

Senior Year Math Recommendations

These are general rules of thumb, not to supersede student interest, motivation, etc.

If a student took:	And got a grade of:	The next class should be:
Secondary Math IIIH	A or B C, D, or F	AP Calc AB, AP Calc BC, AP Stats, Math 1040, Math 1050, or Math 1060 Pre-Calculus, Intro to Statistics, Math 1030, or Math 1040
Secondary III	A or B A, B, C, or D A, B, C, D, or F C, D, or F	AP Stats, Math 1050, or Math 1060 Math 1030, or Math 1040 Pre-Calculus, Math in Business & Personal Finance, Introduction to Stats, College Prep

COURSE DESCRIPTIONS

AP Calculus AB

Prerequisite: Pre-Calculus or Secondary Mathematics IIIH

This is an introduction to differential and integral calculus topics, which are equivalent to a college level Calculus 1 course. The course uses advanced skills in algebra, geometry, and trigonometry to analyze real world problems involving movement and variable rates of change. Graphing calculator investigations are an integral part of the course and the AP exam. University credit may be earned with successful performance on the AP exam.

AP Calculus BC

Prerequisite: Pre-calculus or Secondary Math IIIH

This course teaches the extension of the differential and integral calculus topics of Calculus AB, which is the equivalent to two semesters of college level Calculus 1 and 2 courses. The course uses advanced skills in algebra, geometry, and trigonometry to analyze real world problems involving movement and variable rates of change. This course focuses on the application of calculus using vectors, parametric/polar modeling, and power series. Graphing calculator investigations are an integral part of the course and the AP exam. University credit may be earned with a successful performance on the Advanced Placement exam.

AP Statistics

Prerequisite: Secondary Mathematics II. Can be taken concurrently with Secondary Math III.

An introductory, non-calculus-based college level course which introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data, including exploring data, statistical inference, planning a study, and using probability and simulation to anticipate patterns. Graphing calculators with statistical capabilities are an integral part of the course and of the Advanced Placement exam. University credit may be earned with a successful performance on the Advanced Placement exam.

College Prep Math

Prerequisite: Secondary Math III

College Prep Math formalizes and reinforces concepts from the Secondary Mathematics series to provide students with the foundational skills and understanding that are prerequisite for College Algebra (1050). Students will reason abstractly and quantitatively while solving linear and quadratic equations and linear inequalities. They will efficiently use polynomial and rational expressions and functions, radicals and complex numbers, and exponential and logarithmic expressions and functions to model and solve mathematical problems. They will explore conic sections and represent parabolic data. Throughout this course, students will make sense of problems and persevere in solving them, use tools strategically, and attend to precision.

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Introductory Statistics

Prerequisite: Secondary Math II

Statistics is a branch of mathematics that explores concrete connections with everyday living. Students will develop critical thinking skills with lifelong application. Students will gather, graph, examine, compare and interpret data using technology, including graphing calculators or computer statistics software. They will describe data and make informed decisions and predictions based on data.

Mathematics of Personal & Business Finance

Prerequisite: Secondary II

This course focuses on the application of mathematics with an emphasis on understanding formulas and reasoning through real-life situations. Some of the topics that students will learn are wages, taxes, budgeting, interest, loans, credit, vehicle and house purchases, insurance and retirement.

MATH 1030 Quantitative Literacy (English/languages, Fine arts, Humanities, and Performing Arts Majors)

Prerequisite: Successful completion of Secondary I, II and III (C grade or better). Qualifying ACT Scores (Math: 19, Reading: 16).

Appropriate CPT or ACT Math score. Students must have successfully completed Secondary Math 3.

This course focuses on the development of analytical thinking through the application of math to real-life problems. Topics include modeling, logic, financial math, probability, statistics, and geometry. For students with focus on English/languages, Fine arts, Humanities, and Performing arts fields of study.

MATH 1040 Statistics (History, Nursing, Psychology, Social Science Majors)

Prerequisite: Successful completion of Secondary I, II and III (C grade or better). Qualifying ACT Scores (Math: 22, Reading: 16).

Descriptive and inferential statistical methods. Emphasis on sampling design; descriptive statistics; linear regression and correlation; probability; sampling distributions; hypothesis testing, and confidence intervals.

MATH 1050 College Algebra (Business, Biology & physical sciences, Engineering, Education Majors)

Prerequisite: Successful completion of Secondary I, II and III (C grade or better). Qualifying ACT Scores (Math: 23, Reading: 18).

This course covers polynomial, rational, exponential, and logarithmic functions and graphs, complex roots of polynomial functions, matrices, partial fractions, conics, sequences and series, and the binomial theorem. Includes real-world application problems and graphing technology.

MATH 1060 Trigonometry

Prerequisite: Math 1050 with C or Successful completion of Secondary I, II and III (C grade or better) and qualifying ACT Scores (Reading: 18) and Accuplacer math score.

Trigonometric functions and their graphs developed using circular and triangular methods including inverses; polar coordinates; and an introduction to vectors.

Pre-calculus

Prerequisite: Secondary Math III

This course combines the trigonometric, geometric, and algebraic techniques needed to prepare students for the study of calculus, and strengthens students' conceptual understanding of problems and mathematical reasoning in solving problems. Instructional time will focus on four critical areas: (1) extend work with complex numbers; (2) expand understanding of logarithms and exponential functions; (3) use characteristics of polynomial and rational functions to sketch graphs of those functions; and (4) perform operations with vectors. Proficiency with these topics is especially important for students intending to study calculus, physics, and other sciences, and/or engineering in college.