FINC 602-01 Investment Management

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FINC 602-01: Investment Management, Spring 2017
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Course Objective

The purpose of this course is to provide MBA students with an understanding of both basic and advanced investment management theories and strategies. Students should be able to discuss and understand with some depth the security types and markets, security valuation, portfolio and capital market theory, fundamental, technical, and efficient market analysis, derivative markets, strategies, valuation, and hedging applications, fixed-income securities and markets, and fixed-income analysis.

Student Learning Objectives

Objective: At the end of this class students will be able to:

1. Value bonds, stocks, and derivatives
2. Statistically measure the expected return and risk of a security and portfolio
3. Apply modern portfolio theory to the construction of equity portfolios
4. Derive the Capital Asset Pricing Model
5. Explain the Arbitrage Pricing Theory
6. Compare and contrast the Arbitrage Pricing Theory to Capital Asset Pricing Model
7. Explain the major types of equity, bonds, asset-backed securities, and investment funds in terms of their characteristics
8. Explain how the different financial markets function and how securities are traded
9. Explain the financial anatomy of a company
10. Value stocks and indexes using fundamental DCF and multiplier approaches
11. Understand and apply technical tools
12. Explain the Efficient Market Theory in terms of its propositions and implications
13. Explain the weak-form, semi-strong-form, and strong-form-tests of the EMH and some of the empirical studies and methodologies used to tests these hypotheses.
14. Explain a CAR test methodology
15. Explain how the options and futures markets functions
16. Evaluate option strategies with profit tables and graphs
17. Explain option price relations
18. Apply options to create a portfolio insurance strategy
19. Apply the BOPM and the B-S OPM to value options
20. Derive the BOPM
21. Use futures contracts to set up speculation and hedging strategies
22. Explain the carry-cost model
23. Explain the determinants of interest rates and the terms structure of rates
24. Explain bond credit risk, call risk, and market risk
25. Explain the relation between bond risk and bond spreads
26. Explain duration and convexity
27. Explain bond immunization
28. Explain bond speculation strategies
29. Understand Bond and Interest Rate Derivative: Swaps, Interest Rate Options, and Exchange-Traded derivatives
30. Construct a fundamental equity portfolio on Bloomberg
31. Construct an equity-style portfolio on Bloomberg
32. Construct a portfolio insured portfolio on Bloomberg
33. Construct a total return bond portfolio on Bloomberg

Readings
- Chapters from Johnson, *Debt Markets and Analysis*, Bloomberg Press/Wiley (Canvas)
- Chapters from Johnson, *Introduction to Derivative*, Oxford University Press (Canvas)

Canvas Folders
- Modules: Assignments, Audio/PPTs, PPTS, end-of-chapter problems, test review material, solutions, chapter PDFs from debt and derivative book, and Excel programs can be downloaded from the modules
- Assignment: End-of-the Chapter Problems can be downloaded and the work submitted by uploading from “Assignments”
- Discussions: Discussions are found in Assignment, Discussions, and Modules

Discussions
During the course, you will be asked to post your thoughts and analysis related to several topical areas to Discussion Board on Canvas and then respond to other post. The discussion posts include:
- “Introduce Yourself”
- “The Relevance of CAPM”
- “Interesting ETFs”
- “Interesting Stocks”
- “Efficient Market Theory”

Note: It is highly recommended to compose your discussion board posts in Microsoft Word or another text editor and then copy and paste your response into the discussion board.
Live Online Lectures, Office Hours, Test Review

Sessions via Zoom
I will be available on Thursday and selected Sunday evenings from 6:00-8:00 to review the material covered for that week, work problems, and answer questions. You can join the online session by using the following Zoom Link: https://xavier.zoom.us/

Note: The Live online sessions will be recorded and can be accessed from the Zoom link on the Canvas dashboard.

Schedule for Live Online Lectures and Problem Reviews, 6:00 am - 8:00 am

- January 12, Thursday
- January 19, Thursday
- January 22, Sunday (Test 1 Review)
- January 26, Thursday (Test 2 Review)
- February 2, Thursday
- February 9, Thursday
- February 12, Sunday (Test 3 Review)
- February 16, Thursday
- February 23, Thursday
- February 26, Sunday (Test 4 Review)

Modules
The course consists of a series of Modules and Assignments. On Canvas, you will see a list of all of the modules in this course. In each Module, you will find all of the assignment that you are responsible for completing, instructions, and links for submitting assignments. You can also click on the Assignment button to access the assignments. The assignments require that you work select chapter problems by hand or in Excel. With many of the problems requiring math and graphs, I would like that you do your work by hand and then submit it by uploading a scanned PDF.

Module 1: Equity and Bond Valuation
This module covers Chapters 3 from *Equity Markets and Portfolio Analysis*: Bond and Equity valuation.

SLO:
- Calculate the values and rates of return on bonds and stocks

Topics:
- Review of time value of money
- Bond valuation
- Bond price relations
- YTM
• Total return
• Spot rates and equilibrium bond prices
• Geometric mean
• Stock returns and valuation
• Fundamental stock valuation
• Two-stage and three-stage growth models

Readings and Assignments
• Read Chapters 3
• Chapter 3 Audio/PPTs
• Chapter 3 Problems

Module 2: Return and Risk, Portfolio Analysis, and Capital Market Theory
This module covers Chapters 6-10 in *Equity Markets and Portfolio Analysis: Stock Return and Risk, Portfolio Evaluation, Markowitz Portfolio Selection, Capital Asset Pricing Model (CAPM), and Arbitrage Pricing Theory (APT)*.

