

## ***Saxon Advanced Mathematics Course Plan Set***

The following pages include three course plans for *Saxon Advanced Mathematics*. The course types and amount of credit are outlined below. The first course plan covers the entire book in one year and is considered to be an honors (H) track. Only highly motivated and able students should attempt the one-year Honors course. The last two course plans together cover the book over two years which is Kolbe's core (K) track. Most students will benefit from a two-year approach to the course so that advanced concepts can be grasped more easily.

### **Course Plan I. Precalculus (with Geometry)**

- ❖ Covers entire *Saxon Advanced Math* book in one year
- ❖ 10 math credits
- ❖ Honors credit **(H)**

### **Course Plan II. Algebra III with Geometry**

- ❖ Covers the first 60 lessons of the *Saxon Advanced Math* book in one year
- ❖ 10 math credits
- ❖ Kolbe core credit **(K)**

### **Course Plan III. Precalculus**

- ❖ Covers the remaining 65 lessons of the *Saxon Advanced Math* book in one year
- ❖ 10 math credits
- ❖ Kolbe core credit **(K)**

# Kolbe Academy Home School

## HIGH SCHOOL PRECALCULUS with GEOMETRY *Saxon Advanced Mathematics*

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**COURSE TITLE:** Precalculus with Geometry

**COURSE DESCRIPTION:** The *Advanced Mathematics* book by Saxon can be used in 2, 3, or 4 semesters. Kolbe Academy offers a course in two (10 credits) and four (20 credits) semesters. Those students interested in doing the course in 3 semesters (15 credits) should contact Kolbe for additional guidance. Those students who are more proficient in math, may want to use this one year honors Advanced Math course (10 credits), calling the course "Precalculus with Geometry." Students will be prepared for Calculus after this one year study of Advanced Mathematics. Students wishing to pursue a less rigorous approach to the advanced mathematics course should follow the Advanced Math I and II two-year (20 credits) track.

**SCOPE AND SEQUENCE:**

This course provides, among other topics, in-depth coverage of the following:

- trigonometry
- logarithms
- geometry
- analytic geometry
- fundamentals of algebra requisite for success in the above areas

**SKILLS TO BE DEVELOPED:**

- problem-solving.
- use of diagrams.
- familiarity with the concepts and procedures of algebra and advanced mathematics.
- Using the graphing calculator

**COURSE TEXT:** *Saxon Advanced Mathematics* (2<sup>nd</sup> edition)

**DIPLOMA REQUIREMENTS:**

***Summa Cum Laude*** diploma candidates are required to follow the Kolbe Honors course (H) track outlined in this Precalculus with Geometry course plan or use the subsequent course plans for Kolbe Core (K) credit. ***Magna Cum Laude*** and ***Standard*** diploma candidates may choose to pursue the (H) designation, but are not required to do so, and instead the parent has the option of altering the course plan as desired. ***Summa*** students must complete 4 years of mathematics during their high school course of study including the equivalent of Algebra I, Geometry, Algebra II, and Pre-Calculus (or higher). For a Summa student planning to use Saxon for their high school course of study, this means completing at minimum, the entirety of the *Saxon Advanced Math* program (meaning completing the entire *Saxon Advanced Math* text). ***Magna*** students must complete 3 years of mathematics during their high school course of study including Algebra I, Geometry, and Algebra II (or higher). For a Magna student planning to use Saxon for their high school course of study, this means completing at least through the Kolbe Advanced Math I course plan which covers a little over half of the *Saxon Advanced Math* book. ***Standard*** diploma students must complete 2 years of mathematics including Algebra I. Please see below for specific course titles, quarterly reporting requirements and transcript designations for Precalculus with Geometry.

**REQUIRED SAMPLE WORK:**

Designation*		H
Course Title**	Precalculus with Geometry	Precalculus with Geometry
Quarter 1	1. Any written sample of work	1. Completed Saxon Test 7
Quarter 2	1. Any written sample of work	1. Completed Saxon Test 15
Quarter 3	1. Any written sample of work	1. Completed Saxon Test 23
Quarter 4	1. Any written sample of work	1. Completed Saxon Test 31

\*Designation refers to designation type on transcript. H designates a Kolbe Academy Core course.

\*\*Students who have already taken a separate Geometry course (i.e. Jacobs Geometry) should use a course title of just "Precalculus."

