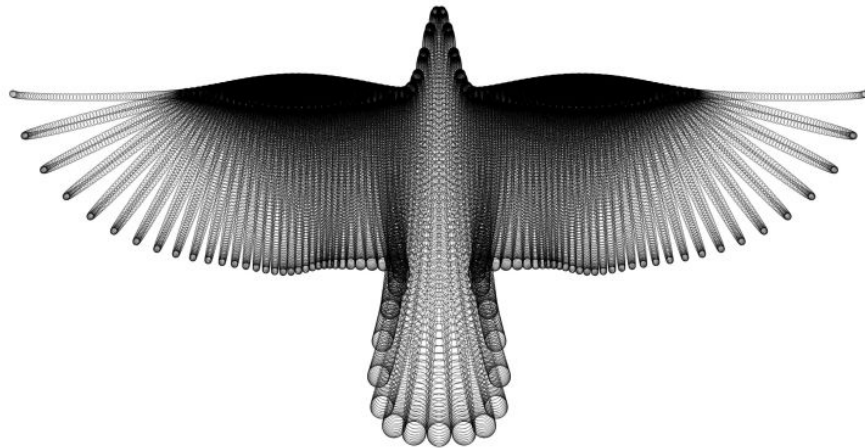




**INTERNATIONAL
CHRISTIAN
SCHOOL**

Mathematics Department: 2026-2027

Department Chair: **Kristin Barber, Kiel Nation, Will Schroeder, & Nick Seward**



A Bird in Flight by Hamid Naderi Yeganeh

This image shows all circles of the form $(x - A(k))^2 + (y - B(k))^2 = (R(k))^2$ for $k = -10000, -9999, \dots, 9999, 10000$, where

$$A(k) = \frac{3k}{20000} + \sin\left(\frac{\pi}{2} \left(\frac{k}{10000}\right)^7\right) \cos^6\left(\frac{41\pi k}{10000}\right) + \frac{1}{4} \cos^{16}\left(\frac{41\pi k}{10000}\right) \cos^{12}\left(\frac{\pi k}{20000}\right) \sin\left(\frac{6\pi k}{10000}\right),$$

$$B(k) = -\cos\left(\frac{\pi}{2} \left(\frac{k}{10000}\right)^7\right) \left(1 + \frac{3}{2} \cos^6\left(\frac{\pi k}{20000}\right) \cos^6\left(\frac{3\pi k}{20000}\right)\right) \cos^6\left(\frac{41\pi k}{10000}\right) \\ + \frac{1}{2} \cos^{10}\left(\frac{3\pi k}{100000}\right) \cos^{10}\left(\frac{9\pi k}{100000}\right) \cos^{10}\left(\frac{18\pi k}{100000}\right),$$

$$R(k) = \frac{1}{50} + \frac{1}{10} \sin^2\left(\frac{41\pi k}{10000}\right) \sin^2\left(\frac{9\pi k}{100000}\right) + \frac{1}{20} \cos^2\left(\frac{41\pi k}{10000}\right) \cos^{10}\left(\frac{\pi k}{20000}\right).$$

"A Bird in Flight" by Hamid Naderi Yeganeh, Iran, 2014.

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Introduction to Mathematics

Welcome to the Mathematics Department at ICS. This Subject Handbook is designed to provide an overview of the Mathematics Department's policies, procedures, and curriculum. It serves as a guide for teachers, students, and parents to ensure a cohesive and effective learning environment.

Mathematics Department Vision and Mission

Vision

To inspire and equip students with a strong foundation in mathematical thinking, grounded in a Christian worldview. We strive to foster a love for learning and a sense of curiosity, encouraging students to see the beauty and order in God's creation through the lens of mathematics.

Mission

To create a supportive and inclusive environment where students are challenged to think critically and develop resilience. By integrating faith with academics, we seek to cultivate not only competent mathematicians but also compassionate individuals who view their skills as a means to serve others, become responsible stewards in the world, and glorify God in their pursuits.

