SEHOME MATHEMATICS COURSE PATHWAYS

At Sehome High School, our Mathematics Department is committed to fostering a learning environment rooted in **integrity**, **perseverance**, **inclusivity**, and **respect**. We believe in cultivating a growth mindset that supports the development of the whole student, encouraging ***critical thinking, collaboration, and personal responsibility***. We take pride in the excellence of our teaching and learning practices, inspiring students to strive for their best in all they do. By embracing challenges and celebrating progress, we aim to empower each student to reach their fullest potential and contribute positively to our diverse community.

Washington Guaranteed Admissions Program (WAGAP)

The program lets students learn if they are admitted to these six universities (Central Washington University, Eastern Washington University, Evergreen State College, University of Washington Tacoma, Washington State University, and Western Washington University) before applying. If these simple criteria are met, students are guaranteed admissions:

- Minimum GPA of 3.0 or higher
- Completed or are on track to complete by fall 2025 all the College Academic Distribution Requirements (CADRs)
- School has an agreement with the participating university and college to be part of the program. Participating schools and districts can be found here.

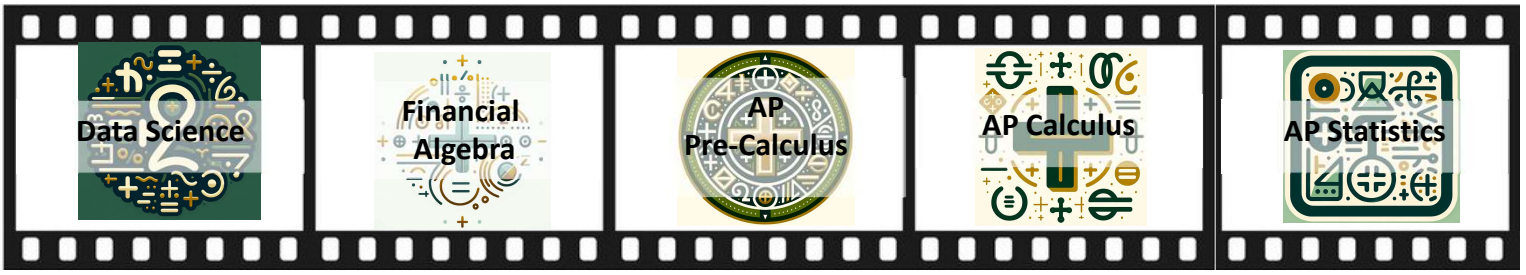
	9th Grade	10th Grade	11th Grade	12th Grade
WAGAP STEM Pathway	Algebra I	Geometry	Algebra II	Pre-Calculus (College Credit)
WAGAP Satisfied	Algebra I	Geometry	Algebra II	Data Science (College Credit)
HS Graduation Pathway	Algebra I	Geometry	3rd Year Math Course (BTC, WCC, and SVC Recommend Algebra II)	X (Required for most 4-year colleges and universities)

* It is possible to take ***multiple math classes in a school year***, students should consider their academic workload and talk with family, counselor and current math teacher if that is an appropriate choice for the student's future goals.

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SEHOME MATHEMATICS COURSE OFFERINGS

Refer to the course catalog and/or videos linked below for more specific information on the course offered at Sehome High School



The ***Financial Algebra*** course satisfies a variety of needs for students. While Algebra 2 is recommended for any student wishing to take continuing education after high school, Financial Algebra can satisfy a 3rd year of math for HS graduation and offers Dual Credit for Business Math at BTC and WCC.

If you are looking for advanced placement and higher-level math course because of acceleration and the love of learning math. The courses of ***Pre-Calculus and Calculus have AP options,*** they also have prerequisites to ensure students are set up for success.

AP Statistics and Data Science are fantastic courses as a stand alone but can also be paired with Pre-Calculus and/or Calculus to become a well-rounded mathematics student for all future endeavors.

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DATA SCIENCE



Snapshot of the course: In Data Science, students will learn to be data explorers in project-based units, through which they will develop their understanding of the entire data lifecycle from collecting data to communication insights. Students will learn foundational concepts in data storage, data preparation, data analysis, and data visualization. Advanced topics, which include machine learning and the role of AI in analytics, are introduced. Students will explore the main ideas in data science through free tools such as Google Sheets, CODAP, Google Collaboratory with EduBlocks/Python, Data Commons, Data Camp, and Tableau. Throughout the course students will build a portfolio of their data science work to showcase their newly developed abilities and will learn work readiness skills to prepare them for career and college.

Prerequisites: Geometry, Grades 10-12

Course Length: Year long

Course Topics: The Data Science Process, Data Lifecycle, and Data Ethics, Relational Databases, SQL: Storing, Manipulating and Retrieving Data, Bivariate Data and Causality vs. Spurious Correlation, Intro. to Tableau, Probabilistic Modeling, Basic Python Programming, Running a Data Simulation, Categorical Data and Introduction to Linear Algebra, Prioritization Model, Sensitivity Analysis, Understanding Bias, Introduction to Machine Learning and AI

Course Considerations: Data Science might be CTE Dual Credit approved and articulated with Skagit Valley College in 25-26. You must receive a B or better (both semesters) to earn dual credit from SVC. During the year we cover learning outcomes included in the SVC DATA 101: Introduction in Data course (5 credits).

