

ANOKA-HENNEPIN SCHOOLS
HIGH SCHOOL
REGISTRATION GUIDE
MATH
ADDENDUM

2020-21 SCHOOL YEAR

GRADES 9 THROUGH 12

DISTRICT MATH GRADUATION REQUIREMENTS
MATHEMATICS – 3 CREDITS

Class of 2021, 2022, 2023		Class of 2024	
Intermediate Algebra	1.0	HS Intermediate Algebra	1.0
Geometry	1.0	HS Geometry	1.0
Advanced Algebra	0.5	HS Algebra 2	1.0
Statistics and Probability/AP Statistics	0.5		



ANOKA-HENNEPIN
 SCHOOLS
A future without limit

Graduating Class of 2024

1.0 credit	HS Intermediate Algebra
1.0 credit	HS Geometry
1.0 credit	HS Algebra 2 (or Advanced Algebra and Statistics & Probability)

There are many options available for students as they progress through their math learning experience. Included below are examples of the most common course pathways for a student entering high school in the fall of 2020.

Option 3 outlines a pathway for highly motivated and high achieving students that enter high school in a grade level math course to accelerate their math experience. Students choosing to enroll in this accelerated pathway would be able to complete two additional math credits beyond those that are required for graduation. This acceleration would occur after the successful completion of the HS Intermediate Algebra course and would include a wrap-around of the Geometry and Algebra 2 courses. The wrap-around would allow students to start a course during 3rd Trimester and finish the course during the next school year. Students that choose this pathway will need to register, during their 9th-grade school year, for HS Intermediate Algebra (choosing 2 course numbers) and Honors HS Geometry (choosing 1 course number). Refer to the Option 3 flowchart to see the math pathway for these students.

Currently in Grade 8...	MS Algebra Block	MS Algebra	Honors Intermediate Algebra	Honors Geometry	Advanced Mathematics
Next year take...	HS Intermediate Algebra *	HS Intermediate Algebra	Honors HS Geometry with College Foundations	Honors Advanced Algebra AND Statistics & Probability <u>or</u> AP Statistics	Ask your Advanced Math teacher for the appropriate course

If a student is currently in grade 8 (graduating class of 2024) and in Middle School Algebra:

Option 1:

Option 2:

Option 3:

Gr 9	HS Intermediate Algebra	HS Intermediate Algebra	HS Intermediate Algebra	HS Intermediate Algebra	HS Intermediate Algebra	HS Intermediate Algebra	Honors HS Geometry w/College Foundations		
Gr 10	HS Geometry w/College Foundations	HS Geometry w/College Foundations	HS Geometry w/College Foundations	Honors HS Geometry w/College Foundations	Honors HS Geometry w/College Foundations	Honors HS Geometry w/College Foundations	Honors HS Geometry w/College Foundations	Honors HS Geometry w/College Foundations	Honors HS Algebra 2
Gr 11	HS Algebra 2	HS Algebra 2	Honors HS Algebra 2	Honors HS Algebra 2	Honors HS Algebra 2	Honors HS Algebra 2	Honors Precalculus or an IB Math Course	Honors Precalculus or an IB Math Course	Honors Precalculus or an IB Math Course
Gr 12	math elective	math elective	math elective	math elective	math elective	math elective	math elective	math elective	

If a student is currently in grade 8 (graduating class of 2024) and in Honors Intermediate Algebra:

Option 1:

Option 2:

Option 3:

Gr 9	HS Geometry w/College Foundations	HS Geometry w/College Foundations	HS Geometry w/College Foundations	Honors HS Geometry w/College Foundations	Honors HS Geometry w/College Foundations	Honors HS Geometry w/College Foundations	Honors HS Geometry w/College Foundations	Honors HS Geometry w/College Foundations	Honors HS Geometry w/College Foundations
Gr 10	Advanced Algebra	Statistics & Probability	Honors Advanced Algebra	Statistics & Probability	Honors HS Algebra 2	Honors HS Algebra 2	Statistics & Probability	Statistics & Probability	Statistics & Probability
Gr 11	math elective	math elective	math elective	math elective	math elective	math elective	math elective	math elective	
Gr 12	math elective	math elective	math elective	math elective	math elective	math elective	math elective	math elective	

