PREREQUISITE WORKSHEET FOR

MASTERS IN MATHEMATICS, OPTION IN MATH EDUCATION

The courses listed below, or their equivalents, are required prerequisites for the Math Education Graduate Program. Fill out the form below and email it to graduate advisor listed on Math Education Graduate Program.

Under each course, fill out the course number, the semester or quarter and year (for example, Fall '20), institution at which you completed the course, and your grade in the course.

Your Name: _____ E-Mail: _____

MATH 247. Introduction to Linear Algebra
Matrix algebra, solution of systems of equations, determinants, vector spaces including function spaces, inner product spaces, linear transformations, eigenvalues, eigenvectors, quadratic forms and applications. Emphasis on computational methods.

Institution: _____ Semester or Quarter/Year: _____

Course Number: _____ Grade: _____

MATH 310. History of Early Mathematics
History of mathematics through seventeenth century, including arithmetic, geometry, algebra, and beginnings of calculus. Interconnections with other branches of mathematics. Writing component; strongly recommended students enrolling have completed the G.E. A.1 requirement.

Institution: _____ Semester or Quarter/Year: _____

Course Number: _____ Grade: _____

MATH 341. Number Theory
Divisibility, congruences, number theoretic functions, Diophantine equations, primitive roots, continued fractions. Writing proofs.

Institution: _____ Semester or Quarter/Year: _____

Course Number: _____ Grade: _____

MATH 355. College Geometry
Transformations, motions, similarities, geometric objects, congruent figures, axioms of geometry and additional topics in Euclidean and non-Euclidean geometry. Writing proofs.

Institution: _____ Semester or Quarter/Year: _____

Course Number: _____ Grade: _____

MATH 380. Probability and Statistics
Frequency interpretation of probability. Axioms of probability theory. Discrete probability and combinatorics. Random variables. Distribution and density functions. Moment generating functions and moments. Sampling theory and limit theorems.

Institution: _____ Semester or Quarter/Year: _____

Course Number: _____ Grade: _____

One of Math 361A or Math 364A:

MATH 361A. Introduction to Mathematical Analysis I
Rigorous study of calculus and its foundations. Structure of the real number system. Sequences and series of numbers. Limits, continuity, and differentiability of functions of one real variable. Students will be asked to write valid mathematical proofs. Note: This is a junior level analysis course, not Calculus I.

Institution: _____   Semester or Quarter/Year: _____

Course Number: _____   Grade: _____

MATH 364A. Ordinary Differential Equations I
First order differential equations; undetermined coefficients and variation of parameters for second and higher order differential equations; series solution of second order linear differential equations; systems of linear differential equations; applications to science and engineering.

Institution: _____   Semester or Quarter/Year: _____

Course Number: _____   Grade: _____