If the student wishes to have the course distinguished on the transcript with a (H) as a Kolbe Academy Honors course, please be sure to send the correct exams and components each quarter for verification as specified above. **If no designation on the transcript is desired, parents may alter the lesson plan and any written sample work is acceptable to receive credit for the course each quarter.** If you have any questions regarding what is required for the (H) designation or diploma type status, please contact the academic advisory department at 707-255-6499 ext. 5 or by email at [advisors@kolbe.org](mailto:advisors@kolbe.org).

**COURSE PLAN METHODOLOGY:** The following course plan outline shows the schedule for the Honors Pre-Calculus course (H). **PLEASE refer to your Saxon test bank for the test schedule to ensure that the student takes each test after the appropriate lesson.**

◆◆◆ FIRST QUARTER ◆◆◆

WEEK	TRACK	COURSE NAME	LESSONS	TEST
1	Honors	Precalculus with Geometry	Lessons 1 – 5	
2	Honors	Precalculus with Geometry	Lessons 6 – 9	Test 1

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## HIGH SCHOOL ALGEBRA III WITH GEOMETRY *Saxon Advanced Mathematics*

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D. Fourth Quarter	5

**COURSE TITLE:** Algebra III with Geometry

**COURSE DESCRIPTION:** The *Advanced Mathematics* book by Saxon can be used in 2, 3, or 4 semesters. Kolbe Academy offers a course in two (10 credits) and four (20 credits) semesters. Those students interested in doing the course in 3 semesters (15 credits) should contact Kolbe for additional guidance. Those students who are more proficient in math, may want to use the one year honors Precalculus course (10 credits) outlined in the previous course plan. Students wishing to pursue a less rigorous approach to the advanced mathematics course should follow the Advanced Math I and II two-year (20 credits) track.

**SCOPE AND SEQUENCE:**

This course provides, among other topics, in-depth coverage of the following:

- trigonometry
- logarithms
- geometry
- analytic geometry
- fundamentals of algebra requisite for success in the above areas

**SKILLS TO BE DEVELOPED:**

- problem-solving.
- use of diagrams.
- familiarity with the concepts and procedures of algebra and advanced mathematics.
- Using the graphing calculator

**DIPLOMA REQUIREMENTS:**

***Summa Cum Laude*** diploma candidates are required to follow the Kolbe Core course (K) track outlined in this Algebra III with Geometry course plan. ***Magna Cum Laude*** and ***Standard*** diploma candidates may choose to pursue the (K) designation, but are not required to do so, and instead the parent has the option of altering the course plan as desired. ***Summa*** students must complete 4 years of mathematics during their high school course of study including the equivalent of Algebra I, Geometry, Algebra II, and Precalculus (or higher). For a Summa student planning to use Saxon for their high school course of study, this means completing at minimum, the entirety of the *Saxon Advanced Math* program (meaning completing the entire *Saxon Advanced Math* text). ***Magna*** students must complete 3 years of mathematics during their high school course of study including Algebra I, Geometry, and Algebra II (or higher). For a Magna student planning to use Saxon for their high school course of study, this means completing at least through the Kolbe Advanced Math I course plan which covers a little over half of the *Saxon Advanced Math* book. ***Standard*** diploma students must complete 2 years of mathematics including Algebra I. Please see below for specific course titles, quarterly reporting requirements and transcript designations for Algebra III with Geometry.

**REQUIRED SAMPLE WORK:**

Designation*		K
Course Title	Algebra III with Geometry	Algebra III with Geometry
Quarter 1	1. Any written sample of work	1. Completed Saxon Test 3
Quarter 2	1. Any written sample of work	1. Completed Saxon Test 7
Quarter 3	1. Any written sample of work	1. Completed Saxon Test 11
Quarter 4	1. Any written sample of work	1. Completed Saxon Test 15

\*Designation refers to designation type on transcript. K designates a Kolbe Academy Core course.

\*\*Students who have already taken a separate Geometry course (i.e. Jacobs Geometry) should use a course title of just "Algebra III."

If the student wishes to have the course distinguished on the transcript with a (K) as a Kolbe Academy Core course, please be sure to send the correct exams and components each quarter for verification as specified above. **If no designation on the transcript is desired, parents may alter the lesson plan and any written sample work is acceptable to receive credit for the course each quarter.** If you have any questions regarding what is required for the (K) designation or diploma type status, please contact the academic advisory department at 707-255-6499 ext. 5 or by email at [advisors@kolbe.org](mailto:advisors@kolbe.org).