If a student is currently in grade 8 (graduating class of 2024) and in Honors Geometry:

Option 1:

Option 2:

Option 3:

Gr 9	Honors Advanced Algebra	Honors Precalculus or AP Statistics or IB Math Course	Honors Precalculus or AP Statistics or IB Math Course	Honors Advanced Algebra	Statistics & Probability	Honors Advanced Algebra	Honors Precalculus or AP Statistics or IB Math Course	Honors Precalculus or AP Statistics or IB Math Course	Honors Precalculus or AP Statistics or IB Math Course
Gr 10	Statistics & Probability or math elective	math elective	math elective	math elective	math elective	math elective	math elective	math elective	
Gr 11	math elective	math elective	math elective	math elective	math elective	math elective	math elective	math elective	
Gr 12	math elective	math elective	math elective	math elective	math elective	math elective	math elective	math elective	

Graduating Class of 2023

1.0 credit	Intermediate Algebra
1.0 credit	Geometry
0.5 credit	Advanced Algebra
0.5 credit	Statistics & Probability (or AP Statistics)

There are many options available for students as they progress through their math learning experience. Included below are examples of the most common course math pathways for a student.

Currently in Grade 9	3-Tri Intermediate Algebra	Intermediate Algebra with College Foundations	Honors Geometry	Honors Advanced Algebra AND Statistics & Probability	Honors Precalculus
Next year take...	HS Geometry with College Foundations	HS Geometry with College Foundations or Honors HS Geometry with College Foundations	Honors Advanced Algebra AND Statistics & Probability <i>or</i> AP Statistics	Honors Precalculus	AP Calculus AB **

If a student is currently in grade 9 (graduating class of 2023) and in Intermediate Algebra:

<p>Option 1:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 33%;">Gr 10 HS Geometry w/College Foundations</td> <td style="width: 33%;">Gr 10 HS Geometry w/College Foundations</td> <td style="width: 33%;">Gr 10 HS Geometry w/College Foundations</td> </tr> <tr> <td>Gr 11 Advanced Algebra</td> <td>Gr 11 Statistics & Probability</td> <td></td> </tr> <tr> <td>Gr 12 math elective</td> <td>Gr 12 math elective</td> <td></td> </tr> </table>	Gr 10 HS Geometry w/College Foundations	Gr 10 HS Geometry w/College Foundations	Gr 10 HS Geometry w/College Foundations	Gr 11 Advanced Algebra	Gr 11 Statistics & Probability		Gr 12 math elective	Gr 12 math elective		<p>Option 2:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 33%;">Gr 10 Honors HS Geometry w/College Foundations</td> <td style="width: 33%;">Gr 10 Honors HS Geometry w/College Foundations</td> <td style="width: 33%;">Gr 10 Honors HS Geometry w/College Foundations</td> </tr> <tr> <td>Gr 11 Honors Advanced Algebra</td> <td>Gr 11 Statistics & Probability</td> <td></td> </tr> <tr> <td>Gr 12 math elective</td> <td>Gr 12 math elective</td> <td></td> </tr> </table>	Gr 10 Honors HS Geometry w/College Foundations	Gr 10 Honors HS Geometry w/College Foundations	Gr 10 Honors HS Geometry w/College Foundations	Gr 11 Honors Advanced Algebra	Gr 11 Statistics & Probability		Gr 12 math elective	Gr 12 math elective		<p>Option 3:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 33%;">Gr 10 Honors HS Geometry w/College Foundations</td> <td style="width: 33%;">Gr 10 Honors HS Geometry w/College Foundations</td> <td style="width: 33%;">Gr 10 Honors HS Geometry w/College Foundations</td> </tr> <tr> <td>Gr 11 Honors Advanced Algebra</td> <td>Gr 11 AP Statistics or IB math course</td> <td>Gr 11 AP Statistics or IB math course</td> </tr> <tr> <td>Gr 12 math elective</td> <td>Gr 12 math elective</td> <td></td> </tr> </table>	Gr 10 Honors HS Geometry w/College Foundations	Gr 10 Honors HS Geometry w/College Foundations	Gr 10 Honors HS Geometry w/College Foundations	Gr 11 Honors Advanced Algebra	Gr 11 AP Statistics or IB math course	Gr 11 AP Statistics or IB math course	Gr 12 math elective	Gr 12 math elective	
Gr 10 HS Geometry w/College Foundations	Gr 10 HS Geometry w/College Foundations	Gr 10 HS Geometry w/College Foundations																											
Gr 11 Advanced Algebra	Gr 11 Statistics & Probability																												
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Gr 11 Honors Advanced Algebra	Gr 11 AP Statistics or IB math course	Gr 11 AP Statistics or IB math course																											
Gr 12 math elective	Gr 12 math elective																												