Secondary Department Faculty by Course

Middle School Courses	Grade	Teacher
Grade 6 Mathematics	6	Michelle Truman and Wade Simmons
Grade 7 Mathematics	7	Wade Simmons
Grade 7 Pre-Algebra	7	Wade Simmons and Michelle Truman
Grade 8 Mathematics	8	Tanya Wu
Grade 8 Algebra 1	8	Ami Unrau and Tanya Wu
Grade 8 Accelerated Math	8	Justine Fowler

High School Courses	Grade	Teacher
HS Algebra 1	9	Noah Ward
Geometry	9 - 11	Carlos Benavides and Noah Ward
Algebra 2	9 - 12	Corey Tam and Noah Ward
Practical Mathematics	10 - 12	Justine Fowler
AP Pre-Calculus	10 - 12	Corey Tam and Carlos Benavides
AP Statistics	10 - 12	Joy Asuncion
AP Calculus AB	11 - 12	Carlos Benavides
AP Calculus BC	11 - 12	Joy Asuncion and Corey Tam

ICS Teaching & Learning Philosophy

ICS Standards

ICS has a standards-based approach to education. This means we have clear and objective targets (standards) for learning in every subject, at every grade level. In the liberal arts (Math, Science and the Humanities) we emphasise the importance of knowledge, which is the basis for much of what we call 'skills'. In the creative arts (Music, Art and Drama) we emphasise the quality of both technique and interpretation. In Physical Education and Health we develop standards of physical capacity and skill.

Assessing learning of these standards is achieved by the use of proficiency rubrics, which clearly delineate a continuum from 'below standard' to 'approaching standard' to 'meeting standard' to 'exceeding standard'. Both formative and summative assessments are appropriate to the subject-specific standards.

Theology is the "Queen of the Sciences", and so the Bible has the pre-eminent place in our curriculum, training students in a Biblical worldview and understanding of the 'whole counsel of God'.

ICS Teaching & Learning Principles

- The Bible is our final authority in all matters of faith and conduct
- We use evidence-based practice founded on good cognitive science
- Optimal learning is knowledge-based and teacher-directed
- The teaching cycle: explicit instruction, modelling, practice, feedback
- The essence of a liberal arts education is deep reading, thinking, writing and discussion, in pursuit of goodness, truth and beauty, through Socratic dialogue
- We prioritise the known benefits of physical reading and handwriting
- We prepare students to operate effectively in a dual-modal society: departmental handbooks outline where digital technology is effective in enhancing learning, and our curriculum policy details education in digital literacy
- ICS partners with parents in mitigating the harms associated with screen-based childhood and learning, including our policies on homework and device-use

ICS Assessment

Formative assessment refers to a variety of methods teachers use to gather evidence about the effectiveness of their teaching and of students' academic progress over time. Formative feedback to students aims to help students understand where they are at with their learning, where it is they should be aiming for, and how to take next steps towards mastery of particular learning.

Summative assessments are assessments used to evaluate students' proficiency against ICS Standards in a particular unit, semester, or course. These assessments 'count' towards final grades on which ICS reports in Semester One and Semester Two.

Mathematics Curriculum

Mathematics at ICS is more than just calculation; it is the language of logic, patterns, and structure that allows us to decode the world. Our curriculum is designed to transform students into confident problem-solvers, equipping them with the abstract reasoning and analytical tools essential for success in any future field.

We encourage all students to cultivate curiosity about mathematical concepts and recognize how mathematics aids in sophisticated problem-solving, rigorous data analysis, and modeling real-world scenarios.

Our learning standards intentionally provide a coherent, high-quality education that builds essential foundations. This foundational work prepares students for the highest levels of high school study, including success in Advanced Placement (AP) courses such as AP Precalculus, AP Statistics, and AP Calculus, ensuring they have the lifelong mathematical skills necessary for innovation and informed decision-making.

