

MATH 2300 (Fall 2006)

Tentative schedule

Week 1

- 08/28–29 Review basic concepts of Calc 1: *limit, continuous function, derivative, integral*.
6.6: Review the Fundamental Theorem of Calculus
08/30 6.8, 8.1: Integration review
09/01 6.9: Logarithmic functions from the integral point of view

Week 2

- 09/04 Labor Day
09/06 6.9: Continued
09/08 1.8: Review parametric equations

Week 3

- 09/11 7.4: Length of a plane curve
09/13 7.5: Area of a surface of revolution
09/15 7.6: Average value of a function

Week 4

- 09/18 7.7: Work
09/20 **Review for Exam 1**
09/22 7.9: Hyperbolic functions

Week 5

- 09/25 7.9: Inverse hyperbolic functions
09/27 8.2: Integration by parts
09/29 8.3: Trigonometric integrals

Week 6

- 10/02 8.4: Trigonometric substitutions
10/04 8.5: Integrating rational functions
10/06 8.7: Simpson's rule

Week 7

- 10/09 8.8: Improper integrals
10/11 8.8: Continued
10/13 10.1: Sequences

Week 8

- 10/16 10.2: Monotone sequences
10/18 **Review for Exam 2**
10/20 10.3: Series

Week 9

- 10/23 10.4: Convergence tests concavity
10/25 10.5: Comparison, Ratio and Root tests
10/27 10.5: Continued

Week 10

10/30 10.6: Alternating series, conditional convergence

11/1 10.7: Maclaurin and Taylor polynomials

11/3 10.8: Maclaurin and Taylor series, power series

Week 11

11/6 10.8: Continued

11/8 10.9: Convergence of Taylor series

11/10 10.10: Differentiating and integrating power series

Week 12

11/13 10.10: Continued

11/15 **Review for Exam 3**

11/17 11.1: Polar coordinates

Fall Break/Thanksgiving**Week 13**

11/27 11.2: Tangent lines and arc length for parametric and polar curves

11/29 11.2: Continued

12/01 11.3: Area in polar coordinates

Week 14

12/04 11.4: Conic sections in calculus

12/06 11.4: Continued

12/08 11.5: Rotation of axes

Week 15

12/11 11.6: Conic section in polar coordinates

12/13 **Review for the Final Exam**

12/15 **Review for the Final Exam**