If a student is currently in grade 9 (graduating class of 2023) and in Geometry:

<p>Option 1:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 33%;">Gr 10 Advanced Algebra</td> <td style="width: 33%;">Gr 10 Statistics & Probability</td> </tr> <tr> <td>Gr 11 math elective</td> <td>Gr 11 math elective</td> </tr> <tr> <td>Gr 12 math elective</td> <td>Gr 12 math elective</td> </tr> </table>	Gr 10 Advanced Algebra	Gr 10 Statistics & Probability	Gr 11 math elective	Gr 11 math elective	Gr 12 math elective	Gr 12 math elective	<p>Option 2:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 33%;">Gr 10 Honors Advanced Algebra</td> <td style="width: 33%;">Gr 10 Statistics & Probability</td> </tr> <tr> <td>Gr 11 math elective</td> <td>Gr 11 math elective</td> </tr> <tr> <td>Gr 12 math elective</td> <td>Gr 12 math elective</td> </tr> </table>	Gr 10 Honors Advanced Algebra	Gr 10 Statistics & Probability	Gr 11 math elective	Gr 11 math elective	Gr 12 math elective	Gr 12 math elective	<p>Option 3:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 33%;">Gr 10 Honors Advanced Algebra</td> <td style="width: 33%;">Gr 10 AP Statistics or IB math course</td> <td style="width: 33%;">Gr 10 AP Statistics or IB math course</td> </tr> <tr> <td>Gr 11 math elective</td> <td>Gr 11 math elective</td> <td></td> </tr> <tr> <td>Gr 12 math elective</td> <td>Gr 12 Math elective</td> <td></td> </tr> </table>	Gr 10 Honors Advanced Algebra	Gr 10 AP Statistics or IB math course	Gr 10 AP Statistics or IB math course	Gr 11 math elective	Gr 11 math elective		Gr 12 math elective	Gr 12 Math elective	
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Gr 11 math elective	Gr 11 math elective																						
Gr 12 math elective	Gr 12 Math elective																						

If a student is currently in grade 9 (graduating class of 2023) and in Honors Geometry:

