Course Descriptions
MATHEMATICS COURSES FOR UNDERGRADUATES

MATH 0107. COLLEGE ALGEBRA & TRIGONOMETRY. mathematical induction; finite sums and series. Prerequisite

in MATH 0106.

MATH 010Yn107 or Departmental Approval.

MATH 0110. PRECALCULUS. 1st Semester, 2nd Semester on Demand. Lect. 4, 4 credits. An accelerated treatment of content covered in MATH 0107 and 0108. Prerequisite: Placement or Departmental Approval. A student who has previously registered for MATH 0107 and/or MATH 0108 will not be allowed to register for this course. Also, students will not be allowed to use both

Math 110 and Math 107 or both Math 110 and Math 108 to fulfill degree requirements in any major.

MATH 0200. MATHEMATICAL CONCEPTS AND APPLICATIONS. 1st and 2nd Semesters.
Lect. 3, 3 credits. This course is designed to reinforce ARMY ROTC cadets' knowledge of mathematical concepts learned earlier in their mathematics courses. Topics in this course include sets, whole numbers, fractions and rational numbers, decimals, number theory, metric system, variable expressions, factoring, systems of equations, graphing, geometry, exponents and radicals, matrices and quadratic equations. Applications will be emphasized. Prerequisite: Minimum grade of "C" in MATH 0105. Students will not be allowed to use this course to fulfill degree requirements in any major.

MATH 0207. ANALYTIC GEOMETRY & CALCULUS I. 1st and 2nd Semesters, Summer.
Lect. 4, 4 credits. Introduction to analytic geometry; functions; limits; derivatives and integrals with some applications. Prerequisite: Minimum grade of "C" in MATH 0108 or MATH 0110 or Departmental Approval. Students will not be allowed to use both MATH 0207 and MATH 0227 to fulfill degree requirements in any major.

MATH 0208. ANALYTIC GEOMETRY & CALCULUS II. 1st and 2nd Semesters, Summer.
Lect. 4, 4 credits. Further discus

MATH 0227. INTRODUCTORY CALCULUS. 1st and 2nd Semesters, Summer. Lect. 4, 4 credits. Primarily designed for students Architecture and the Social Sciences. Emphasis is on application of elementary differentiation and integration. Prerequisite: Minimum grade of "C" in MATH 0107 or MATH 0110 or Departmental Approval. Students will not be allowed to use both MATH 0207 and MATH 0227 to fulfill degree requirements in any major.

MATH 0304. HISTORY OF MATHEMATICS. 1st Semester. Lect. 3, 3 credits. The history of mathematics from antiquity and medieval times modern times. Some topics of interest are the exciting developments in fractal theory and number theory. This historical development of mathematics covers the intellectual, historical, philosophical, and sequential nature of mathematics and the interrelated nature of various branches of mathematics. Anyone interested in gaining a historical perspective on their knowledge of mathematics or in teaching mathematics will benefit from this course. Prerequisite: Junior or senior standing.

MATH 0307. DIFFERENTIAL EQUATIONS. 1st and 2nd Semesters, Summer. Lect. 3, 3 credits. Solution of ordinary differential equations with applications to geometry, physics, and engineering; solutions in power series; systems of linear differential equations; introduction to Laplace Transforms. Corequisite: MATH 0209 and a minimum grade of "C" in MATH 0208.

MATH 0401. INDEPENDENT STUDY. 1st and 2nd Semesters. 1-3 credits. Designed to provide an opportunity for outstanding students to study advanced topics not covered in required courses. The student is expected to do most of the work on his own under the supervision and with the assistance of a member of the mathematics faculty. Prerequisite: Junior standing and Departmental Approval.

MATH 0407. LINEAR ALGEBRA & MATRIX THEORY. 1st Semester, 2nd Semester and Summer on Demand. Lect. 3, 3 credits. Systems of linear equations; vector spaces; matrices; determinants; bilinear and quadratic functions and forms; linear transformations. Prerequisite: Minimum grade of "C" in MATH 0208.

MATH 0408. MODERN ALGEBRA. 2nd Semester. Lect. 3, 3 credits. Elementary theory of groups; rings; fields; and related topics. Prerequisite: Minimum grade of "C" in MATH 0407 or Departmental Approval.

MATH 0417. MODERN GEOMETRY. 2nd Semester. Lect. 3, 3 credits. Selected topics from Euclidean geometry; introduction to non-Euclidean geometry and projective geometry. Prerequisite: Junior standing and Departmental Approval.

MATH 0451. SEMINAR I. 1st Semester. Lect. 1, 1 credit. Required of all Mathematics majors. Presentation followed by discussion of various topics in Mathematics. Will involve students, faculty, and visiting lectures.

MATH 0452. SEMINAR II. 2nd Semester. Lect. 1, 1 credit. Continuation of MATH

0451. MATH 0461. ENGINEERING MATHEMATICS. 1st and 2nd Semesters, Summer. Lect.

4, 4
credits. Laplace Transforms: Fourier series and integrals; harmonic analysis; Bessel and Legendre Functions; introduction and applications of partial differential equations. Prerequisite: Minimum grade of "C" in both MATH 0307 and MATH 0209.

Graduate Courses

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

MATH 0504. INTRODUCTION TO APPLIED STATISTICS. 1st Semester, Summer on
Demand. Lect. 3, 3 credits. Basic concepts and mathematical preliminaries; frequency distributions; statistical notation, measures of central tendency, correlations and regression; basic sampling theory; statistical hypotheses; introduction to design and experiments; t-test; chi-square tests; analysis of variance; applications of statistical methods to problems in psychology and educational business, economics biology, agriculture, sociology and mathematics. Prerequisite Department Approval.

MATH 0505. ADVANCED CALCULUS I. 1st Semester, Summer on Demand. Lect. 3, 3 credits.

MATH 0525. MODERN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS I.
(Offered in response to need and availability of faculty). Lect. 3, 3 credits. Sets and numbers; relations and functions; polynomial functions; exponential and logarithmic functions. Prerequisite: Departmental Approval.

MATH 0526. MODERN MATHEMATICS FOR SECONDARY SCHOOL TEACHERS II.
(Offered in response to need and availability of faculty). Lect. 3, 3 credits. Circular functions; trigonometric functions; vectors; theory of equations; complex numbers; analytic geometry. Prerequisite: MATH 0525.

MATH 0527. NUMERICAL METHODS FOR SECONDARY SCHOOL TEACHERS. (Offered in response to need and availability of faculty). Lect. 3, 3 cred