

# UNIVERSITY OF MICHIGAN BUSINESS SCHOOL

## FINANCE 608 CAPITAL MARKETS AND INVESTMENT STRATEGIES

Syllabus: Fall 2006

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### COURSE MATERIALS:

Required: *Investments* by Zvi Bodie, Alex Kane, and Alan Marcus

Recommended: Class notes on Ctools

### COURSE DESCRIPTION:

Capital Markets and Investment Strategies is a course that is designed to provide you with a foundation in making investment decisions. We will cover five broad aspects of the investing decision:

1. How to form optimal portfolios
2. Estimating benchmark expected returns
3. Evaluating investment opportunities
4. Implementing trading strategies
5. Analyzing and understanding sources of risk

We will address these issues by using finance theory and its application in practical investing by professional money managers. The course is highly quantitative and will require the use of a number of analytical tools. Assignments and projects in the course will make extensive use of Microsoft Excel, and students are expected to be comfortable with statistics and must be familiar with linear algebra.

## COURSE ADMINISTRATION, POLICY, AND PEDAGOGY

The emphasis in this class will be on the application of concepts from financial theory to investment management problems. These applications involve the use of computing resources and financial market data. Because the majority of the class is applied, I will emphasize homework and projects. I also strongly believe that participation contributes to the classroom environment, and will factor it into my final evaluation of your performance.

The specific grading policy follows:

Homework	25%
Project	25%
Final Exam	40%
Attendance and Participation	10%

Homework may be completed in groups of up to five students. The project will also be completed in groups of up to five students, and will involve quantitative stock selection. The final exam will be an individual effort.

The final grade will be assigned according to the policy of the business school:

Low Pass	$\leq 5\%$
Pass	$\leq 25\%$
Good	$\leq 40\%$
Excellent	$\leq 35\%$

I will adhere strictly to this policy by ranking students based on their scores and applying the above percentile cutoffs to the ranking

## COURSE OUTLINE:

<b>Module</b>	I (9/6, 9/11)
<b>Topic</b>	Introduction and Basic Statistical Review <i>Class goals</i> <i>Average and expectation</i> <i>Variance, covariance, and correlation</i> <i>Basic regression analysis</i>
<b>Readings</b>	BKM, Chapters 1-5
<b>Assignments</b>	Assignment 1, Due 9/18
<b>Module</b>	II (9/13, 9/18)
<b>Topic</b>	Diversification and Portfolio Optimization <i>Impact of correlation on mean and standard deviation</i> <i>Portfolio mean and standard deviation</i> <i>Optimal portfolios without constraints</i> <i>Optimal portfolios with constraints</i> <i>Tracking error criteria</i>
<b>Readings</b>	BKM, Chapters 6-8
<b>Assignments</b>	Assignment 2, Due 9/25
<b>Module</b>	III (9/20, 9/25)
<b>Topic</b>	Equilibrium Expected Returns, the CAPM, and Strategic Asset Allocation <i>The CAPM idea and formula</i> <i>Implementation of the CAPM</i> <i>Estimating alphas and betas</i> <i>Constructing a strategic asset allocation</i>
<b>Readings</b>	BKM, Chapters 9-10
<b>Assignments</b>	Assignment 3, Due 10/2

<b>Module</b>	IV (9/27, 10/2)
<b>Topic</b>	Basic Security Analysis, Trading Strategies, and Forming Views <i>The dividend discount model</i> <i>Earnings vs. dividends</i> <i>Valuation ratios</i> <i>Forecasting growth rates</i> <i>Trading strategies</i> <i>Quantitative stock selection</i>
<b>Readings</b>	BKM, Chapters 17-18
<b>Assignments</b>	Assignment 4, Due 10/9 Group Project, Assigned 10/2, Due 10/16
<b>Module</b>	V (10/4, 10/9)
<b>Topic</b>	Incorporating Views into Portfolio Allocations <i>Unconstrained optimization with a view</i> <i>Tracking error and views</i> <i>Black-Litterman framework</i>
<b>Assignments</b>	Assignment 5, Due 10/16
<b>Module</b>	VI (10/11, 10/16)
<b>Topic</b>	Factor Models <i>What is a factor?</i> <i>Factor exposure and portfolio tilts</i> <i>How do we manage factor exposure?</i>
<b>Readings</b>	BKM, Chapters 10-11