<p>Option 1:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 33%;">Gr 10 Honors Advanced Algebra</td> <td style="width: 33%;">Gr 10 Statistics & Probability</td> </tr> <tr> <td>Gr 11 math elective</td> <td>Gr 11 math elective</td> </tr> <tr> <td>Gr 12 math elective</td> <td>Gr 12 math elective</td> </tr> </table>	Gr 10 Honors Advanced Algebra	Gr 10 Statistics & Probability	Gr 11 math elective	Gr 11 math elective	Gr 12 math elective	Gr 12 math elective	<p>Option 2:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 33%;">Gr 10 Honors Advanced Algebra</td> <td style="width: 33%;">Gr 10 Honors Precalculus or IB math course</td> <td style="width: 33%;">Gr 10 Honors Precalculus or IB math course</td> </tr> <tr> <td>Gr 11 math elective</td> <td>Gr 11 math elective</td> <td></td> </tr> <tr> <td>Gr 12 math elective</td> <td>Gr 12 Math elective</td> <td></td> </tr> </table>	Gr 10 Honors Advanced Algebra	Gr 10 Honors Precalculus or IB math course	Gr 10 Honors Precalculus or IB math course	Gr 11 math elective	Gr 11 math elective		Gr 12 math elective	Gr 12 Math elective		<p>Option 3:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 33%;">Gr 10 Honors Advanced Algebra</td> <td style="width: 33%;">Gr 10 AP Statistics or IB math course</td> <td style="width: 33%;">Gr 10 AP Statistics or IB math course</td> </tr> <tr> <td>Gr 11 Statistics & Probability or math elective</td> <td>Gr 11 math elective</td> <td></td> </tr> <tr> <td>Gr 12 math elective</td> <td>Gr 12 math elective</td> <td></td> </tr> </table>	Gr 10 Honors Advanced Algebra	Gr 10 AP Statistics or IB math course	Gr 10 AP Statistics or IB math course	Gr 11 Statistics & Probability or math elective	Gr 11 math elective		Gr 12 math elective	Gr 12 math elective	
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Gr 12 math elective	Gr 12 math elective																									

Graduating Class of 2022

1.0 credit	Intermediate Algebra
1.0 credit	Geometry
0.5 credit	Advanced Algebra
0.5 credit	Statistics & Probability (or AP Statistics)

There are many options available for students as they progress through their math learning experience. Included below are examples of the most common course math pathways for a student.

Currently in Grade 10	3-Tri Geometry or Geometry	Honors Geometry	Advanced Algebra AND Statistics & Probability	Honors Advanced Algebra AND Statistics & Probability or AP Statistics	Honors Precalculus	AP Calculus AB
Next year take...	Advanced Algebra AND Statistics & Probability	Honors Advanced Algebra AND Statistics & Probability or AP Statistics	Coll Honors College Algebra through Modeling or Coll Honors College Algebra	Honors Precalculus or AP Statistics	AP Calculus AB ** or AP Statistics	AP Calculus BC or AP Statistics

If a student is currently in grade 10 (graduating class of 2022) and in Geometry:

Option 1:

Gr 11	Advanced Algebra	Statistics & Probability
Gr 12	math elective	math elective

Option 2:

Gr 11	Honors Advanced Algebra	Statistics & Probability
Gr 12	math elective	math elective

Option 3:

Gr 11	Honors Advanced Algebra	AP Statistics or IB math course	AP Statistics or IB math course
Gr 12	math elective	math elective	

If a student is currently in grade 10 (graduating class of 2022) and in Honors Geometry:

Option 1:

Gr 11	Honors Advanced Algebra	Statistics & Probability
Gr 12	math elective	math elective

Option 2:

Gr 11	Honors Advanced Algebra	Honors Precalculus	Honors Precalculus
Gr 12	Statistics & Probability or AP Statistics	math elective or AP Statistics	

Option 3:

Gr 11	Honors Advanced Algebra	AP Statistics or IB math course	AP Statistics or IB math course
Gr 12	math elective	math elective	

If a student is currently in grade 10 (graduating class of 2022) and in Honors Advanced Algebra and Stats & Prob:

Option 1:

Gr 11	Honors Precalculus or IB math course	Honors Precalculus or IB math course
Gr 12	math elective	math elective

Option 2:

Gr 11	AP Statistics or IB math course	AP Statistics or IB math course
Gr 12	math elective	math elective

Option 3:

Gr 11	College Algebra or IB math course	College Algebra or IB math course
Gr 12	Statistics & Probability or math elective	math elective

Graduating Class of 2021

1.0 credit	Intermediate Algebra
1.0 credit	Geometry
0.5 credit	Advanced Algebra
0.5 credit	Statistics & Probability (or AP Statistics)

There are many options available for students as they progress through their math learning experience. Included below are examples of the most common course math pathways for a student.

