**Math 134A Suggested Syllabus**

**Text:** *Investment Science, 2nd Edition*, David G. Luenberger, ISBN: 9780199740086

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| **Week** | **Chapter** | **Topics** |
| 0 | 1 | Introduction to Investment Science  |
| 1 | 2 | **PART I. DETERMINISTIC CASH FLOWS:**  The Basic Theory of Interest |
| 2 | 3 | **PART I. DETERMINISTIC CASH FLOWS:** Fixed Income Securities |
| 3 | 4 | **PART I. DETERMINISTIC CASH FLOWS:** The Term Structure of Interest Rates |
| 4 | 5 | **PART I. DETERMINISTIC CASH FLOWS:**  Applied Interest Rate Analysis |
| 5 | • | Review of Part I and Midterm Examination |
| 6 | 6 | **PART II. SINGLE-PERIOD RANDOM CASH FLOWS:**  Mean-Variance Portfolio Theory |
| 7 | 7 | **PART II. SINGLE-PERIOD RANDOM CASH FLOWS:**  The Capital Asset Pricing Model  |
| 8 | 8 | **PART II. SINGLE-PERIOD RANDOM CASH FLOWS:**  Arbitrage Pricing Theory and Other Pricing Models  |
| 9 | 9 | **PART II. SINGLE-PERIOD RANDOM CASH FLOWS:** Data and Statistics |
| 10 | 10 | **PART II. SINGLE-PERIOD RANDOM CASH FLOWS:**  Risk Measures  |
| 11 | • | Final Exam |