

## **Graduation Requirements:**

- \* Minimum of 6 semesters of math in high school
- Must have Completed Algebra 1 and Geometry
- Pass Math SBA test (taken in 10<sup>th</sup> grade)

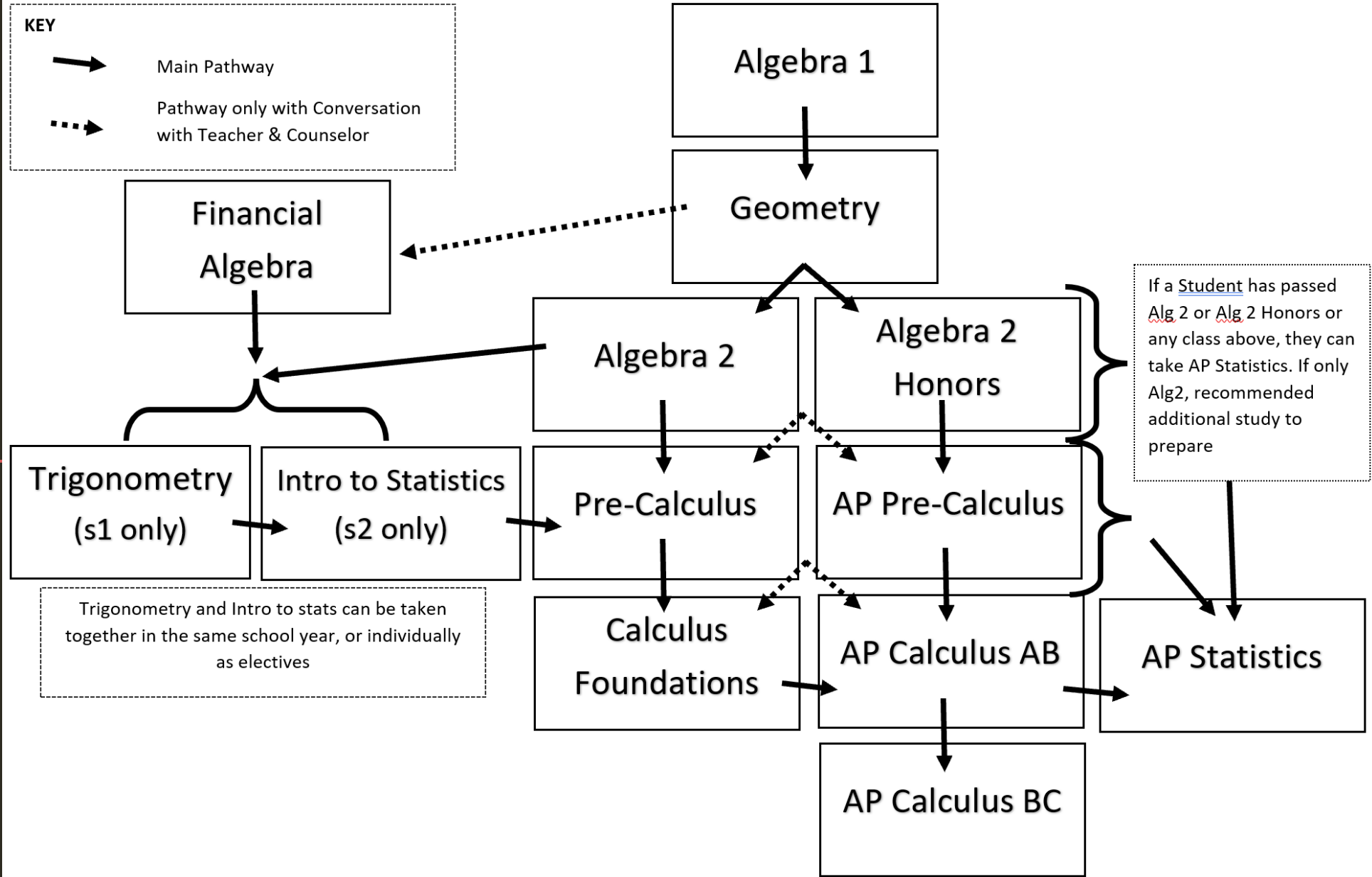
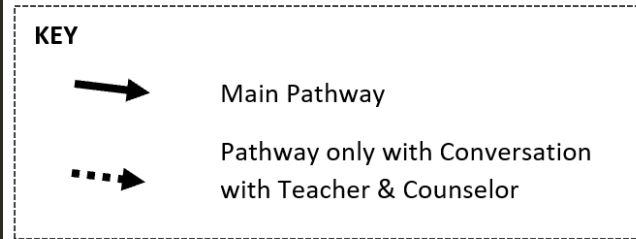
## **4-year College Requirements:**

