MATH 165
Calculus & Analytical Geometry I

Course Content

Listed are the sections of the text that must be covered. Other sections can be covered at the authors discretion. There should be ample time to cover some other sections.

1. Functions and models
   (a) Appendices A and C
   (b) Section 1.3

2. Limits and Rates of Change
   (a) All sections
   (b) Section 2.4 must be covered but the instructor can decide how much to emphasize the material, possibly examining the definition for linear functions only

3. Derivatives
   (a) All sections
   (b) In section 3.7 the physics applications must be covered and the instructor can decide how much to emphasize the biological and economic material
   (c) In section 3.9 linear approximations must be covered and the instructor can decide how much to emphasize differentials

4. Applications of Derivatives
   (a) Sections 4.1 to 4.5, 4.7 and 4.9 must be covered
   (b) Section 4.3 requires additional attention since it contains both the first and second derivative tests

5. Integrals
   (a) All sections
   (b) In section 5.4 the indefinite integral must be covered but the *Net Change Theorem* is optional

6. Applications on Integrals
   (a) All sections
   (b) Section 6.4 should be covered but take into account that the students have not previously seen work, variation or proportion
   (c) Section 6.5 should be covered with the instructor deciding how much to emphasize the material