

Mathematics in the General Education Core

Which general education mathematics course is right for me?

The mathematics department provides three types of experiences for the general education core. The choice that a student and his/her advisor make will depend largely on the student's major and interests. Each student should consult the *Undergraduate Bulletin* and speak with his/her advisor to determine the mathematics requirement(s) for his/her major. In broad, general terms, here are the courses which satisfy the general education core requirement in mathematics:

- Math 1010 -- Mathematical Thought and Practice
- Math 1530 -- Elements of Statistics
- A course or courses in algebra and/or calculus.
- Math 1420 -- Structure of Mathematical Systems II

These options are described below.

Math 1010 -- Mathematical Thought and Practice

This course is designed specifically for students majoring in the arts and humanities. It deals with applications of mathematics in areas such as politics, code-breaking, art, music, and finance. (Did you know, for example, that the first presidential veto in U.S. history involved a mathematical formula?) Math 1010 satisfies the general education core requirement in mathematics. It may be taken by any student whose major does not specify a particular math course. *Students who enter APSU with ACT-M scores below 18 must enroll in an "e-section" of Math 1010 or in an "e-section" of Math 1530.*

Math 1530 -- Elements of Statistics

This is an introductory course in descriptive and inferential statistics. Students will learn things like how opinion polls are taken and how the margins of error for those polls are computed. Students will get an introduction to the ways in which statisticians decide if information from a sample can reasonably be used to infer information about a population. (These are the statistical methods, for example, that medical researchers use to determine if drugs or vaccines are effective.) Math 1530 satisfies the general education core requirement in mathematics. Some majors require Math 1530. Like Math 1010, Math 1530 may also be taken by any student whose major does not specify a particular math course. *Students who enter APSU with ACT-M scores below 18 must enroll in an "e-section" of Math 1010 or in an "e-section" of Math 1530. Students with learning support requirements in reading or writing must satisfy these requirements prior to enrolling in Math 1530.*

Math 1420 – Structure of Mathematical Systems II

Topics include proportionality, the real number system, probability, data analysis, geometry, and measurement. Emphases are problem solving, multiplicative thinking, number sense, and communicating mathematics concepts with language, symbols, and concrete and pictorial representations. This course is reserved for students seeking elementary or middle school teaching licensure.

Algebra and/or Calculus

Several majors require courses in this category. Each course listed below satisfies the general education core requirement in mathematics. The courses in this category are:

1. **Algebra Courses: Math 1110 (Algebraic Problem Solving) and Math 1710¹ (College Algebra)** The primary difference between Math 1710 and Math 1110 is the instructional method employed. Math 1710 is a more traditional lecture-based course. Math 1110 classes involve more hands-on, activity-based learning strategies.
2. **Precalculus: Math 1730** This course includes exponential and logarithmic functions and has a heavy emphasis on trigonometry.
3. **Calculus: Math 1910 and Math 1810** Math 1810 is sometimes referred to as "Business Calculus." It does not require knowledge of trigonometry as a prerequisite. Math 1910 does require proficiency in trigonometry as a prerequisite.

Placement in Algebra and Calculus Courses

Students may challenge their placement by taking (at their own expense) the APSU Mathematics Placement Examination.

ACT Math Score	Course Sequence (Business / Information Systems Track)	Course Sequence (Science / Mathematics Track)
18 or below	<ol style="list-style-type: none">1) An "e-section" of Math 1530 or an "e-section" of Math 10102) Math 1110 (Algebraic Problem Solving) or Math 1710 (College Algebra)3) Math 1810	<ol style="list-style-type: none">1) An "E-section" of Math 1010 or an "e-section" of Math 15302) Math 1110 or Math 17103) Math 17304) Math 1910
19-24	<ol style="list-style-type: none">1) Math 1110 (Algebraic Problem Solving) or Math 1710 (College Algebra)2) Math 1810	<ol style="list-style-type: none">1) Math 1110 or Math 17102) Math 17303) Math 1910
25 - 26	<ol style="list-style-type: none">1) Math 1810	<ol style="list-style-type: none">1) Math 17302) Math 1910

¹ Math 1710 was formerly named "Precalculus (Algebra)."

27 or above	1) Math 1810	3) Math 1910
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The prerequisite relationship described in this table is diagrammed on the next page.