- 4 years of math in high school
- Credit through Algebra 2
- At least one course with Trig (Trig or Pre-Calculus)

# MATH COURSE PATHWAYS

2023-2024

# Math Pathways 23-24



# MATH PATHWAYS

# CURRENT COURSE: ALGEBRA 1

## COURSE OPTIONS

### Geometry

- Must have passed at least one semester of Algebra 1

## ELECTIVES

No Math Electives Available

# CURRENT COURSE: GEOMETRY

## COURSE OPTIONS

### Algebra 2

- Credit in Geometry and Algebra 1 (Must have passed BOTH semesters)
- Preparation for Pre-Calculus

Most commonly  
chosen option

### Algebra 2 Honors

- Rigorous course to prepare students for Pre-Calculus and AP Pre-Calculus

### Financial Algebra\* (12th only)

- After conversation with counselor and teacher – depending on post-high school plans

## ELECTIVES

### AP Computer Science Principles

# CURRENT COURSE: ALGEBRA 2

## COURSE OPTIONS

### Trigonometry/ Introduction to Statistics

- Expose to Trigonometry for 4-yr colleges; Not prep for AP Calc
- Courses that could follow: Foundations of Calc, Applications of Statistics, AP Statistics, Pre-Calculus

### Pre-Calculus

- Preparation for Calculus Courses

Most commonly  
chosen option

### AP Pre-Calculus

- Preparation for AP Calculus AB

### Financial Algebra\* (12th only)

- After conversation with counselor and teacher – depending on post-high school plans

## ELECTIVES

### AP Computer Science Principles

AP Statistics\* - *Only recommended if Students Excelled in Algebra 2*

# CURRENT COURSE: ALGEBRA 2 HONORS

## COURSE OPTIONS

### Trigonometry/ Introduction to Statistics

- Expose to Trigonometry for 4-yr colleges; Not prep for AP Calc
- Courses that could follow: Foundations of Calc, Applications of Statistics, AP Statistics, Pre-Calculus

### Pre-Calculus

- Preparation for Calculus Courses

### AP Pre-Calculus

- Preparation for AP Calculus AB

Most commonly  
chosen option

### Financial Algebra\* (12th only)

- After conversation with counselor and teacher – depending on post-high school plans

## ELECTIVES

### AP Computer Science Principles

AP Statistics\*- *Only recommended if Students Excelled in Algebra 2*

# CURRENT COURSE: ALGEBRA 3/TRIGONOMETRY

## COURSE OPTIONS

### Pre-Calculus

- Credit in Alg3/Trig
- Rigorous Pre-Calculus Course

### Foundations of Calculus

Most commonly  
chosen option

### AP Statistics

- Credit in Alg3/Trig
- Recommend you Revisit Pre-Calc topics and introduction of limits

### Financial Algebra\* (12th only)

- After conversation with counselor and teacher – depending on post-high school plans

## ELECTIVES

### AP Computer Science Principles

# CURRENT COURSE: MATH ANALYSIS

## COURSE OPTIONS

### Foundations of Calculus

- Revisit Pre-Calc topics and introduction of limits and derivatives

### AP Calculus AB

### AP Statistics

Most commonly  
chosen options

### Trigonometry/ Introduction to Statistics

- Expose to Trigonometry for 4-yr colleges; Not prep for AP Calc
- Courses that could follow: Foundations of Calc, Applications of Statistics, AP Statistics, Pre-Calculus

## ELECTIVES

### AP Computer Science Principles

### AP Statistics



# CURRENT COURSE: FOUNDATIONS OF CALCULUS

## COURSE OPTIONS

AP Calculus AB

AP Statistics

Most commonly  
chosen options

Trigonometry/ Introduction to Statistics

- Expose to Trigonometry for 4-yr colleges; Not prep for AP Calc
- Courses that could follow: Foundations of Calc, Applications of Statistics, AP Statistics, Pre-Calculus