Currently in Grade 11	Advanced Algebra AND Statistics & Probability	Honors Advanced Algebra AND Statistics & Probability or AP Statistics	Coll Honors College Algebra through Modeling or Coll Honors College Algebra	Honors Precalculus	AP Calculus AB	AP Calculus BC
Next year take...	Coll Honors College Algebra through Modeling or Coll Honors College Algebra	Coll Honors College Algebra through Modeling or Coll Honors College Algebra or Honors Precalculus	Honors Precalculus or AP Statistics	AP Calculus AB ** or AP Statistics	AP Calculus BC or AP Statistics	AP Statistics

If a student is currently in grade 11 (graduating class of 2021) and in **Advanced Algebra and Stats & Prob:**

Gr 12	Option 1:		Option 2:			Option 3:		
	College Algebra or IB math course	College Algebra or IB math course	Honors Advanced Algebra	AP Statistics or IB math course	AP Statistics or IB math course	Honors Advanced Algebra	Honors Precalculus or IB math course	Honors Precalculus or IB math course

If a student is currently in grade 11 (graduating class of 2021) and in **Honors Advanced Algebra and Stats & Prob:**

Gr 12	Option 1:		Option 2:		Option 3:	
	Honors Precalculus or IB math course	Honors Precalculus or IB math course	AP Statistics or IB math course	AP Statistics or IB math course	College Algebra or IB math course	College Algebra or IB math course

If a student is currently in grade 11 (graduating class of 2021) and in **College Algebra:**

Gr 12	Option 1:		Option 2:	
	Honors Precalculus	Honors Precalculus	AP Statistics	AP Statistics

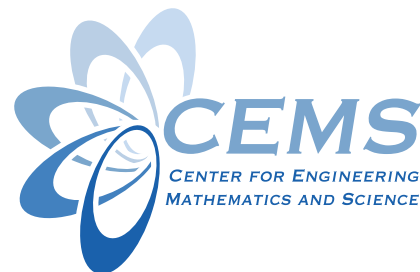
If a student is currently in grade 11 (graduating class of 2021) and in **Honors Precalculus:**

Gr 12	Option 1:		Option 2:		Option 3:	
	AP Calculus AB or IB math course	AP Calculus AB or IB math course	AP Calculus AB/BC or IB math course	AP Calculus AB/BC or IB math course	AP Statistics or IB math course	AP Statistics or IB math course

If a student is currently in grade 11 (graduating class of 2021) and in **AP Calculus AB:**

Gr 12	Option 1:		Option 2:	
	AP Calculus BC or IB math course	AP Calculus BC or IB math course	AP Statistics or IB math course	AP Statistics or IB math course

Center for Engineering, Mathematics, and Science @ Blaine High School



The Center for Engineering, Mathematics and Science [CEMS] at Blaine High School is a program designed for students who want an integrated and rigorous in-depth math, science and engineering focus.

CENTER FOR ENGINEERING, MATHEMATICS, AND SCIENCE

REQUIRED COURSES FOR CEMS	GRADES	PREREQUISITES
Mathematics CEMS		
HS Intermediate Algebra CEMS	9	
Honors HS Geometry with College Foundations	10	
Honors Advanced Algebra	9, 10	
Statistics and Probability or AP Statistics	9, 10, 11, 12	Honors Advanced Algebra

Acceptance into CEMS at BHS is a required prerequisite for all CEMS courses.

MATHEMATICS CEMS

HS Intermediate Algebra CEMS

Prerequisite/Selection Process: Acceptance into CEMS at BHS

Intended Audience: Grade 9

Credit: Two trimesters = 1.0 credit

Major Outcomes: This course continues the extensive, connected, and applied study of Mathematics from previous courses. Emphasis is on the development of multiple strategies to solve problems and to recognize multiple ways of understanding concepts, especially as it pertains to quadratic and exponential functions. It has strong threads woven throughout the course focusing on multiple representations, justifying thinking, and communicating the meaning of a solution. The topics covered in the course are:

- Functions, Linear Relationships
- Simplifying and Solving
- Sequences
- Modeling Two-Variable Data
- Exponential Functions
- Quadratic Functions
- Solving Quadratic and Inequalities
- Trigonometric functions for physics
- Rearranging formulas for physics