SLOs:
• Estimate a stock’s return and risk using statistics
• Evaluate a portfolio in terms of its expected return and risk
• Construct a Portfolio using the Markowitz Portfolio Selection Model
• Derive the Capital Asset Pricing Model
• Compare and contrast APT to CAPM

Readings and Assignments:
• Read Chapter 6-10 from *Equity Markets and Portfolio Analysis*
• Lecture: Audio/PPTs covering the chapters
• Work select end-of-the-chapter problems from chapters 6-10
• Discussions

**Test 1: Online, Module 1 and 2**
Date: 1/25, Wednesday
Time: 6:00pm-11:00pm
Test Duration: 2.5 Hours (allowed 4 hours)

Module 3: Equity Markets, Trading, and Investment Funds
Module 2 covers Chapters 4 and 5 from *Equity Markets and Portfolio Analysis*

SLOs:
• Differentiate the major types of equity and investment funds in terms of their characteristics
• Explain how the different financial markets function

Assignments and Readings:
• Reading: Chapters 4 and 5 (or corresponding PPTs)
• Equity Institutions Question are part of the material for test 2

**Test 2: Online, Module 3**
Due Date: 1/29
Can be downloaded and submitted at any time prior to due date (1/29)

**Module 4: Fundamental, Technical, and Efficient Market Analysis**
This module covers Chapters 11, 12, 13, and 14 from *Equity Markets and Portfolio Analysis*: the financial anatomy of company, valuations of stocks and indexes using DCF and multipliers approaches, bottom-up and top-down stock portfolio construction, technical analysis, efficient market analysis, and equity-style investment

SLOs
• Explain the financial anatomy of company
• Value stocks and indexes using fundamental DCF and multiplier approaches
• Understand and apply technical tools
• Explain the Efficient Market Theory in terms of its propositions and implications
• Explain the weak-form, semi-strong-form, and strong-form-tests of the EMH and some of the empirical studies and methodologies used to tests the hypothesis.
• Explain and apply a CAR test methodology

Readings and Assignments:
• Read Chapters 11-15
• Lecture: Chapter 11-15 Audio/PPT
• Assigned end-of-the-chapter problems

**Module 5: Equity Derivatives**
Module 5 covers Chapter 16 and 17 from *Equity Markets and Portfolio Analysis* and the Binomial Option Pricing Model from Chapter 5 from the Derivatives text.

SLOs:
• Evaluate fundamental option strategies in terms of profit graphs
• Explain how options trade on organized exchanges
• Evaluate a stock portfolio insurance strategy
• Explain the BOPM
• Explain the futures market
• Explain the carrying-cost model
• Explain uses of futures for hedging and speculation

Reading Material and Assignments
• Chapters 16 and 17 from *Equity Markets and Portfolio Analysis* and corresponding PPTs
• Chapter 5, Derivative Text
Test 3: Online: Modules 4 and 5  
Date: 2/15, Wednesday  
Time: 6:00pm-11:00pm  
Test Duration: 2.5 Hours (allowed 4 hours)

Module 6: Bonds Evaluation and Selection and Debt Markets and Securities  
Module 6 covers bond evaluation and selection, and the different debt securities and their markets.

SLOs:
- Explain the determinants of interest rates and the terms structure of rates
- Explain bond credit risk, call risk, and market risk
- Explain the relation between bond risk and bond spreads
- Explain duration and convexity
- Explain bond immunization
- Explain bond speculation strategies
- Differentiate the major types of bonds in terms of their characteristics
- Explain how the different debt markets function

Reading Material and Assignments:
- Readings: Chapters 4-9 from Johnson's *Debt Markets and Analysis*
- Audio/PPT: Chapters 4-6
- Assigned Problems

Test 4: Online: Modules 6 and 7  
Date: 3/2, Thursday  
Time: 6:00pm-11:00pm
Test Duration: 2.5 Hours (allowed 4 hours)

**Bloomberg Workshop, March 4, Saturday, 9:00-12:00**

This is workshop held onsite in the Fifth-Third Trading Room. Students are encouraged but not required to attend.

**SLOs**
- Access Bloomberg from your own account
- Navigate the Bloomberg system
- Search and screen for securities and news
- Access economic data and information
- Construct a portfolio
- Apply Excel to access Bloomberg information
- Create a Bloomberg Launchpad
- Work Bloomberg Exercises
- Construct a fundamental equity portfolio on Bloomberg
- Construct an equity-style portfolio on Bloomberg
- Construct a portfolio insured portfolio on Bloomberg
- Construct a total return bond portfolio on Bloomberg
- Construct a bond portfolio hedged or enhance with debt derivatives

**Reading Material:**
- Chapter 2 from *Equity Markets and Portfolio Analysis*
- Chapter 2 PPT

**Tests, Assignments, and Grading**

1. **Tests:** Tests will be based on material from lectures, readings, and assigned study problems. There will be four tests during the semester.

   Make-up tests will be given only to students who receive permission from me in advance of the test date

2. **End-of-the Chapter Problems:** 28 Problem Sets

3. **Discussions:** Five Discussions Posts and Replies

4. **Grading Weights**
   - Test 1: 20%
   - Test 2: 20%
   - Final: 25%
   - Problems 20%
• Bloomberg Exercises 10%
• Discussions 5%

Grading Scale:

• 93-100: A
• 89-92: A-
• 85-88: B+
• 80-84: B
• 77-79: B-
• 74-76: C+
• 65-73: C
• 50-64: C-
• 0-49: F

5. Modifications: The course is subject to modification during the semester.