## ELECTIVES

Financial Algebra

AP Computer Principles

AP Computer Science A

# CURRENT COURSE: AP CALCULUS AB

## COURSE OPTIONS

AP Calculus BC

AP Statistics

Most commonly  
chosen option

## ELECTIVES

Financial Algebra

AP Computer Principles

AP Computer Science A

# CURRENT COURSE: AP CALCULUS BC

## COURSE OPTIONS

AP Statistics

## ELECTIVES

Financial Algebra

AP Computer Principles

AP Computer Science A

ELECTIVES

# FOUNDATIONS OF CALCULUS

## COURSE DESCRIPTION

1 Year; Math Credit

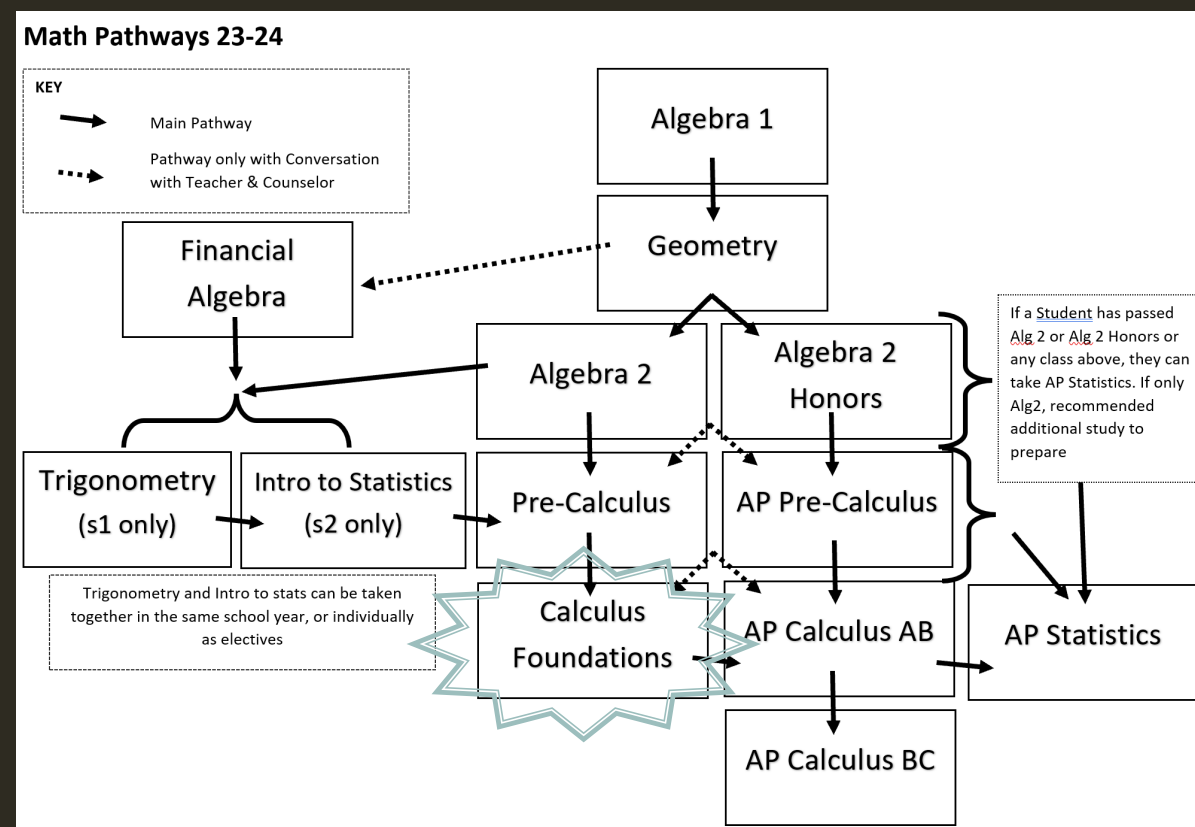
### Overview:

- Prerequisite: Taken Math Analysis (11<sup>th</sup> or 12<sup>th</sup>) or Alg 3/Trig (12<sup>th</sup>)
- Review Pre-Calculus Material
- Strengthen foundational skills for AP or college level calculus