Instructional Focus: Instruction presented in a variety of ways; some hands-on activities and the use of a graphing calculator

MATHEMATICS		
REQUIRED COURSES	GRADES	PREREQUISITES
HS Intermediate Algebra	9	
HS Geometry with College Foundations or Honors HS Geometry with College Foundations	10	Intermediate Algebra with College Foundations or Honors Intermediate Algebra
Advanced Algebra or Honors Advanced Algebra	11	Geometry or Honors Geometry
Statistics and Probability or AP Statistics	11	Intermediate Algebra with College Foundations or Honors Intermediate Algebra
ELECTIVE COURSES	GRADES	PREREQUISITES
Coll Honors College Algebra through Modeling [AndHS, AHS, BHS, CRHS only]	11, 12	Advanced Algebra or Honors Advanced Algebra <i>Advanced Algebra with a grade of C+ or better and class rank considered</i>
Coll Honors College Algebra [AndHS, AHS, BHS, CRHS only]	11, 12	Advanced Algebra or Honors Advanced Algebra <i>Student must pass a placement test and class rank considered</i>
Honors Precalculus	11, 12	Advanced Algebra [with teacher recommendation] or Honors Advanced Algebra or Coll Honors College Algebra [AndHS, AHS, BHS, CRHS only] or Coll Honors College Algebra through Modeling [AndHS, AHS, BHS, CRHS only]
AP Statistics	11, 12	Honors Advanced Algebra
AP Calculus AB	11, 12	Honors Precalculus
Calculus AB Seminar	11, 12	AP Calculus AB
AP Calculus BC	12	AP Calculus AB
AP Calculus AB/BC [BHS]	12	Honors Precalculus
[AP Calculus AB/BC]/IB Mathematics HL 11 [CPHS only]	11, 12	Honors Precalculus

For additional BHS options in Mathematics, see CEMS section.

For additional CPHS options in Mathematics, see IB section.

HS Intermediate Algebra

Intended Audience: Grade 9

Credit: ** Two trimesters = 1.0 credit

Major Outcomes: This course continues the extensive, connected, and applied study of Mathematics from previous courses. Emphasis is on the development of multiple strategies to solve problems and to recognize multiple ways of understanding concepts, especially as it pertains to quadratic and exponential functions. It has strong threads woven throughout the course focusing on multiple representations, justifying thinking, and communicating the meaning of a solution. The topics covered in the course are:

- Functions, Linear Relationships
- Simplifying and Solving
- Sequences
- Modeling Two-Variable Data
- Exponential Functions
- Quadratic Functions
- Solving Quadratic and Inequalities

Instructional Focus: Instruction presented in a variety of ways; some hands-on activities and the use of a graphing calculator.

** Students may be placed in an additional trimester of math based on a variety of achievement scores and teacher recommendation. Students passing this additional trimester course would receive an additional 0.5 elective credit.

HS Geometry with College Foundations

Prerequisite/Selection Process: Intermediate Algebra with College Foundations or Honors Intermediate Algebra

Intended Audience: Grade 10

Credit: Three trimesters = 1.0 math credit and 0.5 elective credit

Major Outcomes: This course continues the extensive, connected, and applied study of Mathematics from previous courses. It has strong threads woven throughout the course focusing on multiple representations, justifying thinking, and communicating the meaning of a solution. The topics covered in the course are:

- Shapes and Transformations
- Angles and Measurement
- Justification and Similarity
- Trigonometry and Probability
- Congruent Triangles
- Proof and Quadrilaterals
- Polygons and Circles
- Solids and Constructions
- Circles and Conditional Probability
- Solids and Circles

Instructional Focus: Instruction presented in a variety of ways; some hands-on activities.