FINANCIAL ALGEBRA



Snapshot of the course: In Financial Algebra, we will explore questions and find patterns relating to the stock market, modeling a business, the financial aspects of career planning, responsible financial decision-making, automobile ownership, the tax system, budgeting techniques, savings and investment strategies to meet short and long-term goals, student education loans, evaluation of services offered by financial institutions, managing credit cards and debt, fraud, and financial loss. Students will learn work readiness skills to prepare them for career and college.

Prerequisites: Two Years of High School Math, Grades 11-12

Course Length: Year long

Course Topics: Analyze stock charts and calculate stock metrics, buy/sell stocks/bonds, understand checking and savings accounts, write checks and balance a checkbook, calculate the future value of an investment, analyze credit scores, perform credit card statement calculations, calculate total interest paid on various loans, fill out 1040 tax forms, compare tax systems, analyze the process for buying/leasing a vehicle, analyze amortization schedules, statistics for automobile insurance, vehicle accident investigation calculations, write a work resume, answer common job interview questions, compute wage, salary, overtime, commission, and employee benefit calculations, analyze business financial statements, generate supply and demand curves, calculate expense and revenue functions, determine the best price for a company to sell their materials, create a budget, study the process of buying a house or renting an apartment, calculate different types of mortgage payments and interest, and perform calculations for retirement plans, annuities, and reverse mortgages.

Course Considerations: Financial Algebra is CTE Dual Credit approved and articulated with Bellingham Technical College & Whatcom Community College. You must receive a B or better (both semesters) to earn dual credit from BTC or WCC. During the year we cover learning goals included in the following BTC/WCC courses:

BTC: BUS 150 – Mathematics for Business (5 credits)
WCC: BUS 100 – Business Math (5 credits)

AP OR NON-AP
PRE-CALCULUS



Snapshot of the course: Precalculus continues the study of functions, including polynomial, rational, exponential, and logarithmic functions. The course also develops deeper understanding of trigonometric functions and their graphs.

Prerequisites: Algebra II

Course Length: Year long

Course Topics: Trigonometric Functions and Relationships, Polynomial and Rational functions, and Exponential and Logarithmic Functions.

Course Considerations: Precalculus is split into AP and non-AP versions. Both versions cover the topics above and can provide college in the high school credits, while the AP course will include additional topics of sequences, conic sections, vectors, polar equations, and complex numbers. AP Precalculus is specifically designed to prepare students for AP Calculus, with a much greater focus on rates of change of every function type. Grading in the non-AP Precalculus class remains standards based (same 4-points scale as Algebra 1, Geometry, and Algebra 2), while the AP course transitions into grading from AP style tests, similar to what you would see in AP Calculus. Students planning on taking AP Calculus and/or entering a STEM field in college should strongly consider taking the AP course, while students looking to continue their math education and get college credit for a 4th year math course might opt for the non-AP course.

AP CALCULUS OR CALCULUS



Snapshot of the course: AP Calculus is rigorous, very challenging, takes much practice, effort and work. Non-AP Calculus is designed to be intentional in minimizing homework, spend more time developing concepts while supporting algebraic work.

Prerequisites: AP Precalculus or Precalculus

Course Length: Year long

Course Topics: Limits, Derivatives, Integrals and Applications of derivatives and integrals

Course Considerations: AP Calculus questions are rigorous. Non-AP Calculus are more focused on the broad concepts as opposed to higher complexity scenarios. Both courses will offer free Calculus 1 credit (Math 124) from WWU. Consider AP Calculus if...You have room in your schedule for a high course workload. You want another AP class on your transcript. You want a resume builder of a 4 or 5 on the AP Calculus exam. You want the cleanest defined college credit across the nation. You feel like you truly understand most/all precalculus topics. Be careful about balancing your total AP workload as the workload for AP Calculus is high.

AP STATISTICS



Snapshot of the course: Applied mathematics for the real world and analyzing situations through data.

Prerequisites: Pass Algebra 2 with a B+ or higher. Recommendation from teacher.

Course Length: Year long

Course Topics: The purpose of the AP course in statistics is 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:

1. **Exploring Data:** Observing patterns and departures from patterns
2. **Planning a Study:** Deciding what and how to measure
3. **Anticipating Patterns:** Producing models using probability theory and simulation
4. **Statistical Inference:** Confirming models

Course Considerations:

- **What is class like?**
  - Nearly every day we cover something new. It is a flipped classroom meaning HW is expected to be done as preparation for class and we dig deeper during our class time.
    Much of the time we do labs or group investigations – which always seem to involve a food item!
- **Do you have to be a top-rate mathematician?**
  - The course does not depend heavily on abstract mathematical concepts, but you **DO** need a **very strong** background in Algebra II.
    Our calculators will help us with much of the numeric drudgery inherent in statistics.
    More importantly, you must be an AP-level self-motivated scholar who reads the text, stays caught up, and prepares for class on a consistent basis.

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