

Math 152 – Weekly Schedule

Textbook: “Calculus: Early Transcendentals,” 8th edition, by Stewart

Week 1

- Section 5.5 – The Substitution Rule
- Section 6.1 – Areas Between Curves

Week 2

- Section 6.1 continued
- Section 6.2 – Volumes (Disks, Washers, and by Slicing)

Week 3

- Section 6.3 – Volumes by Cylindrical Shells
- Section 6.4 – Work

Week 4

- Section 7.1 – Integration by Parts
- Section 7.2 – Trigonometric Integrals

Week 5

- Section 7.3 – Trigonometric Substitution
- **Exam 1 (Covering through Section 7.2)**

Week 6

- Section 7.4 – Integration of Rational Functions by Partial Fractions
- Section 7.8 – Improper Integrals

Week 7

- Section 7.8 continued
- Section 11.1 – Sequences
- Section 11.2 – Series

Week 8

- Section 11.2 continued
- Section 11.3 – The Integral Test (including remainder estimate)

Week 9

- Section 11.4 – The Comparison Tests
- **Exam 2 (Covering through Section 11.3)**

Week 10

- Section 11.5 – Alternating Series
- Section 11.6 – Absolute Convergence and the Ratio Test (exclude Root Test)
- Section 11.8 – Power Series

Week 11

- Section 11.8 continued
- Section 11.9 – Representations of Functions as Power Series

Week 12

- Section 11.10 – Taylor and Maclaurin Series (excluding Taylor’s Inequality and Binomial Series)
- Section 11.11 – Taylor Polynomials (excluding error estimates)

Week 13

- Section 10.1 – Curves Defined by Parametric Equations (brief review)
- Section 10.2 – Calculus with Parametric Curves (arc length and surface area only)
- **Exam 3 (Covering through Section 11.11)**
- Thanksgiving break in the Fall semester

Week 14

- Section 10.3 – Polar Coordinates
- Section 10.4 – Areas and Lengths in Polar Coordinates
- Section 10.5 – Conic Sections (brief discussion, excluding focus, directrix, and asymptotes)

Week 15

- Section 10.6 – Conic Sections in Polar Coordinates (brief discussion so that students should be able to identify the type of conic based on its polar equation only.)
- Review and Final Exams