Course Schedule

Help

Week 1	1. Course Introduction 2. Computing Asset Returns 3. Getting financial data from Yahoo! 4. Excel calculations
Weeks 2, 3 and 4	1. Univariate random variables and distributions 2. Characteristics of distributions 3. The normal distribution 4. Linear function of random variables 5. Quantiles of a distribution, Value-at-Risk 6. Bivariate distributions 7. Covariance, correlation, autocorrelation 8. Linear combinations of random variables 9. Time Series concepts 10. Matrix algebra
Weeks 5, 6 and 7	1. Descriptive statistics: histograms, sample means, variances, covariances and autocorrelations 2. The constant expected return model. 3. Monte Carlo simulation 4. Standard errors of estimates 5. Confidence intervals 6. Bootstrapping standard errors and confidence intervals 7. Hypothesis testing 8. Midterm Exam
Weeks 8, 9 and 10	1. Introduction to portfolio theory 2. Optimization 3. Markowitz algorithm 4. Markowitz Algorithm using the solver and matrix algebra

	5. Risk budgeting 6. Statistical Analysis of Efficient Portfolios 7. Beta as a measure of portfolio risk 8. The Single Index Model 9. Estimating the Single Index Model using simple linear regression 10. Final Exam

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