**COURSE TEXT:**

*Saxon Advanced Mathematics* (2<sup>nd</sup> edition)

**COURSE PLAN METHODOLOGY:** The following course plan outline shows the schedule for the Algebra III course (K). Algebra III students will only complete through lesson 80. Algebra III students are encouraged to complete the advanced mathematics book in the 2 semester Precalculus (K) course next year. **PLEASE refer to your Saxon test bank for the test schedule to ensure that the student takes each test after the appropriate lesson.**

◆◆◆ FIRST QUARTER ◆◆◆

WEEK	TRACK	COURSE NAME	LESSONS	TEST
1	Core	Algebra III w/ Geometry	Lessons 1 – 2	
2	Core	Algebra III w/ Geometry	Lessons 3 – 4	

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## HIGH SCHOOL PRECALCULUS *Saxon Advanced Mathematics*

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**COURSE TITLE:** Precalculus

**COURSE DESCRIPTION:** The *Advanced Mathematics* book by Saxon can be used in 2, 3, or 4 semesters. This course plan is a continuation of the Algebra III with Geometry course. Students completing this course will be prepared to take Calculus next year.

**SCOPE AND SEQUENCE:**

This course provides, among other topics, in-depth coverage of the following:

- trigonometry
- logarithms
- geometry
- analytic geometry
- fundamentals of algebra requisite for success in the above areas

**SKILLS TO BE DEVELOPED:**

- problem-solving.
- use of diagrams.
- familiarity with the concepts and procedures of algebra and advanced mathematics.
- Using the graphing calculator

**DIPLOMA REQUIREMENTS:**

***Summa Cum Laude*** diploma candidates are required to follow the Kolbe Core course (K) track outlined in this Precalculus course plan. ***Magna Cum Laude*** and ***Standard*** diploma candidates may choose to pursue the (K) designation, but are not required to do so, and instead the parent has the option of altering the course plan as desired. ***Summa*** students must complete 4 years of mathematics during their high school course of study including the equivalent of Algebra I, Geometry, Algebra II, and Pre-Calculus (or higher). For a Summa student planning to use Saxon for their high school course of study, this means completing at minimum, the entirety of the *Saxon Advanced Math* program (meaning completing the entire *Saxon Advanced Math* text). ***Magna*** students must complete 3 years of mathematics during their high school course of study including Algebra I, Geometry, and Algebra II (or higher). For a Magna student planning to use Saxon for their high school course of study, this means completing at least through the Kolbe Advanced Math I course plan which covers a little over half of the *Saxon Advanced Math* book. ***Standard*** diploma students must complete 2 years of mathematics including Algebra I. Please see below for specific course titles, quarterly reporting requirements and transcript designations for Precalculus.

**REQUIRED SAMPLE WORK:**

Designation*		K
Course Title	Precalculus	Precalculus
Quarter 1	1. Any written sample of work	1. Completed Saxon Test 18
Quarter 2	1. Any written sample of work	1. Completed Saxon Test 22
Quarter 3	1. Any written sample of work	1. Completed Saxon Test 26
Quarter 4	1. Any written sample of work	1. Completed Saxon Test 31

\*Designation refers to designation type on transcript. K designates a Kolbe Academy Core course.

If the student wishes to have the course distinguished on the transcript with a (K) as a Kolbe Academy Core course, please be sure to send the correct exams and components each quarter for verification as specified above. **If no designation on the transcript is desired, parents may alter the lesson plan and any written sample work is acceptable to receive credit for the course each quarter.** If you have any questions regarding what is required for the (K) designation or diploma type status, please contact the academic advisory department at 707-255-6499 ext. 5 or by email at [advisors@kolbe.org](mailto:advisors@kolbe.org).

**COURSE TEXT:** *Saxon Advanced Mathematics* (2<sup>nd</sup> edition)

**COURSE PLAN METHODOLOGY:** The following course plan outline shows the schedule for the one semester course in Trigonometry. This course is a continuation of the one year Algebra III course using Saxon’s Advanced Mathematics book. Students should pursue this course in order to adequately prepare themselves for taking Calculus I in high school or college. **PLEASE refer to your Saxon test bank for the test schedule to insure that the student takes each test after the appropriate lesson.**

◆◆◆ FIRST QUARTER ◆◆◆

WEEK	TRACK	COURSE NAME	LESSONS	TEST
1	To bring students back to speed, some review may be necessary. Test 15 is assigned as a review and can be done as an open book test in Week 2.			
	Core	Precalculus	Lessons 61 –62	
2	Core	Precalculus	Lessons 63 – 64	Review: Test 15