors Calculus, or CCP College Algebra.

3063 Honors Precalculus

- Grade Levels: 10, 11, 12
- Credit: 1.0
- Length: Year
- Prerequisite: 3053 Honors Algebra 2 and Teacher Recommendation
- Corequisite: Not applicable
- This course may be used to satisfy the fourth math credit requirement. Topics in this course will cover (but not be limited to) modeling mathematics with the following functions: power, polynomial, exponential, logarithmic, rational, and trigonometric. Also included in this course are connections to physics and linear algebra. This course is meant to prepare students to take AP Calculus (AB or BC) and will therefore include topics related to Calculus and its theory. Upon completion of this course students can consider enrolling in AP Statistics, Probability and Statistics or AP Calculus (AB or BC).

3070 Honors Calculus

- Grade Levels: 11, 12
- Credit: 1.0
- Length: Year
- Prerequisite: 3061 Precalculus or 3063 Honors Precalculus and Teacher Recommendation
- Corequisite: Not applicable
- This course is an elective math course. Since many college majors require a semester of Calculus, this course provides students with a brief introduction to many of the topics studied in a college Calculus course.
- Topics covered include a study of continuous vs. discontinuous functions, limits, derivatives, application of derivatives, integrals and a study of related rates and antiderivatives.

3073 AP Calculus AB

- Grade Levels: 11, 12
- Credit: 1.0
- Length: Year
- Prerequisite: 3063 Honors Precalculus and Teacher Recommendation
- Corequisite: Not applicable
- Fee: $96.00 AP Exam fee
- Students are required to take the AP exam in May.
- AP Calculus AB is a rigorous college-level course designed for students who exhibit a high mathematical aptitude. The class will prepare students for the AP Exam by covering the content of college Calculus 1.Topics covered in this course include: limits, derivatives, integrals, and their applications.
- Students considering AP Calculus AB are strongly encouraged to take Honors Precalculus in the school year prior to taking the course.

3074 AP Calculus BC

- Grade Levels: 11, 12
- Credit: 1.0
- Length: Year
- Prerequisite: 3063 Honors Precalculus and Teacher Recommendation
- Corequisite: Not applicable
- Fee: $96.00 AP Exam fee
- Students are required to take the AP exam in May.

- AP Calculus BC is a rigorous college-level course designed for students who exhibit a high mathematical aptitude, as well as successfully completed Honors Precalculus with an A or possibly a high B. The class will prepare students for the AP Exam by covering the content of college Calculus 1 and 2. Topics covered in this course include: limits, derivatives, integrals, convergence and divergence of series, and their applications.
- Students considering AP Calculus BC are strongly encouraged to take Honors Precalculus in the school year prior to taking the course.

3080 Topics of Math

- Grade Levels: 11, 12
- Credit: 1.0
- Length: Year
- Prerequisite: 3050 Algebra 2, 3053 Honors Algebra 2, or 3054 Advanced Quantitative Reasoning and Teacher Recommendation
- Corequisite: Not applicable
- This course has been designed to provide an opportunity for students to further study mathematics as it relates directly to the real world. In short, if a student has ever sat in a math class wondering how to use math in the real world, this is the course designed to answer that question. Much of this course will involve project-based learning and have students investigate applications and do activities using previously learned skills (with the use of technology and by-hand mathematics).

23021SIN College Algebra

- Grade Levels: 11, 12
- Credit: 1.0
- Length: Year
- Prerequisite: 3050 Algebra 2 or 3053 Honors Algebra 2
- Corequisite: Not applicable
- This course may be used to satisfy the fourth math credit. Topics include: polynomial, radical, rational, exponential and logarithmic functions and their graphs; roots of polynomial functions, rational and polynomial inequalities; systems of linear and nonlinear equations; matrices; and applications.
- Students will have the opportunity to earn college credit for this course as it is part of the College Credit Plus (CCP) program. Note enrollment in the class is dependent upon acceptance to the Sinclair College CCP program. For more information and to apply please go to the Sinclair College CCP website.
- CCP credit is earned through Sinclair College. Students must be accepted by the university to qualify.