Honors HS Geometry with College Foundations

Prerequisite/Selection Process: Intermediate Algebra with College Foundations or Honors Intermediate Algebra

Intended Audience: Grade 10

Credit: Three trimesters = 1.0 math credit and 0.5 elective credit

Major Outcomes: This course continues the extensive, connected, and applied study of Mathematics from previous courses. It has strong threads woven throughout the course focusing on multiple representations, justifying thinking, and communicating the meaning of a solution. The topics covered in the course are:

- Shapes and Transformations
- Angles and Measurement
- Justification and Similarity
- Trigonometry and Probability
- Congruent Triangles
- Proof and Quadrilaterals
- Polygons and Circles
- Solids and Constructions
- Circles and Conditional Probability
- Solids and Circles

Instructional Focus: Instruction presented in a variety of ways; some hands-on activities, and more in-depth study of content.

Advanced Algebra

Prerequisite/Selection Process: Geometry

Intended Audience: Grade 11

Credit: One trimester = 0.5 credit

Major Outcomes:

- Rational Functions
- Transformations
- Modeling with Exponential Functions
- Sequences and Series

Projects, Activities, etc.: Varies by teacher

Instructional Focus: Instruction presented in a variety of ways, use of graphing calculator

Honors Advanced Algebra

Prerequisite/Selection Process: Honors Geometry

Intended Audience: Students who plan to continue mathematical studies beyond Honors Advanced Algebra

Credit: One trimester = 0.5 credit

Major Outcomes:

- Rational Functions
- Transformations
- Modeling with Exponential Functions
- Sequences and Series

Projects, Activities, etc.: Varies by teacher

Instructional Focus: Instruction presented in a variety of ways, use of graphing calculator, faster pace, higher level problem solving, and more in-depth study of content

Statistics and Probability

Prerequisite/Selection Process: Intermediate Algebra with College Foundations or Honors Intermediate Algebra

Intended Audience: Grades 10 and 11

Credit: One trimester = 0.5 credit

Major Outcomes:

- Using data to draw conclusions and identify trends
- Effects of display distortion and measurement error on the interpretation of data
- Application of theoretical probability to real world problems

Projects, Activities, etc.: Varies by teacher

Instructional Focus: Instruction presented in a variety of ways, use of statistical software and some hands-on activities

AP Statistics

[AP exam is in May each year]

Prerequisite/Selection Process: Honors Advanced Algebra

Intended Audience: Grades 9, 10, 11, and 12

Credit: Two trimesters = 1.0 credit

Major Outcomes:

- Introduction to the major concepts and tools for collecting, analyzing and drawing conclusions from data
 - Approach the AP exam with confidence
- Projects, Activities, etc.:* Varies by teacher
- Instructional Focus:* Instruction presented in a variety of ways, use of statistical software, some hands-on activities and preparation for AP exam. College credit may be earned based on AP exam score and institution.

Coll Honors College Algebra Through Modeling

[AndHS, AHS, BHS, and CRHS only]

College Credit [University of Minnesota - CI 1806]

Prerequisite/Selection Process: Advanced Algebra, Honors Advanced Algebra

Intended Audience: Grades 11 and 12; a grade of C+ or better in Advanced Algebra and class rank (50th-80th percentile) is considered

Credit: Two trimesters = 1.0 credit

Major Outcomes:

- Construct math models to describe real world phenomena
 - Use math models to make predictions
 - Apply linear, polynomial, rational, exponential, and logarithmic functions to real world situations
 - Communicate and evaluate math reasoning
- Projects, Activities, etc.:* Modeling assignments solving realistic problems; utilize graphing calculators and spreadsheets to accurately represent the behavior of real-world data
- Instructional Focus:* Emphasis on real-world problem-solving applications

Coll Honors College Algebra

[AndHS, AHS, BHS, CRHS only]

College Credit [AHS only: Anoka-Ramsey Community College – Math 1200] [AndHS, BHS, and CRHS: St. Cloud State University – Math 112]

Prerequisite/Selection Process: Advanced Algebra or Honors Advanced Algebra and a required math score on the placement test
Intended Audience: Only Grade 11 [GPA in top 33 percent of class] and only Grade 12 [GPA in top 50 percent of class]

Credit: Two trimesters = 1.0 credit, successful completion can earn college credit

Major Outcomes:

- Functions and function inverses
- Exponential and logarithmic functions
- Polynomial and Rational Functions
- Linear programming
- Systems of equations and inequalities

