Syllabus for Math-101 based on Stewart *Essential Calculus: Early Transcendentals*

Chapter 5
Time: 2 weeks

5.2 Definite Integrals

5.4 Newton-Leibniz Formula

5.5 Substitution Rule

Chapter 6
Time: 3 weeks

6.1 Integration by Parts

6.2 Trigonometric Substitutions

6.3 Rational Functions

6.5 Numerical Integration

6.6 Improper Integrals

Chapter 7
Time: 2 weeks

7.1-7.3 Areas and Volumes

7.4 Arc Length

7.5 Applications in Physics

7.6 Differential Equations

Chapter 8
Time: 3 weeks

8.2 Sequences and Series

8.3 Convergence Tests

8.5-8.8 Power Series and Applications

Chapter 9
Time: 2 weeks

9.1 -9.2 Parametric Curves and Applications

9.3-9.4 Polar Curves and Applications