CATALOG YEAR __2006-2007_____
(Please use separate form for each add/change)

COLLEGE/SCHOOL : _Arts and Sciences_____

Current Catalog Page(s) Affected ___p. 299_____

Course: Add: _____ Delete: _____
(check all that apply) Change: X Number ____ Title _____ SCH _____
Description _X_ Prerequisite _____

If new, provide Course Prefix, Number, Title, SCH Value, Description, prerequisite, and lecture/lab hours if applicable. If in current catalog, copy and paste the text from the and indicate changes in red.

MATH 2414 *Calculus II*. Four semester hours (SP/SS)
Techniques and applications of integration: area between curves, volumes of solids of revolution, work, areas of surfaces of revolution, arc-length, introduction to differential equations, parametric equations and polar coordinates, sequences and series. Prerequisite: MATH 2413 (Formerly MATH 2406).

Justification: Change reflects the true contents of the course.

Program: Add: _____ Change: _____ Attach new/changed Program of Study description and 4-year plan. If in current catalog, copy and paste the text from the and indicate changes in red.

Minor: Add: _____Delete: _____ Change: _____ Attach new/changed minor.
If in current catalog, copy and paste the text from the and indicate changes in red.

Faculty: Add: _____ Delete: _____ Change: _____ Attach new/changed faculty entry.
If in current catalog, copy and paste the text from the and indicate changes in red.
College Introductory Pages: Add information: _____ Change information: _____
Attach new/changed information. If in current catalog, copy and paste the text from the and indicate changes in red.

Approvals: Signature Date

Chair _____ _____
Department Curriculum Committee

Chair _____ _____
Department

Chair _____ _____
College Curriculum Committee

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MATH 1324 (MATH 1324) *Business Mathematics I.* Three semester hours. (FL/SS)
Systems of linear equations and matrices; linear programming; mathematics of finance; limits, continuity, derivatives. Prerequisite: MATH 1314.

MATH 1325 (MATH 1325) *Business Mathematics II.* Three semester hours. (SP/SS)
Applications of the derivative, anti-derivatives, and techniques of integration; functions and calculus of several variables. Prerequisite: MATH 1324.

MATH 1333 *Mathematics for Liberal Arts.* Three semester hours. (FL/SS)
This course is designed to promote mathematical literacy among liberal arts students and is designed to stimulate interest in an appreciation of mathematics and quantitative reasoning as valuable tools for comprehending the world in which we live. In the course, a student will use mathematics through logical reasoning and problem solving in various contexts in liberal arts and the social sciences in a technological society. Prerequisite: MATH 1314.

MATH 1342 (MATH 1342) *Introductory Statistics.* Three semester hours. (FL/SS)
Topics include organization of data; probability; random variables; the normal distribution; inferences; chi-square; regression and correlation; analysis of variance; and non-parametric statistics. Prerequisite: MATH 1314.

MATH 1348 (MATH 1348) *Analytic Geometry.* Three semester hours.
Equations and inequalities in R, R^2, and R^3; transcendental functions; vectors in R^2 and R^3. Prerequisite: MATH 1316 or MATH 2412. (Formerly MATH 1320).

MATH 1350 (MATH 1350) *Fundamentals of Mathematics I.* Three semester hours.
Sets, relations, functions, number system, and elementary number theory. Prerequisite: MATH 1314 (Formerly MATH 3301 Elements of Mathematics I). This course cannot be used to fulfill Core Curriculum requirements.

MATH 1351 (MATH 1351) *Fundamentals of Mathematics II.* Three semester hours.
Probability, statistics, and geometry. Prerequisite: MATH 1350 (Formerly MATH 3302 Elements of Mathematics II). This course cannot be used to fulfill Core Curriculum requirement.

MATH 2412 (MATH 2412) *Pre-Calculus.* Four semester hours. (SP)
A more advanced course than both MATH 1314 and 1316 giving a review of their combined content. Prerequisite: Advanced high school mathematics or permission of instructor. (Formerly MATH 1415).

MATH 2413 (MATH 2413) *Calculus I.* Four semester hours. (FL/SS)
Limits, continuity, differentiation, applications to optimization; integration and the Fundamental Theorem of Calculus. Prerequisite: MATH 1316 or MATH 2412 (Formerly MATH 2405).

MATH 2414 (MATH 2414) *Calculus II.* Four semester hours. (SP/SS)
Techniques of integration; applications: arc lengths, surface areas, volumes, work, centers of mass, etc.; series and power series; parametric equations; coordinate systems. Prerequisite: MATH 2413. (Formerly MATH 2406).

MATH 2415 (MATH 2415) *Calculus III.* Four semester hours. (FL)
Vector operations in R^2, R^3, lines, planes; vector-functions, space curves, curvature; multivariable calculus, optimization, Lagrange multipliers; multiple integrals; vector fields, theorems of Green, Gauss and Stokes. Prerequisite: MATH 2414. (Formerly MATH 2410).