Prerequisite Worksheet for
Masters in (Pure) Mathematics

The courses listed below, or their equivalents, are required prerequisites for the Pure Mathematics Program. Fill out the form below and send it to:

Graduate Advisor (Pure)
Department of Mathematics and Statistics, CSULB
1250 Bellflower Blvd.,
Long Beach, CA, 90840-1001

Under each course, fill out the course number, the semester or quarter and year (for example, Fall ‘03), 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 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 361B. Introduction to Mathematical Analysis II.**
Riemann integration. Topological properties of the real number line. Sequences of functions. Metric Spaces. Introduction to the calculus of several variables. Students will be asked to write valid mathematical proofs.
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: _______

**MATH 444. Introduction to Abstract Algebra.**
Groups, subgroups, cyclic groups, symmetric groups, Lagrange’s Theorem, quotient groups. Homomorphisms and isomorphisms of groups. Rings, integral domains, ideals, quotient rings, homomorphisms of rings. Further topics in groups, rings and fields as time permits. Students will be asked to write valid mathematical proofs.
Institution: _______________________ Semester or quarter/year: ____________________
Course Number: _______ Grade: _______