

**Subject: Economics & Business      Number: EBG546**

**Course Title: Investments & Portfolio Management**

**Section: A**

**Semester/year: Fall 2014**

**Instructor or Coordinator:** Professor John Cuddington

**Contact information (Office/Phone/Email):** EH 325, 303-273-3150, jcudding@mines.edu

**Office hours:** Mon/Wed 4:00 – 5:15 pm

**Class meeting days/times:** Mon/Wed 2:30 – 3:45 pm

**Class meeting location:** EH 211 ??

**Web Page/Blackboard link (if applicable):** Blackboard website

**Teaching Assistant (if applicable):** n/a

**Contact information (Office/Phone/Email):** n/a

**Instructional activity:** 2.5 hours lecture/week    \_\_\_ hours lab    \_\_\_ semester hours

**Course designation:** \_\_\_ Common Core    \_\_\_ Distribute Core    \_\_\_ Major requirement     Elective  
\_\_\_ Other (please describe \_\_\_\_\_)

**Course description from Bulletin:**

This course covers institutional information, valuation theory and empirical analysis of alternative financial investments, including stocks, bonds, mutual funds, ETFs and (to a limited extent) derivative securities. Special attention is paid to the role of commodities (esp. metals and energy products) as an alternative investment class. After an overview of the time value of money and arbitrage and their application to the valuation of stocks and bonds, there is an extensive treatment of optimal portfolio selection for risk averse investors, mean-variance efficient portfolio theory, index models, and equilibrium theories of asset pricing including the capital asset pricing model (CAPM) and arbitrage pricing theory (APT). Market efficiency is discussed, as are its implications for passive and active approaches to investment management. Investment management functions and policies, and portfolio performance evaluation are also considered.

Prerequisites: Mat323/530 (Prob/Stats), MACS111 (Calculus I), and EBG311 (Principles of Microeconomics).

**CFA Student Scholarships:** The CFA program offers scholarships for current Mines students interested in taking the Level 1 CFA exam. See CFA website for current program information:  
<http://www.cfainstitute.org/>

As a CFA charter holder, I can sponsor up to five top students in EBG546 per year for CFA level 1. Let me know if you are interested.

**Textbook and/or other requirement materials:**

**Required text:** Zvi Bodie, Alex Kane, and Alan J. Markus. *Investments*. 2014. 10th Edition. McGraw Hill Irwin.

**Other required supplemental information:** None

**Student learning outcomes: At the conclusion of the class students will have a good understanding of**

1. U.S. financial institutions.
2. Risk, return and portfolio diversification.
3. Various theories of asset pricing.
4. Portfolio management practices.

**Brief list of topics covered:**

1. As stated in Course Bulletin above.

**Policy on academic integrity/misconduct:**

The Colorado School of Mines affirms the principle that all individuals associated with the Mines academic community have a responsibility for establishing, maintaining an fostering an understanding and appreciation for academic integrity. In broad terms, this implies protecting the environment of mutual trust within which scholarly exchange occurs, supporting the ability of the faculty to fairly and effectively evaluate every student's academic achievements, and giving credence to the university's educational mission, its scholarly objectives and the substance of the degrees it awards. The protection of academic integrity requires there to be clear and consistent standards, as well as confrontation and sanctions when individuals violate those standards. The Colorado School of Mines desires an environment free of any and all forms of academic misconduct and expects students to act with integrity at all times.

Academic misconduct is the intentional act of fraud, in which an individual seeks to claim credit for the work and efforts of another without authorization, or uses unauthorized materials or fabricated information in any academic exercise. Student Academic Misconduct arises when a student violates the principle of academic integrity. Such behavior erodes mutual trust, distorts the fair evaluation of academic achievements, violates the ethical code of behavior upon which education and scholarship rest, and undermines the credibility of the university. Because of the serious institutional and individual ramifications, student misconduct arising from violations of academic integrity is not tolerated at Mines. If a student is found to have engaged in such misconduct, sanctions such as change of a grade, loss of institutional privileges, or academic suspension or dismissal may be imposed.

The complete policy is [online](#).

**Grading Procedures:** (Note: all courses must have a published, transparent grading policy that students can use to gauge their performance and progress in the class through the course of the semester.)

