Typical 6-12 Math Course Sequences

6th Grade	7th Grade	8th Grade	Freshman	Sophomore	Junior	Senior
Math 6	Math 7	Math 8	Pre-Algebra	Algebra I	Geometry *or* Algebra II	Algebra II *or* Geometry
			Algebra I + Algebra Lab	Geometry + Geometry Lab	Algebra II	Electives ****
			Algebra I	Geometry	Algebra II	Electives ****
					Algebra II with Trigonometry	Pre-Calculus *and/or* Electives ****
				Geometry *and* Algebra II with Trig* (CP or Honors – Honors is recommended if the intention is AP level Calculus)	Pre-Calculus (CP or Honors – Honors is recommended if the intention is AP level Calculus)	Honors Calculus *or* AP Calculus AB/BC *and/or* AP Statistics***
Accelerated 1	Accelerated 2	Algebra I	Geometry	Algebra II with Trig	Pre-Calculus	Honors Calculus *and/or* AP Statistics***
			Honors Geometry	Honors Algebra II with Trig* (Honors is recommended if the intention is AP level Calculus)	Honors Pre-Calculus *and/or* AP Statistics***	AP Calculus AB *or* AP Calculus BC** *and/or* AP Statistics***
			Geometry *and* Honors Algebra II with Trig*	Honors Pre-Calculus *and/or* AP Statistics ***	AP Calculus AB *or* AP Calculus BC** *and/or* AP Statistics***	Multivariable Calculus* *(only if AP Calculus BC completed) and/or* AP Statistics***
Accelerated 2	Algebra I	Honors Geometry	Honors Algebra II with Trig*	Honors Pre-Calculus *and/or* AP Statistics ***	AP Calculus AB *or* AP Calculus BC** *and/or* AP Statistics***	Multivariable Calculus* *(only if AP Calculus BC completed) and/or* AP Statistics***

* *Students wishing to accelerate in math, with a goal of taking Calculus and/or Multivariable Calculus, should plan to take Geometry and Algebra II with Trigonometry concurrently. Multivariable Calculus does not have a corresponding AP test and will not earn college credit.*

** *Students may enroll in either AP Calculus AB or AP Calculus BC after Honors Pre-Calculus. AP Calculus BC covers all of the topics of AP Calculus AB, plus an additional units college math. As a result, the course moves at a much faster pace.*

****AP Statistics can be taken concurrently with Honors Pre-Calculus, or any of the Calculus courses.*

**** *Electives for students completing* **Algebra II Foundations**: *Financial Math I and II, College Math Prep I with Algebra II teacher approval*
Electives for students completing **Algebra II**: *Financial Math I and II, College Math Prep I and II, Intro to Statistics, Discrete Math, Trigonometry, Intro to Data Science.*
Electives for students completing **Algebra II with Trigonometry**: *Intro to Statistics, Discrete Math, Intro to Data Science*
Electives for students completing **Pre-Calculus**: *Intro to Statistics, Discrete Math, AP Statistics, Intro to Data Science*
[South Windsor High School Course Catalog for the Math Department](#) *– explore the high school courses offered*

Frequently Asked Questions – SWHS Math 2024-2025

1. **What is Algebra Lab? Why might my child be recommended for this class?**

   Algebra Lab is a companion course to Algebra I. Algebra I is a full year course that earns 1 credit in math. Algebra Lab is a full-year course that earns 1 credit in elective credit. It is taught by a certified math teacher, and supports student learning in Algebra by pre-teaching concepts, providing reinforcement, practice and support with essential skills. Students who benefit from extra time with content, extra practice or support from the teacher in 8th grade are recommended for this course. Student performance in Algebra I is reviewed at the end of the first semester, and students who have strong performance in Algebra I at that time may instead take an elective or have a study hall in place of Algebra Lab. Students enrolled in Algebra Lab share with us that the extra time, support from teachers, pre-teaching of concepts and extra practice are very helpful.

2. **Why does the course sequence chart show that students can take Geometry and Algebra II with Trigonometry at the same time? Does my child need to take two math courses?**

   No student needs to take two math courses in a single year. Sometimes students wish to accelerate their study of math. Students are able to take Geometry and Algebra II with Trigonometry at the same time, taking two credits of math in a single year. This pairing of courses works because Geometry applies algebra concepts and Algebra II with Trigonometry builds on algebraic ideas, concepts and skills. Students who elect to take both math courses in the same year typically do so in grade 10 in order to take calculus during their senior year. Students who take this pathway typically are enrolled in Algebra in grade 9, both classes (Geometry and Algebra II with Trigonometry) in grade 10, Pre-Calculus in grade 11, and Calculus in grade 12.

   Occasionally, students who have completed Algebra I in grade 8 opt to take Geometry and Algebra II with Trigonometry at the same time in grade 9, then Pre-Calculus in grade 10, Calculus in grade 11, with the possibility of taking Multivariable Calculus in grade 12. *(continued on back page)* If students elect to take both of these courses (Geometry and Algebra II with Trigonometry) in the same year, both are typically taken at the CP (college prep) level instead of the honors level. Students who have the goal of taking AP level calculus (AP is Advanced Placement and holds the possibility of earning college credit) may consider taking Algebra II with Trigonometry at the honors level, followed by Honors Pre-Calculus, and then AP Calculus.

3. **Are there any courses in math that can earn college credit?**

   We offer several AP (Advanced Placement) courses in the math department. These courses are validated by College Board. Students who are enrolled in these classes can sit for the AP exam in May. Depending on the guidelines set by the receiving university or college, students may earn college credit based on their performance on this exam. AP Statistics, AP Calculus AB, and AP Calculus BC are offered for students. AP Statistics can be taken alone, or it can be taken concurrently with Honors Precalculus or calculus.

4. **What is the difference between AP Calculus AB and AP Calculus BC?**

This is a great question. Both courses are available to students after they have completed precalculus, and typically follow Honors Precalculus. Students elect to take *either* AP Calculus AB or AP Calculus BC. Both courses cover differential and integral calculus, however BC calculus also covers additional units which may earn additional credit beyond what AP Calculus AB would earn at the receiving college or university. As a result, this class goes at a much faster pace, and demands a very solid understanding of algebra and precalculus topics.

5. **What about Multivariable Calculus? Does that course earn college credit?**

Multivariable Calculus is equivalent to the third semester of college level calculus. It is available to students who have completed AP Calculus BC. There is no AP offering of Multivariable Calculus. As a result, there is no exam that has the potential to earn college credit. Students who complete this course in high school will not earn college credit, and should not expect to be placed out of this class in college. It is offered for students who wish to continue the study of algebra-based mathematics and who plan to study mathematics or engineering in college. Students will likely take this course again in college, but they will have had instruction in the topics.

6. **Do you have any advice for students as they begin high school?**

Absolutely. There are many wonderful classes to explore in high school. If you are drawn to math, there are also wonderful courses in other departments that apply math, or offer different experiences. If you also enjoy social sciences, economics courses in the Social Studies department may intrigue you. In the science department, upper level physics courses apply math to explore real-world phenomena. Our tech-ed department houses courses related to computer programming and engineering, while the business department offers many related courses as well. And finally, the art department offers students an opportunity to explore and create patterns in creative ways. We always suggest that students explore the wide range of courses offered at South Windsor High School to match both their interests and personal goals.

As students begin their year at the high school, we encourage them to always work with their math teachers. This is especially helpful if there is a topic that is challenging, to get ready for assessments and to review assessments after they are graded. South Windsor High School is proud of the math program that is offered, and we are excited to welcome you as you join the high school.