Detailed Syllabus, Math 116


Topics covered:
1. Foundations – theory and review (selections from Apostol): b
   a) real numbers, order completeness, complex numbers. From Apostol, Introduction (material before Chapter 1), sections 3.1-3.9, 3.11, lightly on 3.13-3.15; Chapter 9, sections 1-7.
   b) limits and continuity. From Apostol, Chapter 3, sections 2-5, 7, 9, 10, 16.
   c) differentiation. From Apostol, Chapter 4, sections 1-14.
   d) integration. From Apostol, Chapter 1, sections 9-17, 20, 21; Chapter 3, sections 4 (Theorem 3.4), 18; Chapter 5, sections 1-3.


3. Applications of vector algebra to analytic geometry. Apostol, Chapter 13: full chapter.


5. Ordinary differential equations. Apostol, Chapter 8: full chapter.


7. Linear transformations and matrices. Apostol, Chapter 16: sections 1-17.