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CALCULUS FOR MATHEMATICAL AND PHYSICAL SCIENCES II

APPROXIMATE SYLLABUS

FALL 2001

Text: *Calculus, Early Transcendentals*, Stewart, 4th Edition, Brooks-Cole Publishing Co.

Lecture	Reading	Topics
9/6	5.5, 6.1	Integration by substitution, area between two curves
9/10	6.2	Volumes
9/13	6.3, 6.5	Volumes of solids of rotation, average value of a function
9/17	7.1	Integration by parts
9/20	7.2, 7.3	Trigonometric integrals, trigonometric substitutions
9/24	7.4, 7.5	Partial fractions, strategies for integration
9/27	7.7	Approximate integration
10/1	7.8	Improper integrals
10/4	8.1, 8.2	Arc length, surface area
10/8	**First Exam**	**Covers through Section 7.8**
10/11	9.1, 9.2, 9.3	Differential equations, direction fields (not Euler's method), separable equations
10/15	9.4	Exponential growth
10/18	11.1	Sequences
10/22	11.2, 11.3	Series, integral test
10/25	11.4	Comparison tests
10/29	11.5	Alternating series, absolute convergence
11/1	11.6, 11.7	Ratio test, strategies for testing series
11/5	11.8	Power series
11/8	11.9	Representations of functions by power series
11/12	11.10	Taylor and Maclaurin series
11/15	11.11	Binomial series
11/19	**Second Exam**	**Covers through Section 11.10**
11/20	11.12	Applications of Taylor series
11/26	10.1	Parametric curves
11/29	10.2, 10.3	Tangents, areas, and arc lengths for parametric curves
12/3	10.4	Polar coordinates
12/6	10.5	Areas in polar coordinates
12/10	—	Catch-up

Final Examination: Monday, December 17, 4-7 PM