The Syllabus for Math 8B

Textbooks:

1. Sullivan: Precalculus, Ninth Edition (**Supplement only)**
2. David Guichard: Calculus, Late Transcendentals. (This is a free electronic book, available online at http://www.whitman.edu/mathematics/calculus_late/

Analytic Geometry (from Guichard)

- 1.1 Lines
- 1.2 Distance Between Two Points; Circles
- 1.3 Functions
- 1.4 Shifts and Dilations

Trigonometric (from Sullivan)

- 6.1 Angles and their measure
- 6.2 The unit circle; trigonometric functions of an angle
- 6.3 Some properties of the trigonometric functions
- 6.4 Graphs of the sine and cosine functions
- 6.5 Graphs of the other trigonometric functions
- 6.6 Phase Shift

Analytic Trigonometry (from Sullivan)

- 7.1 The inverse sine, cosine and tangent functions
- 7.2 The inverse trigonometric functions
- 7.3 Trigonometric equations
- 7.4 Trigonometric identities
- 7.5 Sum and difference formulas
- 7.6 Double-angle and half-angle formulas

Applications of Trigonometric functions (from Sullivan)

- 8.1 Right-triangle trigonometry

Instantaneous Rate of Change: The Derivative (from Guichard)

- 2.1 The slope of a function
- 2.2 An example
- 2.3 Limits
- 2.4 The Derivative Function
- 2.5 Adjectives for Functions

Rules for Finding Derivatives (from Guichard)

- 3.1 The Power Rule
- 3.2 Linearity of the Derivative
- 3.3 The Product Rule
- 3.4 The Quotient Rule
- 3.5 The Chain Rule

Trigonometric Functions (from Guichard)

- 4.1 Trigonometric Functions
- 4.2 The Derivative of sin x
- 4.3 A Hard Limit