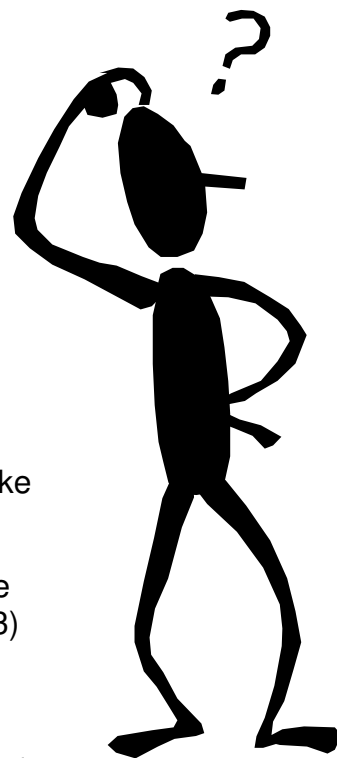


What Mathematics Course Should I Take At HSU??



It depends on your ACT score and major.

If your mathematics **ACT** score is **LESS than 16** then you **MUST** take Elementary Algebra (MTH0003)

If your mathematics **ACT** score is **LESS than 19** then you must take Intermediate Algebra (MTH 0013) or Elementary Algebra (MTH0003)

If your mathematics **ACT** score is **19 or above**, you may take a mathematics course for college credit. Which one depends on your major and mathematics ACT score, so discuss your options with your advisor.

If your major is in **mathematics, business, any of the sciences, or aviation**, you will probably need to take College Algebra or Precalculus; even though you may take these courses with a math ACT score of 19, we recommend that you have at least a math ACT score of 22 before taking College Algebra and a math ACT score of 24 before taking Precalculus. If you have a math act score of 19, 20, or even 21, your chances of success are much better if you take Intermediate Algebra.

If your **major** is going to be **Mathematics, Computer Science, Chemistry or Physics** then your degree requires Calculus I (MTH 1295). We rarely recommend that a first-time freshman take Calculus, but if your mathematics ACT score is 30 or above, you may discuss this option with the mathematics chair. If your math ACT scores are in the mid-20's, you should probably register for Pre-Calculus (MTH1273) and Plane Trigonometry (MTH1253). When you take Calculus 1 you will also have to take Introduction to Mathematical Computing (MTH1261). As always, discuss your options with your advisor.

If your **major** is going to be **Elementary or Middle School Education** then your degree requires Number Operations and Number Sense (MTH1053). You must have at least a math ACT score of 19 to take this course; otherwise you will have to take Elementary Algebra or Intermediate Algebra.

If your **major** is going to be **Nursing**, then you need to talk to your advisor to see whether you should take Mathematics for the Liberal Arts (MTH1033) or College Algebra (MTH 1243) to fulfill your general education mathematics requirement.

If your major is not in the sciences, business or elementary education, then Mathematics for the Liberal Arts (MTH1033) may be an excellent choice to fulfill your general education mathematics requirement. Another course of this nature, Mathematics Through Practical Applications (MTH1083) is scheduled to be offered in the spring of 2009. Be sure to discuss these options with your advisor.

Course Descriptions

MTH 0003. Elementary Algebra. This course is designed for students wanting or needing a stronger understanding of the numeration system, and how to operate within that system, and is designed to enhance students' understanding of algebraic expressions and linear equations. The course will be taught with an emphasis on proportional reasoning. Additionally, students will analyze linear functions using numeric, graphical and algebraic techniques. Students with mathematics ACT scores below 16 (or equivalent scores from admission exams approved by HSU) are required to complete the course with a grade of "C" or better before enrolling in Intermediate Algebra. This course cannot be used for degree requirements.

MTH 0013. Intermediate Algebra. A course designed to strengthen the mathematical background of students in the area of algebra. Topics include: operations with real numbers; operations with polynomial expressions; properties of exponents and radicals; operations with rational expressions; solving quadratic equations and inequalities; linear and quadratic functions; solutions of systems of linear equations. A graphing calculator is required. Prerequisite: MTH0003 (with a grade of C or better), or a mathematics ACT score of at least 16 (or equivalent math score from an admission exam approved by HSU). This course cannot be used for degree requirements.

MTH 1033. Mathematics for Liberal Arts. A course designed to meet the general education needs of students majoring in programs outside of business, elementary education, mathematics or science. This course consists of units dealing with elementary number theory, set theory and logic, algebraic functions, geometry (plane and solid), and probability and statistics. A graphing calculator is required. Prerequisite: MTH0013 (with a grade of C or better), or a mathematics ACT score of at least 19 (or equivalent math score from an admission exam approved by HSU). **A policy of allowing MTH0003 to be sufficient remediation for this course is currently being tried on a voluntary basis.**

MTH 1053. Number Operations and Number Sense. This is the entry level course for P-8 education majors. Numeration systems from natural numbers through real numbers will be covered. The operations and properties with applications within each system will be developed as appropriate to the P-8 teacher. Prerequisite: MTH0013 (with a grade of C or better), or a mathematics ACT score of at least 19 (or equivalent math score from an admission exam approved by HSU).

MTH 1083. Mathematics Through Practical Applications. The course looks at percentages, calculating and using statistics, unit conversions, mathematical modeling, physics of motion, probability, geometry, estimation, data collection and other applications. The motivation for coverage of the topics will come from various areas chosen by the instructor such as sports, music, art, physics, acoustics, etc. Applications of these topics will be made to everyday life. Prerequisite: MTH0013 (with a grade of C or better), or a mathematics ACT score of at least 19 (or equivalent math score from an admission exam approved by HSU). **A policy of allowing MTH0003 to be sufficient remediation for this course is currently being tried on a voluntary basis.**

MTH 1243. College Algebra. A course designed to prepare students to pursue degrees in mathematics, business, or the sciences. Topics include: quadratic equations and inequalities; polynomial, rational, exponential, and logarithmic functions; graphing functions; inverse functions; zeros of polynomial and rational functions with approximation techniques; solving systems of linear equations, linear inequalities, and non-linear equations; binomial theorem. A graphing calculator is required. Prerequisite: MTH0013 (with a grade of C or better), or a mathematics ACT score of at least 19 (or equivalent math score from an admission exam approved by HSU). An ACT math score of 22 or above is recommended.

MTH 1253. Plane Trigonometry. Topics to include trigonometric functions, identities, graphing, Law of Sines, Law of Cosines, polar coordinates and complex numbers. The graphing calculator will be used throughout the course. A graphing calculator is required. Prerequisite or co-requisite: MTH 1243 or MTH 1273, or consent of department.

MTH 1261. Introduction to Mathematical Computing. An introduction to computer algebra systems and other mathematical computing software. Prerequisite: Same as for MTH 1295. Co-requisite: MTH 1295.

MTH 1273. Precalculus Mathematics. Topics in algebra and trigonometry. To be taken by students who expect to take MTH 1295. The functional approach to mathematics is emphasized. Graphics technology will be used in the course. A graphing calculator is required. Prerequisite: Two units of high school algebra and one unit of high school trigonometry. An ACT math score of 25 or above is recommended.

MTH 1295. Calculus I. Topics covered in this course include limits, derivatives, Riemann sums, the definite integral, exponential growth and decay, and transcendental functions. Applications will be introduced where appropriate. The graphing calculator and computer algebra will be used to enhance the concepts of calculus. A graphing calculator is required. Prerequisite: MTH 1253, MTH 1273; or consent of the department. Co-requisite: MTH 1261.