### Topics Covered:

- Radicals
- Inequalities
- Trig, Limits
- Derivatives
- Apps of Derivatives

## PLACE IN SEQUENCE



# TRIGONOMETRY & INTRO TO STATISTICS

## COURSE DESCRIPTION

1 year; Math Credit

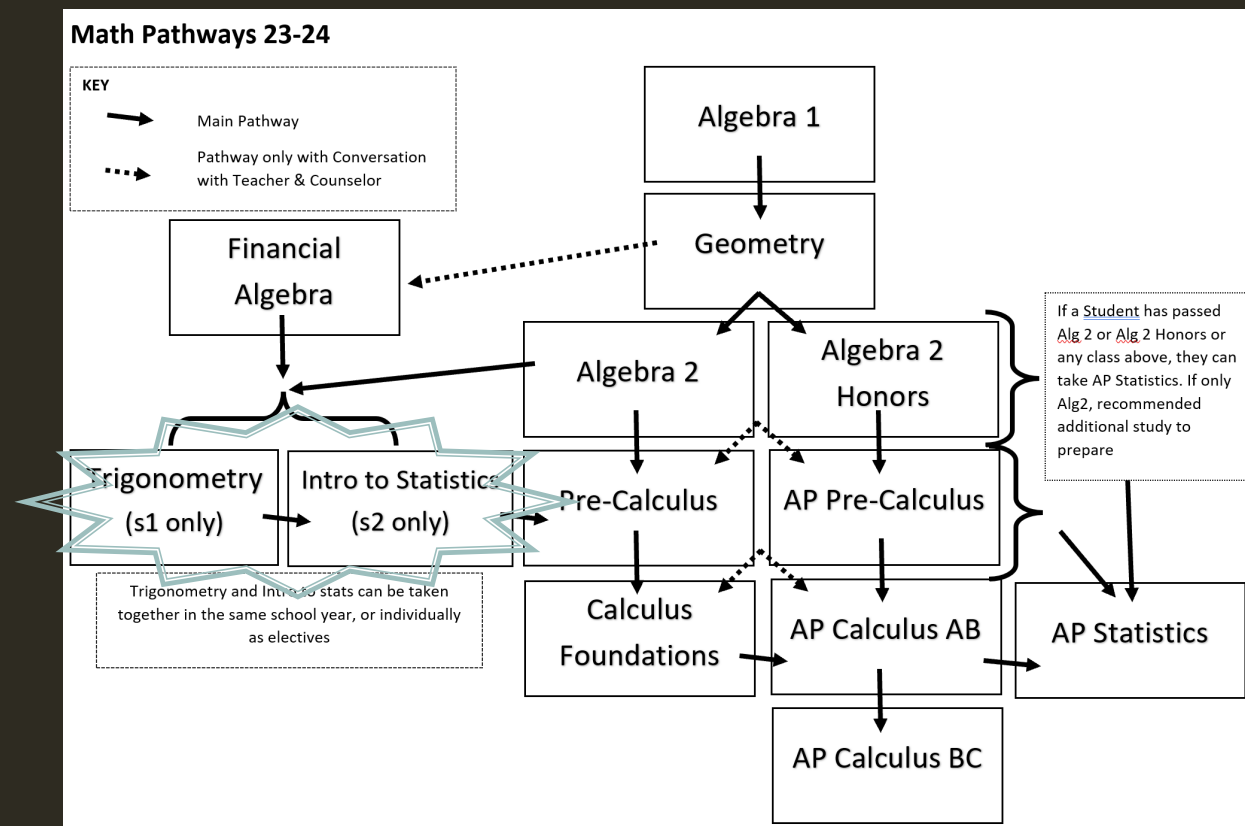
- 1<sup>st</sup> Semester: Concepts of Trigonometry
- 2<sup>nd</sup> Semester: Introduction to Statistical Applications

### Overview

- Pre-Requisite: Credit in Algebra 2
- Introduces statistical thinking and trigonometric applications
- Graphing calculators will be used for developing concepts and analyzing data.

Trigonometry and Intro to stats can be taken together in the same school year, or individually as electives

