

Mathematics Development

Freshman students are initially placed into mathematics courses by their MATH ACT scores, or the results of the NEIU Mathematics Placement Test, or by an appropriate score on the Advanced Placement Test in Calculus. Course work indicated by these standards is required.

Transfer students with a grade of "C" or higher from another college or university in a developmental course in "Intermediate Algebra" should contact the Mathematics Department as to whether this course would be recognized as a prerequisite for a college mathematics course at Northeastern.

Matthew Graham, Ph.D., Coordinator

Lidia Filus, Ph.D., Professor, Chair

MATH-011A. Developmental Stretch I: Statistics In Daily Life. 2 Hours.

Math 011A must be taken concurrently with Math 111A. These two courses comprise the first semester in a two semester sequence. Students completing each of Math 011A, 011B, 111A, and 111B with a C or better will have satisfied the Math 112 requirement and earned a total of 4 college credits. These courses comprise an elementary introduction to statistics. Students will learn: to process and classify observational, experimental, and sampling data; to make decisions using descriptive statistics; to use inferential statistics to test hypotheses and draw conclusions about a population; and to use spreadsheets to perform these tasks.

Corequisite: MATH-111A.

MATH-011B. Developmental Stretch II: Statistics In Daily Life. 2 Hours.

Math 011B must be taken concurrently with Math 111B. These two courses comprise the second semester in a two semester sequence. Students completing each of Math 011A, 011B, 111A, and 111B with a C or better will have satisfied the Math 112 requirement and earned a total of 4 college credits. These courses comprise an elementary introduction to statistics. Students will learn: to process and classify observational, experimental, and sampling data; to make decisions using descriptive statistics; to use inferential statistics to test hypotheses and draw conclusions about a population; and to use spreadsheets to perform these tasks.

Prerequisite: MATH-011A with a minimum grade of C.

Corequisite: MATH-111B.

MATH-048A. Developmental Stretch I: Math For Elementary Teachers I. 3 Hours.

Math 048A must be taken concurrently with Math 148A. These two courses comprise the first semester in a two semester sequence. Students completing each of Math 048A, 048B, 148A, and 148B with a C or better will have satisfied the Math 149 requirement and earned a total of 4 college credits. These courses comprise a mathematical introduction for elementary and middle school teachers. Topics include place value, models for and the development of arithmetic, mental math, estimation, word problems, algorithms, factors, primes, proofs, prealgebra, fractions, ratios, rates, and percentages. The development of elementary mathematics from an advanced standpoint is emphasized.

Corequisite: MATH-148A.

MATH-048B. Developmental Stretch II: Math For Elementary Teachers I. 3 Hours.

Math 048B must be taken concurrently with Math 148B. These two courses comprise the second semester in a two semester sequence. Students completing each of Math 048A, 048B, 148A, and 148B with a C or better will have satisfied the Math 149 requirement and earned a total of 4 college credits. These courses comprise a mathematical introduction for elementary and middle school teachers. Topics include place value, models for and the development of arithmetic, mental math, estimation, word problems, algorithms, factors, primes, proofs, prealgebra, fractions, ratios, rates, and percentages. The development of elementary mathematics from an advanced standpoint is emphasized.

Prerequisite: MATH-048A with a minimum grade of C.

Corequisite: MATH-148B.

MATH-090. Elementary Algebra. 3 Hours.

This course develops the foundations of algebra, beginning with the real number system and its operations. Topics include: variable expressions, linear equations, exponents and polynomials, applications of proportion, percent, and the use of formulas to develop problem solving skills. Freshman students are initially placed into mathematics courses by their MATH ACT scores, their NEIU Mathematics Placement Test scores, or by an appropriate score on the Advanced Placement Test in Calculus. (This course does not count toward graduation or GPA.)

Prerequisite: NEIU Math Placement Result 00 - 40 (or ACT Math 01 - 36 or Accuplacer Elementary Algebra 020 - 040 or SAT Math 200 - 800 or Accuplacer QR, Algebra, & Stat 200 - 300).

MATH-0901. Math Enrichment Workshop For Math 090. 1 Hour.

Mathematics enrichment workshop for students currently enrolled in MATH-090. The workshops draw on the Peer Led Team Learning (PLTL) and Emerging Scholars Program (ESP) models, which have been nationally identified for increasing students' probability of earning higher grades in their required mathematics courses. Workshop participants will attend a workshop during the same day and time each week; collaboratively solve problems related to their standard Math 090 course within small peer groups; receive guidance from math instructors who are specially trained to facilitate the workshops; and participate in social events with workshop peers during the semester.

