MATH 174B
Mathematics for Electronics 4

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Textbook
Basic Technical Mathematics with Calculus (7th Edition) by Allyn J. Washington.

Evaluation
· Three term tests: 50%   or
· Comprehensive final exam: 50%   Comprehensive final exam: 100%

Tentative Schedule

Test 1	January 28	**Test 2**	February 18	**Test 3**	March 11

The following percentage conversion to letter grade will be used:

Percentage:	0–49	50–59	60–64	65–69	70–74	75–79	80–84	85–89	90–94	95–100
Letter grade:	F	D	C	C+	B-	B	B+	A-	A	A+

Course Outline

1. APPLICATIONS OF THE DERIVATIVES
   · Tangents and Normals (section 24.1)
   · Newton's Methods (section 24.2)
   · Curvilinear Motion (section 24.3)
   · Related Rates (section 24.4)
   · Using Derivatives in Curve Sketching (section 24.5)
   · More on Curve Sketching (section 24.6)
   · Applied Maximum and Minimum Problems (section 24.7)
   · Differentials and Linear Approximations (section 24.8)

2. DIFFERENTIATION OF TRANSCENDENTAL FUNCTIONS
   · Derivatives of the Sine and Cosine Functions (section 27.1)
   · Derivatives of the Other Trigonometric Functions (section 27.2)
   · Derivatives of the Inverse Trigonometric Functions (section 27.3)
   · Derivatives of the Logarithmic Function (section 27.5)
   · Derivatives of the Exponential Function (section 27.6)

3. INTEGRATION
   · Antiderivatives (section 25.1)
   · The Indefinite Integral (section 25.2)
   · The Area Under a Curve (section 25.3)
   · The Definite Integral (section 25.4)
   · Numerical Integration: The Trapezoidal Rule (section 25.5)
   · Simpson's Rule (section 25.6)

4. APPLICATIONS OF INTEGRATION
   · Applications of The Definite Integral (section 26.1)
   · Areas by Integration (section 26.2)
   · Volumes by Integration (section 26.3)

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