

**Del Mar College**  
**Math 2315**  
**Calculus III**

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

- 9.1 Integration by Parts
- 9.2 Trigonometric Integrals
- 9.3 Trigonometric Substitutions
- 9.4 Integrals of Rational Functions
- 9.5 Integrals Involving Quadratic Expressions
- 9.6 Miscellaneous Substitutions
- 10.1 The Indeterminate Forms  $0/0$  and  $\infty/\infty$
- 10.2 Other Indeterminate Forms
- 10.3 Integrals with Infinite Limits of Integration's
- 10.4 Integrals with Discontinuous Integrand's
- 11.1 Sequences
- 11.2 Convergent or Divergent Series
- 11.3 Positive-Term Series
- 11.4 The Ratio and Root Tests
- 11.5 Alternating Series and Absolute Convergence
- 11.6 Power Series
- 11.8 Maclaurin and Taylor Series
- 11.9 Applications of Taylor Polynomials
- 11.10 The Binomial Series
- 14.5 Lines and Planes
- 14.6 Surfaces
- 15.1 Vector-Valued Functions and Space Curves
- 15.2 Limits, Derivatives and Integrals
- 15.3 Motion
- 15.4 Curvature
- 15.5 Tangential and Normal Components of Acceleration
- 13.2 Tangent Lines and Arc Length
- 13.3 Polar Coordinates
- 13.4 Integrals in Polar Coordinates