**Math 211: Multivariable Calculus**

**Description**
Vectors; multivariable functions; partial derivatives; multiple integrals; vector and scalar fields; Green's and Stokes' theorems; divergence theorem. Vectors and 3-space, functions of several variables, multiple integration, vector fields, and line integrals.

*Fall, Spring, and Summer*

**Prerequisites**
Math 112 or 112Z, or 6 hours of AP BC credit.

**Intended audience**
Required for the Physics BS and all Math majors. Highly recommended for the Chemistry BS and for those that plan to apply to Economics graduate programs.

**Math 212: Differential Equations**

**Description**
First-order and second-order ordinary differential equations and their applications. Additional topics may include: systems of differential equations, power series solutions, the Laplace transform. Primary emphasis will be placed on developing techniques for the solution of differential equations. Some time will be spent on theory and applications.

*Fall and Spring*

**Prerequisites**
Math 112 or 112Z, or 6 hours of AP BC credit.

**Intended audience**
Required for Applied Math majors/minors and Physics BS majors. Highly recommended for the Chemistry BS and for those that plan to apply to Economics graduate programs.

**Math 221: Linear Algebra**

**Description**
Systems of linear equations and matrices, determinants, Cramer's Rule, linear transformations, eigenvalues and eigenvectors, inner products, and least squares.

*Fall and Spring*

**Prerequisites**
Math 112 or 112Z, or 6 hours of AP BC credit.

**Intended audience**
Required for students majoring in Computer Science and the Mathematics BA or BS. Recommended for the Chemistry BS.