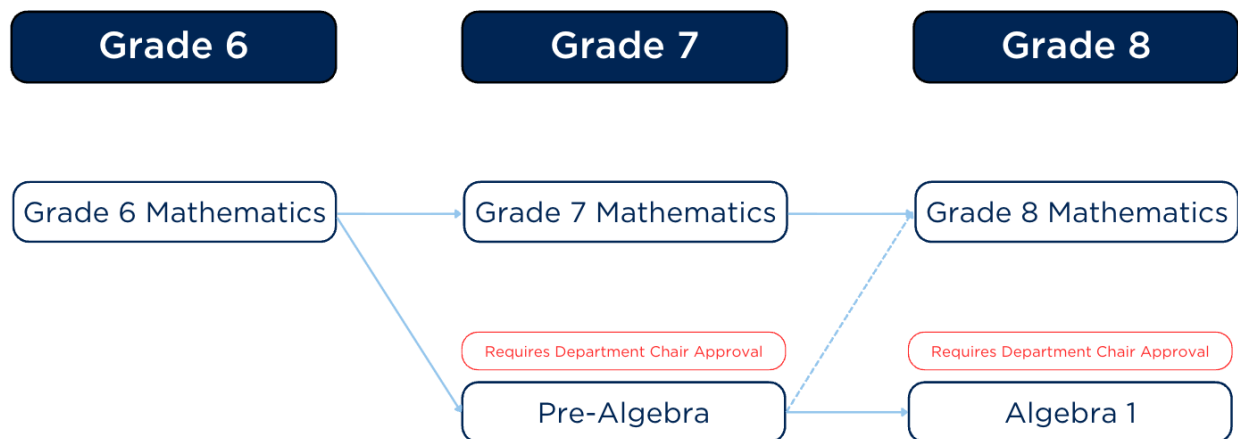
Middle School Courses	Grade
Grade 6 Mathematics	6
Grade 7 Mathematics	7
Grade 7 Pre-Algebra	7
Grade 8 Mathematics	8
Grade 8 Algebra 1	8
High School Courses	Grade
HS Algebra 1	9
Geometry	9 - 11
Algebra 2	9 - 12
Practical Mathematics	10 - 12
AP Pre-Calculus	10 - 12
AP Statistics	10 - 12
AP Calculus AB	11 - 12
AP Calculus BC	11 - 12

Note: For more information about each course in the Mathematics Curriculum, please read the following:

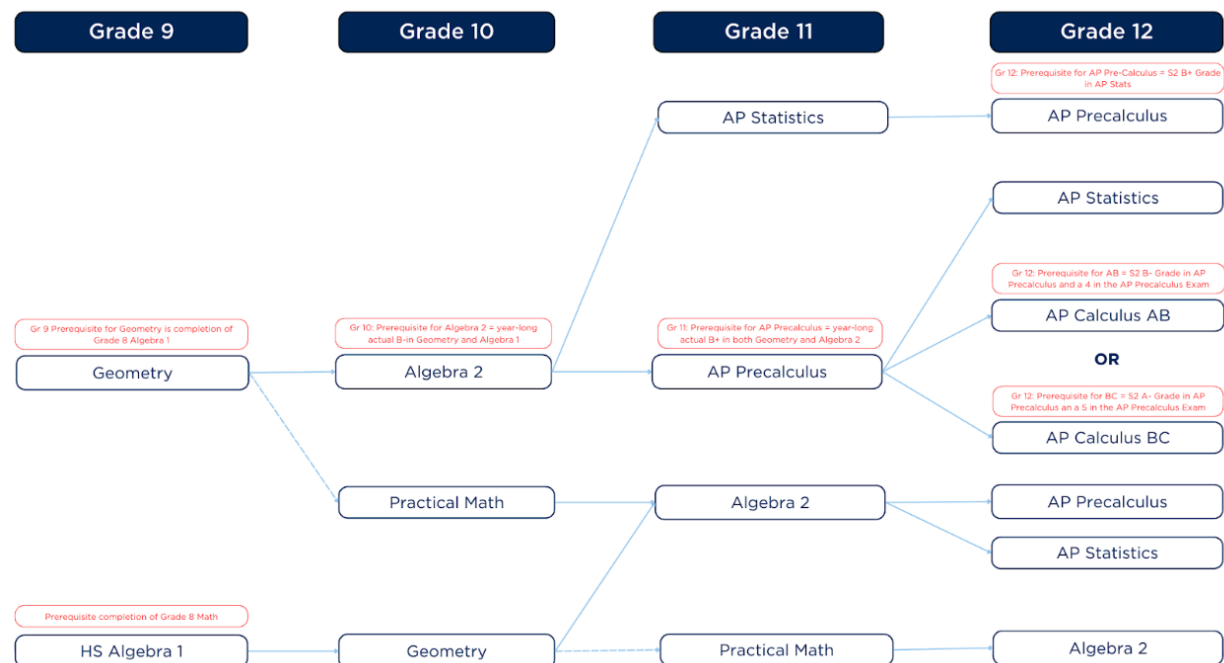
- [MIDDLE SCHOOL COURSE GUIDE 2026/27](#)
- [HIGH SCHOOL COURSE GUIDE 2026/27](#)

