

## GR5261/GU4261 Midterm Information Sheet

**When:** 9:00 am-12:00, Saturday, March 24, 2018

**Where:** Room 501 Schermerhorn Hall

**Coverage:** Fixed income securities (zero coupon bonds, coupon bonds, spot rates, forward rates, yield, default time); Markowitz's portfolio theory (feasible region, efficient frontier, minimum variance point, **two-fund theorem**, risk-free asset, **one-fund theorem**), CAPM (Sharpe ratio, capital market line, beta, security market line and linear regression model, **one-fund theorem, two-fund theorem**); factor models and PCA; risk management (VaR, expected shortfall) and copulas (Gaussian and t-copulas, Archimedean copulas (Gumbel, Frank, Clayton), special copulas ( $C^-$ ,  $C^+$ ,  $C^\perp$ )). Chapters 2, 3, 8, 16, 17, 18 and 19 contain most materials.

**Format:** This is a closed book exam. Books, notes, cell phones and laptops are NOT allowed. However, you may prepare and bring with you two formula sheets of regular size (up to 4 pages total!).