













Math Classes at Lisle High School

All students must pass three (3) years or six (6) semesters of math to graduate. The following sequences are possibilities for students who enter LHS as freshman. Students are placed in each sequence based on grades, MAP scores, and teacher recommendation. There are certain criteria that must be met in order to stay in each math sequence.

	SEQUENCE 1	SEQUENCE 2	SEQUENCE 3	SEQUENCE 4
FR	Algebra I Part 1  Pass	Algebra I  Pass	Geometry  Pass	Honors Geometry  B or Better
SO	Algebra I Part 2  Pass	Geometry  Pass	Algebra II/Trig  C or Better	Honors Algebra II  B or Better
JR	Geometry or Informal Geometry  Pass	Algebra II/Trig  C or Better	PreCalculus  B or Better	Honors PreCalculus  B or Better
SR	Algebra II or Geometry	PreCalculus and/or Prob and Stats	Calculus and/or Prob and Stats	Calculus and/or Prob and Stats

MATH

ALGEBRA I, Part 1 - (FRESHMAN - SENIOR)

This course is the first year in a two-year sequence which will give the student the same background as Algebra I. It is designed for the student who would benefit from extended preparation for success in Algebra. Topics include integers and real numbers, variables, polynomials, linear equations, and graphing. A scientific calculator is required. This course by itself does not satisfy college entrance requirements. PRE-REQUISITE: Pre-Algebra or 8th grade placement. (1 credit)

ALGEBRA I, Part 2 - (SOPHOMORE - SENIOR) This course is the second half of the two-year sequence designed to give the student the same background as Algebra I. This course combined with Algebra I, Part 1, allows the student to obtain two credits in mathematics and fulfills a one-year algebra requirement for college entrance as well as the high school math graduation requirement. Topics include exponents, polynomials, factoring, quadratics, inequalities, and systems of equations. A scientific calculator is required. PRE-REQUISITE: Algebra I Part 1. (1 credit)

ALGEBRA I - (FRESHMAN - SENIOR)

This course contains the standard topics of Algebra I. It includes the study of real numbers, variables, polynomials, linear equations, systems of equations, radicals and quadratic functions. An introduction to probability and statistics is also included in the course. A scientific calculator is required for the class. PRE-REQUISITE: 8th grade placement. (1 credit)

GEOMETRY (FRESHMAN - SENIOR)

This course is for the college-bound student interested in a mathematical related field. It begins with the language and the logic of geometry, proceeds to formal proof, and concludes with applications involving algebra. Topics include triangles, congruency, parallelism, similarity, coordinates, circles, polynomials, areas, and volumes. Students work toward developing an understanding of the deductive method of reasoning. A scientific calculator is required. PRE-REQUISITE: Algebra I, B or better in 8th grade Algebra I, or department approval for Algebra I Part II. (1 credit)

INFORMAL GEOMETRY (JUNIOR - SENIOR)

This course is designed for students who are interested in learning geometry concepts but are not seeking a college bound geometry course. It will provide a basic knowledge of geometric concepts such as measurement, congruency, symmetry, parallel and perpendicular lines, angles, triangles, quadrilaterals, and proportions and similarity. A review of basic math skills will be incorporated while using a discovery approach to learning geometry. A scientific calculator is required. This class may not be accepted as a math credit for admission by many four-year colleges and universities. PRE-REQUISITE: Algebra I Part 1 and Part 2 or department approval. (1 credit)

HONORS GEOMETRY (FRESHMAN-SOPHOMORE) HONORS

This course is designed for the student who wishes to explore geometric concepts through a self discovery approach. Students will investigate topics including lines, angles, geometric shapes, transformations, symmetry, tessellations, similarity, and coordinate geometry. This course places heavy emphasis on student explorations and making algebraic and geometric connections. Students will use Sketchpad software in a computer environment. PRE-REQUISITE: A in Algebra I and Department approval. (1 credit)

ALGEBRA II/TRIGONOMETRY (SOPHOMORE- SENIOR)

This course is designed to provide the college bound student an extensive and sound understanding of advanced algebra and trigonometry. The course includes the study of real numbers and properties, equations and inequalities, relations and functions, polynomials and rational expressions, radicals and radical equations, irrational and complex numbers, quadratic relations and systems, determinants and matrices, logarithms, trigonometric and circular functions, and trigonometric identities and formulas. A graphing calculator is required preferably a TI-83/84. (1 credit) PRE-REQUISITE: Geometry.

HONORS ALGEBRA II/TRIGONOMETRY (SOPHOMORE-SENIOR)

This course is designed for the college-bound student who wishes to explore mathematics. Students will investigate a variety of topics including mathematical modeling, linear relationship, matrices, functions, transformations, logarithmic and exponential functions, polynomials, rational functions, and an introduction to trigonometry. This course places heavy emphasis on student explorations and making connections among the various branches of mathematics. A graphing calculator is required, preferably a TI-83/84. PRE-REQUISITE: B or better in Honors Geometry or Departmental approval. (1 credit)

PRE-CALCULUS (JUNIOR-SENIOR)

This course is designed for the college-bound student. It encompasses and extends concepts of advanced algebra. The content of the course includes various topics of college algebra, functions, trigonometry, analytical geometry, statistics and probability, and an introduction to Calculus. Students who successfully complete this course should be prepared for Calculus. A graphing calculator is required, preferable a TI-83/84. (1 credit) PRE-REQUISITE: C or better in Algebra II/Trig.

HONORS PRE-CALCULUS (JUNIOR-SENIOR) HONORS

This course is designed for the college-bound student who wishes to explore mathematics. Students will investigate a variety of topics including trigonometric equations, trigonometric identities, series and sequences, polar and complex numbers, conics, and vectors. This course places heavy emphasis on student explorations and making connections among the various branches of mathematics. A graphing calculator is required, preferably a TI-83/84 model. PRE-REQUISITE: B or better in Honors Algebra II/Trig and Department approval. (1 credit)

A.P. CALCULUS HONORS (SENIOR)

This is an advanced placement college level course in Differential and Integral Calculus. This course is designed for students who have an exceptional ability in mathematics. The content of the course includes analytical geometry, limits, functions, derivatives, as well as applications of the derivative, integrals, applications of the integral. This course qualifies for honors credit. Students who take this course will take the Calculus A.P. exam in the spring. A qualifying score on the exam could result in college credit. A TI-83/84 graphing calculator is required. (1 credit) PRE-REQUISITE: B or better in Pre-Calculus or Honors Pre-Calculus.

PROBABILITY AND STATISTICS (SENIOR)

This course is a one-semester elective. It is designed to introduce students to the major concepts and tools for collecting, analyzing and drawing conclusions from data. It may be taken simultaneously with a full year mathematics course or individually for one semester. Topics include describing, exploring, and comparing data, probabilities and distributions, estimates and sample sizes, hypotheses, correlations and regressions. A graphing calculator, preferably a TI-83/84, is required. PRE-REQUISITE: Algebra II/Trig Or Pre-Calculus. (1/2 credit)