Mathematics Course Pathways Grades 6 - 12

Middle School Course Pathways

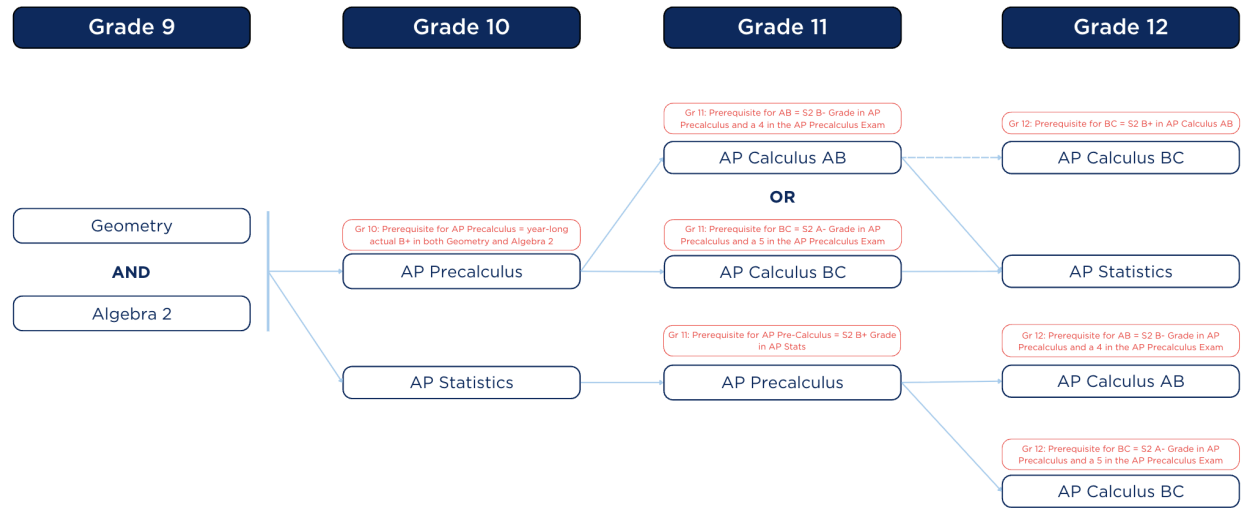


High School Course Pathways



High School Course Pathways (Double Mathematics in Grade 9)

The double Math option in Grade 9 is available only on approval from the Department Chair and C&I. The prerequisite for this pathway is an A- in Algebra 1 in Grade 8 and consistent learning behaviour scores (3) in all learning behaviour categories for that course.



School & Mathematics Department Policies

General Classroom Practice

Students maintain Mathematics notebooks which must be brought to every lesson.

Teachers are responsible for communicating Unit Rubrics at the beginning of every unit to students and parents; teachers will provide formative feedback on every formative assessment relevant to the Unit Rubric.