MATH 1241 Syllabus(3 Tests) - CALCULUS I

<u>IMPORTANT NOTE!</u> This course has a REQUIRED Common Final Exam. The date and location of this exam will be announced in class and posted on the registrar's website. Be sure you are available to take the exam.

Text: *Essential Calculus: Early Transcendentals,* by James Stewart, 2nd Edition

Week 1: A Catalog of Essential Functions; Limit of a Function; Calculating Limits

Week 2: Continuity; Limits Involving Infinity;

Week 3: Derivatives and Rates of Change; The Derivative of a Function

Week 4: Basic Differentiation Formulas; Product and Quotient Rules; Chain Rule; Implicit Differentiation

Week 5: Review for Test 1; Test 1

Week 6: Related Rates; Linear Approximations and Differentials

Week 7: Inverse Functions and Logarithms; Derivatives of Logarithms and Exponential Functions;

Week 8: Exponential Growth and Decay; Inverse Trigonometric Functions

Week 9: Indeterminate Forms and L'Hospital's Rule; Maximum and Minimum Values

Week 10: Review for Test 2; Test 2

Week 11: The Mean Value Theorem; Derivatives and the Shapes of Graphs

Week 12: Curve Sketching; Optimization Problem

Week 13: Newton's Method;Antiderivatives

Week 14: Review for Test 3; Test 3

Week 15: Review for Common Final Exam; Common Final Exam