Corequisite: MATH-090.

MATH-091. Intermediate Algebra I. 3 Hours.

This course develops the foundations of algebra, beginning with the real number system and its operations. Topics include: variable expressions, linear equations and systems of equations, exponents, polynomials, factoring trinomials, and solving equations by factoring. Freshman students are initially placed into mathematics courses by their MATH ACT scores, their NEIU Mathematics Placement Test scores, or by an appropriate score on the Advanced Placement Test in Calculus. (This course does not count toward graduation of GPA.)

Prerequisite: (MATH-090 or NEIU Math Placement Result 01 - 45 or ACT Math 17 - 18 or Accuplacer Elementary Algebra 041 - 059 or Accuplacer QR, Algebra, & Stat 237 - 249 or SAT Math 460 - 490).

MATH-0911. Math Enrichment Workshop For Math 091. 1 Hour.

Mathematics enrichment workshop for students currently enrolled in MATH-091. The workshops draw on the Peer Led Team Learning (PLTL) and Emerging Scholars Program (ESP) models, which have been nationally identified for increasing students' probability of earning higher grades in their required mathematics courses. Workshop participants will attend a workshop during the same day and time each week; collaboratively solve problems related to their standard Math 091 course within small peer groups; receive guidance from math instructors who are specially trained to facilitate the workshops; and participate in social events with workshop peers during the semester.

Corequisite: MATH-091.

MATH-092. Intermediate Algebra II. 3 Hours.

This course further develops the concepts and structures of intermediate algebra. A review of linear equations, polynomials, and factoring, prepares students for the study of linear, quadratic, exponential, and logarithmic equations and functions. Additional topics to prepare students for college algebra include: rational expressions and equations, complex numbers, rational exponents, graphing and applications of quadratic functions, and properties of logarithms. Freshman students are initially placed into mathematics courses by MATH ACT scores, NEIU Mathematics Placement Test scores, or by an appropriate score on the Advanced Placement Test in Calculus. (This course does not count toward graduation or GPA.)

Prerequisite: (MATH-091 - 499 or MATH-091A - 499Z or NEIU Math Placement Result 02 - 45 or ACT Math 19 - 36 or Accuplacer Elementary Algebra 060 - 084 or Accuplacer College Level Math 020 - 120 or Accuplacer Adv. Algebra & Func 200 - 300 or SAT Math 500 - 800).

MATH-0921. Math Enrichment Workshop For Math 092. 1 Hour.

Mathematics enrichment workshop for students currently enrolled in MATH-092. The workshops draw on the Peer Led Team Learning (PLTL) and Emerging Scholars Program (ESP) models, which have been nationally identified for increasing students' probability of earning higher grades in their required mathematics courses. Workshop participants will attend a workshop during the same day and time each week; collaboratively solve problems related to their standard Math 092 course within small peer groups; receive guidance from math instructors who are specially trained to facilitate the workshops; and participate in social events with workshop peers during the semester.

Corequisite: MATH-092.

MATH-092C. College Algebra Express I. 3 Hours.

MATH-092C College Algebra Express I must be taken concurrently with Math 173C College Algebra Express II. Math 092C and Math 173C are collectively a 6-credit co-requisite course that provides students a path to finish developmental coursework and college algebra in ONE semester. Background topics which are necessary for a student to successfully complete Math 173C will be covered in Math 092C. Such topics include fractions, factoring polynomials, functions, exponents, and operating with radical and rational expressions. Students who complete MATH-173C with a minimum grade of C will have satisfied the college algebra requirement.

Prerequisite: Accuplacer Elementary Algebra with a score of 60 or ACT Math with a score of 19 or SAT Mathematics with a score of 500.

Corequisite: MATH-173C.

MATH-097. Mathematical Literacy. 4 Hours.

Mathematical Literacy for College Students is a one semester course for non-math and non-science majors integrating numeracy, proportional reasoning, algebraic reasoning, and functions. Students will develop conceptual and procedural tools that support the use of key mathematical concepts in a variety of contexts. Throughout the course, college success content will be integrated with mathematical topics. Upon passing this course, one can enroll in Math 112 (Statistics) or Math 113 (Mathematical Reasoning). (This course is in place of the Math 091/092 sequence and has no college credit. This course does not count toward graduation or GPA).

Prerequisite: (MATH-090 - 499 or MATH-090A - 499Z or Accuplacer Elementary Algebra 041 - 120 or ACT Math 17 - 36 or Accuplacer QR, Algebra, & Stat 237 - 300 or SAT Math 460 - 800).