OFFICIAL SYLLABUS
MATH 152 - CALCULUS II

(Adopted - Fall 2010; Committee: Z. Agustin, G. Pelekanos, S. Staples)
(Updated Fall 2021 to reflect ninth edition of textbook.)
with Webassign

Ch. 6. Integrals
   6.1 Areas between Curves
   6.2 Volumes
   6.3 Volumes by Cylindrical Shells
   6.4 Work (optional)
   6.5 Average Value of a Function

Ch. 7. Techniques of Integration
   7.1 Integration by Parts
   7.2 Trigonometric Integrals
   7.3 Trigonometric Substitution
   7.4 Integration of Rational Functions by Partial Fractions
   7.5 Strategy for Integration
   7.6 Integration Using Tables and Technology (optional)
   7.7 Approximate Integration
   7.8 Improper Integrals*

Ch. 8. Further Applications of Integration
   8.1 Arc Length
   8.2 Area of a Surface of Revolution
   8.3 Applications to Physics and Engineering

Ch. 11. Infinite Sequences and Series
   11.1 Sequences
   11.2 Series
   11.3 The Integral Test and Estimates of Sums
   11.4 The Comparison Tests
   11.5 Alternating Series and Absolute Convergence
   11.6 The Ratio and Root Tests
   11.7 Strategy for Testing Series
   11.8 Power Series
   11.9 Representations of Functions as Power Series
   11.10 Taylor and Maclaurin Series

Ch. 10. Parametric Equations and Polar Coordinates
   10.1 Curves Defined by Parametric Equations
   10.2 Calculus with Parametric Curves
   10.3 Polar Coordinates
   10.4 Calculus in Polar Coordinates
   10.5 Conic Sections
   10.6 Conic Sections in Polar Coordinates

Any instructor should cover all of the material specified; additional sections are optional.

* May require review of Section 4.4, Indeterminate Forms and L’Hospital’s Rule