Projects, Activities, etc.: Group problem-solving sessions, group presentations, group activities, computer lab projects, individual student presentations, student portfolio creation

Instructional Focus: Small and large group discussions, concept mapping, presentations and use of a college text

Honors Precalculus

Prerequisite/Selection Process: Honors Advanced Algebra or Coll Honors College Algebra [Advanced Algebra with teacher recommendation]

Intended Audience: Grades 9, 10, 11, and 12

Credit: Two terms = 1.0 credit

Major Outcomes:

- Extension of algebraic and geometric concepts of relations, functions and graphing into trigonometric functions
- Applications of trigonometry

Projects, Activities, etc.: Varies by teacher

Instructional Focus: Instruction presented in a variety of ways, use of graphic calculator

AP Statistics

[AP test is in May each year]

Prerequisite/Selection Process: Honors Advanced Algebra

Intended Audience: Grades 9, 10, 11, and 12

Credit: Two trimesters = 1.0 credit

Major Outcomes:

- Introduction to the major concepts and tools for collecting, analyzing and drawing conclusions from data

Projects, Activities, etc.: Varies by teacher

Instructional Focus: Instruction presented in a variety of ways, use of statistical software, some hands-on activities and preparation for AP test

AP Calculus AB

[AP exam is in May each year]

Prerequisite/Selection Process: Honors Precalculus

Intended Audience: Grades 10, 11, and 12

Credit: Two terms = 1.0 credit

Major Outcomes:

- Functions
- Limits, derivatives, integrals
- Approach the AP exam with confidence

Projects, Activities, etc.: Varies by teacher

Instructional Focus: Instruction presented in a variety of ways; use of graphing calculator; preparation for AP exam; College credit may be earned based on AP exam score and institution.

Calculus AB Seminar

Prerequisite/Selection Process: AP Calculus AB

Intended Audience: Students who have completed Calculus AB and desire to prepare for the AP Exam

Credit: One trimester = 0.5 credit

Major Outcomes:

- Review Calculus AB Concepts
- Further in-depth study in Calculus Concepts

Projects, Activities, etc.: Practice AP Calculus AB Exams and discussion of AP testing strategies

AP Calculus BC

[AP exam is in May each year]

Prerequisite/Selection Process: Students must have successfully completed AP Calculus AB or AP Differential Calculus AB and AP Integral Calculus AB

Intended Audience: Grades 10, 11, and 12

Credit: Two trimesters = 1.0 credit

Major Outcomes:

- Improper integrals
- Partial fractions, infinite series
- Parametric, vector and polar functions
- Approach the AP exam with confidence

Projects, Activities, etc.: Varies by teacher

Instructional Focus: Instruction presented in a variety of ways; use of graphing calculator; preparation for AP exam; College credit may be earned based on AP exam score and institution.

AP Calculus AB/BC

[BHS]

[AP Calculus AB and AP Calculus BC]

Prerequisite/Selection Process: Honors Precalculus

Intended Audience: Grade 12

Credit: Three trimesters = 1.5 credits

Major Outcomes:

- Functions
- Limits, derivatives, integrals
- Improper integrals
- Partial fractions, infinite series
- Parametric, vector and polar functions

Projects, Activities, etc.: Varies by teacher

Instructional Focus: Same as AP Calculus AB for first two trimesters [1.0 credit course] and same as AP Calculus BC for one trimester course [0.5 credit course]

AP Calculus AB/BC/IB Mathematics HL 11

[CPHS only]

Prerequisite/Selection Process: Honors Precalculus

Intended Audience: Grades 11 and 12

Credit: Three trimesters = 1.5 credits

Major Outcomes:

- Functions
- Limits, derivatives, integrals
- Improper integrals
- Partial fractions, infinite series
- Parametric, vector and polar functions

Projects, Activities, etc.: Varies by teacher

Instructional Focus: Same as AP Calculus AB for first two trimesters [1.0 credit course] and same as AP Calculus BC for one trimester course [0.5 credit course]