## PLACE IN SEQUENCE



# FINANCIAL ALGEBRA

## COURSE DESCRIPTION

1 year; Math\* or Occ. Ed Credit

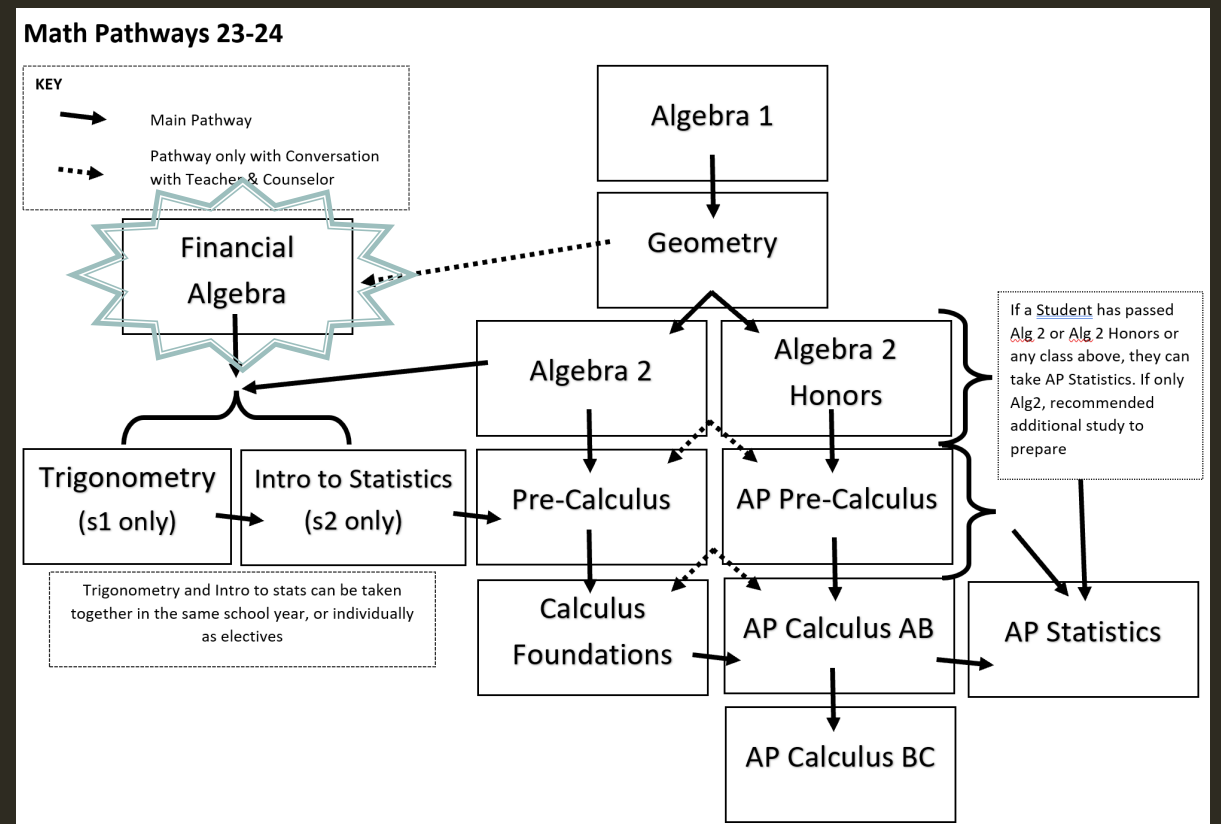
### Overview

- A gentle introduction to real-world applications of algebra in finance.
- Personal finance with focus on math applications
- If not needing math credit, consider taking Personal Finance (1 semester elective) instead

Topics Covered: Credit Cards and Interest, Loans, Investments, Banking, Taxes, and Budgets

\* Students interested in taking course for math credit should have discussion with counselor first.

## PLACE IN SEQUENCE



# AP STATISTICS

## COURSE DESCRIPTION

1 year; Math Credit

### Overview

- Equivalent to 1 semester college course
- Prerequisites: Credit in Algebra 2 Honors or Pre-Calculus
- Introduces non-calculus based statistics, including major topics and tools needed to collect, analyze and draw conclusions from data.
- Students use technology, investigations, problem solving, and writing as they build conceptual understanding.

