

Mathematics

COURSES

Mathematics (MATH)

MATH 1RA. Developmental Mathematics I (3)

The first semester in a two semester sequence preparing students for college level mathematics. See the online *Class Schedule* for restrictions on enrollment based on the Entry Level Math test. Properties of ordinary arithmetic, integers, rational numbers and linear equations. *CR/NC* grading only; not applicable towards baccalaureate degree requirements. F

MATH 1RB. Developmental Mathematics II (3)

Prerequisite: MATH 1RA. The second semester in a two semester sequence preparing students for college level mathematics. Systems of linear equations, exponents, rational expressions, polynomials and quadratic equations. *CR/NC* grading only; not applicable toward baccalaureate degree requirements. S

MATH 3. College Algebra (3)

Prerequisite: students must meet the ELM requirement. Equations and inequalities; rectangular coordinates; systems of equations and inequalities; polynomial, rational, exponential, and logarithmic functions and their graphs; complex numbers. FS

MATH 4R. Intermediate Algebra (3)

Prerequisite: see the online *Class Schedule* for restrictions on enrollment based on the Entry Level Math test. Covers radicals, rational exponents, quadratic equations, simultaneous linear equations, graphing, inequalities, and complex numbers. *CR/NC* grading only; not applicable toward baccalaureate degree requirements. FS

MATH 4RA. Intermediate Algebra (3)

Focuses on arithmetic review, linear equalities, inequalities, and graphing. *Note:* MATH 4RA together with MATH 4RB is equivalent to MATH 4R. Enrollment is limited to first-time freshmen who score 30 and below on the ELM exam. *CR/NC* grading only; not applicable toward baccalaureate degree requirements.

MATH 4RB. Intermediate Algebra (3)

Prerequisite: MATH 4RA. Focuses on radicals, rational exponents, and quadratic equations *Note:* MATH 4RB together with MATH 4RA is equivalent to MATH 4R. Enrollment is limited to first-time freshmen who score 30 and below on the ELM exam.

CR/NC grading only; not applicable toward baccalaureate degree requirements.

MATH 4RL. Intermediate Algebra Laboratory (1)

Prerequisites: concurrently enrolled in MATH 4RA, 4RB, or MATH 4R and assigned to laboratory after taking placement examination. Laboratory does not count toward baccalaureate degree. Extra review and practice with skills essential to success in intermediate algebra. *CR/NC* grading only; not applicable toward baccalaureate degree requirements.

MATH 5. Trigonometry (3)

Prerequisite: students must meet the ELM requirement. Concept of a function, sine and cosine functions, tables and graphs, other trigonometric functions, identities and equations. Trigonometric functions of angles, solution of triangles. (See *Duplication of Courses.*)

MATH 6. Precalculus (4)

Prerequisite: students must meet the ELM requirement. Basic algebraic properties of real numbers; linear and quadratic equations and inequalities; functions and graphs; polynomials; exponential and logarithmic functions; analytic trigonometry and functions; conics; sequences, and series. FS

MATH 10A. Structure and Concepts in Mathematics I (3)

Prerequisite: students must meet the ELM requirement. Designed for prospective elementary school teachers. Development of real numbers including integers, rational and irrational numbers, computation, prime numbers and factorizations, and problem-solving strategies. Meets B4 G.E. requirement only for liberal studies majors. FS

MATH 10B. Structure and Concepts in Mathematics II (3)

Prerequisite: MATH 10A. Designed for prospective elementary school teachers. Counting methods, elementary probability and statistics. Topics in geometry to include polygons, congruence and similarity, measurement, geometric transformations, coordinate geometry, and connections between numbers and geometry with selected applications. FS

MATH 11. Elementary Statistics (3)

Prerequisite: students must meet the ELM requirement. Illustration of statistical concepts: elementary probability models, sampling, descriptive measures, confidence intervals, testing hypotheses, chi-square, nonparamet-

ric methods, regression. It is recommended that students with credit in MATH 72 or 75 (or 75A and B) take MATH 101. FS

MATH 43. Elementary Problem Solving (3)

Prerequisite: students must meet the ELM requirement. The purpose of this course is to develop problem-solving skills using elementary mathematics.

MATH 45. What Is Mathematics? (3)

Prerequisite: students must meet the ELM requirement. Covers topics from the following areas: (I) The Mathematics of Social Choice; (II) Management Science and Optimization; (III) The Mathematics of Growth and Symmetry; and (IV) Statistics and Probability. G.E. Foundation B4. FS

MATH 61. Geometry and the Imagination (3)

Prerequisite: students must meet the ELM requirement. Topics in Geometry. May include, but is not restricted to, tilings and tessellations, regular polyhedra in 3 and 4 dimensions, ruler and compass constructions, map coloring.

MATH 70. Calculus for Life Sciences (4)

No credit if taken after MATH 75 or 75A and B. Prerequisite: students must meet the ELM requirement. Functions and graphs, limits, derivatives, antiderivatives, differential equations, and partial derivatives with applications in the Life Sciences. FS

MATH 75. Calculus I (4)

Prerequisites: elementary geometry, intermediate algebra, trigonometry, or precalculus. Passing score on the department's Calculus Readiness Test required prior to enrollment. In addition, students must meet the ELM requirement. Functions, graphs, limits, continuity, derivatives and applications, definite and indefinite integrals. G.E. Foundation B4. FS

MATH 75A. Calculus with Review IA (4)

Prerequisites: elementary geometry, intermediate algebra, trigonometry, or precalculus. Passing score on the department's Calculus Readiness Test required prior to enrollment. In addition, students must meet the ELM requirement. Functions, graphs, limits, continuity, derivatives, and applications, with extensive review of algebra and elementary functions. With MATH 75B, equivalent to MATH 75. G.E. Foundation B4. FS