

Del Mar College
Math 2313
Calculus I

The textbook for 2003-2004 is *Calculus*, Earl Swokowski, (Brooks/Cole, Classic Edition, 1991). The following topics are to be covered in Calculus I.

- 2.1 Introduction to Limits
- 2.2 Definition of Limits
- 2.3 Techniques for Finding Limits
- 2.4 Limits Involving Infinity
- 2.5 Continuous Functions
- 3.1 Tangent Lines and Rates of Change
- 3.2 Definition of Derivative
- 3.3 Techniques of Differentiation
- 3.4 Derivatives of the Trigonometric Functions
- 3.5 Increments and Differentials
- 3.6 The Chain Rule
- 3.7 Implicit Differentiation
- 3.8 Related Rates
- 4.1 Extrema of Functions
- 4.2 The Mean Value Theorem
- 4.3 The First Derivative Test
- 4.4 Concavity and the Second Derivative Test
- 4.5 Summary of Graphical Methods
- 4.6 Optimization Problems
- 4.7 Rectilinear Motion and Other Applications
- 5.1 Antiderivatives, Indefinite Integrals, and Simple Differential Equations
- 5.2 Change of Variables in Indefinite Integrals
- 13.1 Plane Curves
- 12.1 Parabolas
- 12.2 Ellipses
- 12.3 Hyperbolas
- 12.4 Rotation of Axes