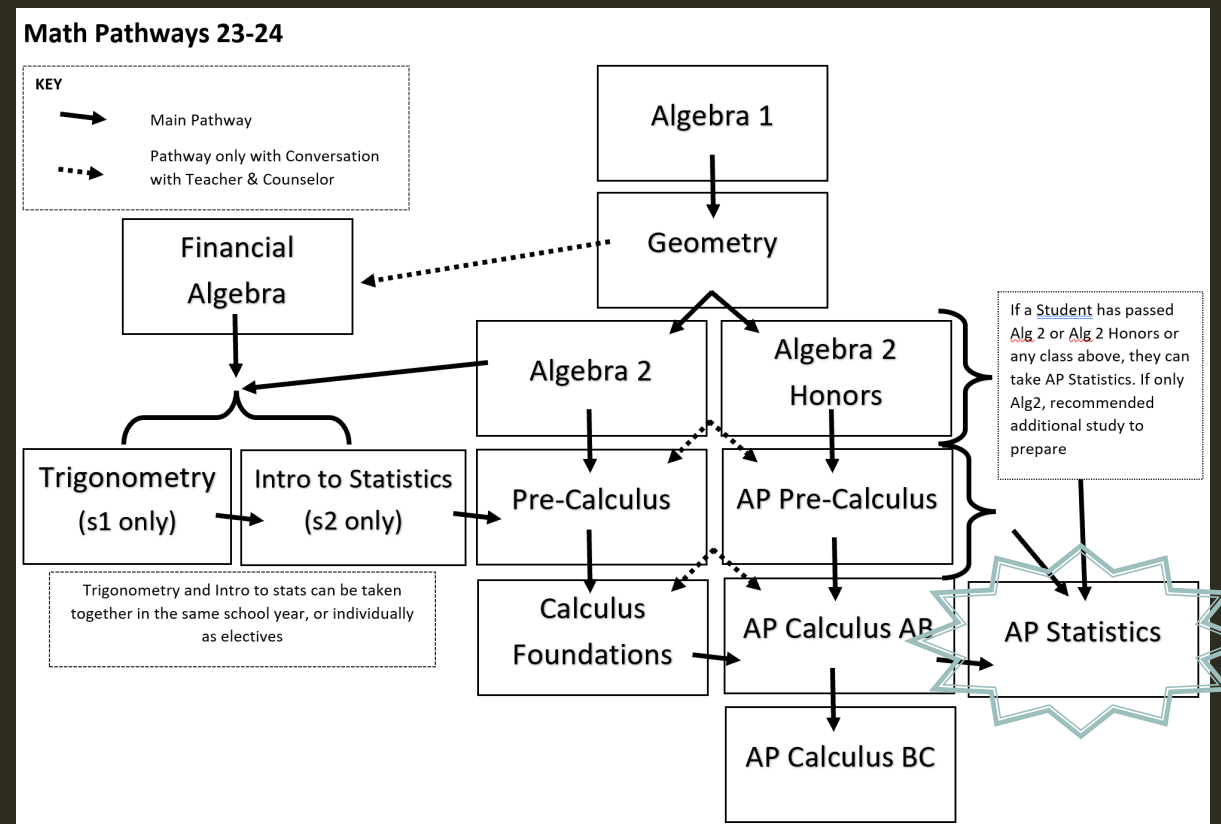
### Topics Covered:

- Four themes: exploring data, sampling and experimentation, anticipating patterns, and statistical inference.

### Goals:

- Describe patterns and departures from patterns;
- Plan and conduct a study;
- Explore random phenomena using probability and simulation; and
- Estimate population parameters and test hypotheses.

## PLACE IN SEQUENCE





# AP COMPUTER SCIENCE A

The Programming Class

1 year; OccEd or Science Credit

## Overview:

- Prerequisites: Algebra 2, 10th Grade
- Language: Java (Beginning - Intermediate Level)
- Homework: 30-45 minutes/night

## Curriculum:

- Curriculum: University of Washington / Microsoft Teals
- UW similar classes: CSE 142 - Computer Programming I

## Outcomes:

- 97% of LW students pass AP the test (4.5 average score)
- You will know how to program in Java at a college level.

## Bottom Line:

- No prior programming experience needed! (But it is helpful)
- If you can only take one-year computer science class at LW, you are a strong student, and you are interested in STEM fields, then this is the course for you.
- Lab based course.

# AP COMPUTER SCIENCE PRINCIPLES

The Computer Concepts AP Class  
1 year; OccEd or Science Credit

## Overview

- Prerequisites: Geometry, 9th Grade
- Language: Javascript (Beginning Level)
- Homework: 15-20 minutes/night

## Curriculum:

- Code.org / Microsoft Teals
- UW similar classes: CSE 120 - Computer Science Principles

## Outcomes:

- You will be able to think critically about a variety of topics in computer science like the internet, big data, encryption, hacking and innovations.
- You will be able to program in Javascript at a starting level and submit an App using AppLab as a final project

## Bottom Line:

- No prior programming experience needed.
- This AP class was designed to be equivalent to computer science for non-majors at the university level. It is engaging for students of all levels / backgrounds.
- Less homework than a typical AP class because it is lab and portfolio based.