<i>Homework, Attendance, and Participation</i>	<i>30%</i>
<i>Midterm Exam 1</i>	<i>15%</i>
<i>Midterm Exam 2</i>	<i>20%</i>
<i>Final Exam</i>	<i>35%</i>

**Coursework Return Policy:** (Note: all courses must have a published, good-faith policy defining when homework, exams, and other graded coursework will be returned. In general most work should be returned to students within two weeks, along with suitable materials/feedback that enable students to understand how to improve their learning/performance.)

**Absence Policy** (e.g., Sports/Activities Policy): Please complete assignments before due dates.

**Homework:**

- Homework must be turned in before it is due to be graded – PLAN AHEAD.
- Exams: If you will be absent during a scheduled exam, you should schedule a make-up time BEFORE YOU LEAVE.

**Common Exam Policy** (if applicable):

**Detailed Course Schedule:** (*Note: it is recommended that the syllabus provide a detailed week-by-week schedule of course activities, including readings, exam and project due dates, etc., as a common courtesy to students.*)

## **COURSE SCHEDULE**

### **OVERVIEW OF INVESTMENTS**

- I. The Investment Environment
  - A. *BCM, Ch.1*
- II. Asset Classes and Financial Instruments; Stock and Bond Indexes
  - A. *BKM, Ch.2*
- III. How Securities are Traded
  - A. *BCM, Chapter 3*
- IV. Mutual Funds and Other Investment Companies; Exchange Traded Funds (ETFs)
  - A. *BCM, Ch.4*
- V. Indexes and Index Funds and Index ETFs. Benchmarking and Performance Evaluation
  - A. *BKM, Ch. 4.7: Mutual Fund Investment Performance: A First Look*
- VI. Commodity Price Indexes and Commodity ETFs
  - A. *Commodity price index - Wikipedia, the free encyclopedia.pdf*
  - B. *S&P GSCI\_ Wikipedia...pdf*
  - C. *Vanguard ETF Guide. <https://personal.vanguard.com/us/funds/etf/ETFTableView>*

Midterm Exam 1 (week 5)

## **RISK AND RETURN; DIVERSIFIABLE AND NONDIVERSIFIABLE RISK**

VII. Return, Risk and the Historical Record; Review of Statistical Concepts

A. *BCM Ch. 5.*

VIII. Risk Aversion and Capital Allocation to Risky Assets

A. *BKM, Ch. 6.*

IX. Optimal Risky Assets

A. *BKM, Ch.7.*

X. Index Models

A. *BKM, Ch.8.*

Midterm Exam 2 (week 10)

## **FINANCIAL MARKET EQUILIBRIUM**

XI. Equilibrium in Capital Market: Capital Asset Pricing Model

A. *BKM, Ch. 9*

XII. Equilibrium in Capital Markets: Arbitrage Pricing Theory

A. *BKM, Ch. 10*

XIII. The Efficient Markets Hypothesis

A. *BKM, Ch.11.*

XIV. Empirical Evidence on Security Returns

A. *BCM, Ch. 13.*

XV. Arbitrage; 'No Arbitrage' Equilibrium Conditions

A. *JC notes*

B. [http://www.bionicturtle.com/learn/article/cost\\_of\\_carry\\_model\\_9\\_min\\_screencast/](http://www.bionicturtle.com/learn/article/cost_of_carry_model_9_min_screencast/)

C. *LME. 2005. Managing Metals Price Risk. Ch. 7: The Structure of LME Prices over Time [on the forward curve, backwardation and contango].*

XVI. Commodity and Resource-Sector Investments [for reading/writing assignment]

A. Georgiev, Georgi. 2001. *Benefits of Commodity Investments*. *Journal of Alternative Investments* 4, 1 (Summer), 40-48.

B. Gorton, G. and K.G. Rouwenhorst. 2004. "Facts and Fantasies about Commodity Futures," *Financial Analysts Journal* 62, 2, 47-68.

C. Idzorek, Thomas, M. 2006. "Strategic Asset Allocation and Commodities." *Ibbotson and Associates report prepared for PIMCO*.

PERFORMANCE VALUATION

XVII. Portfolio Performance Evaluation

A. *BKM, Ch.24*.