

Investment Management

Syllabus

Finance 720/205

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The objective of this course is to undertake a rigorous study of the theory and empirical evidence relevant to institutional portfolio management. The major topics covered are:

- Optimal portfolio selection;
- The relation between risk and return;
- Market efficiency;
- Statistical/quantitative characterizations of asset markets;
- Active and passive portfolio management;
- Asset allocation;
- The behavior and performance evaluation of mutual funds and hedge funds

The primary emphasis of the course is on the design of common stock portfolios, but other investments will be included. The course does not address the details of individual security valuation and selection (i.e., this is not a course about stock picking).

Nonetheless, most students find it **extremely quantitative and demanding**.

The course is applied in an important sense, in that various concepts and approaches are taken to real-world data. On the other hand, the course devotes little time to the institutional aspects of investment management and is fairly quantitative. Rather than describe the institutional details of current practice, the course attempts to provide a lasting conceptual framework in which to view the investment process and to analyze future ideas and changes in the investment environment.

It is important for you to note that this course, while incredibly valuable for purposes of managing your personal portfolio, will not specifically take the perspective of an individual recently graduated MBA or undergraduate investor wishing to turn his or her first year bonus into a million dollars.

Prerequisites.

The prerequisites are FNCE 601 or 100, and STAT 621 or (101 and 102). Given that investment management requires one to understand and deal effectively with randomness, a good grounding in statistics is essential, and familiarity with statistics should extend through regression, covariance, and correlation. In addition, you should have a **good** working knowledge of common software useful for financial and statistical analysis. A spreadsheet program like Excel is an example as is Minitab, etc.

Text

There is one required text for the course. The primary text is *Investments, 5th Edition*, by Bodie, Kane and Marcus, Irwin, 2002 (**henceforth, BKM**). This book, along with the optional solutions manual, is available at the Penn Bookstore. In addition, I have listed Professor Jeremy Siegel's book entitled *Stocks for the Long Run* (3rd Edition) as a required text for the course. I will be drawing on material from it for class, and some homework sets will draw on it.

Bulk Pack

In addition to class notes and texts, the course will make use of articles that are both academic in nature and practitioner-oriented. These articles are contained in a course bulk pack that you may purchase from Wharton Reprographics (phone: 898-7600, fax: 898-2400). While some of the articles in the bulk pack are supportive of the class material in nature and are thus optional, most will be required reading. The philosophy behind including some ancillary material in the course pack is that it acts in the least as a free option to you should you wish to understand what we cover in class to a greater depth. I will make clear for which articles I will hold you responsible.

Handouts

I will hand out material in almost every class. Should you be absent when I hand something out, you will be responsible for obtaining a copy of what I gave to the class. I will put extra copies in the Department of Finance, but if they are gone when you come by, you will have to photocopy the material from someone in the class or download the material from my course web site. You will be charged the standard bulk pack rate for most class handouts.

Evaluation

You will be evaluated in this class through your grades on group homework/problem sets, an optional midterm exam (**Wednesday, March 5th, 2003, in class**) and a final exam. If you take the midterm, it will count as 30% of your final grade. The final exam will then contribute 40%. I'm sorry to say that individual exceptions to the timing of these examinations cannot be made to accommodate travel schedules, Spring Break trips, etc. Homework will in either case represent 30% of the total grade.

While I certainly won't monitor your attendance in the class, I will gauge class participation and will use it to help decide grades. For some, this may contribute up to 5% - 10% of the final grade, or more. Lack of class participation, however, will not harm you, *per se*. ***Keep in mind that, in any case, I cold call in just about every class.***

You will be allowed to bring one 8.5"x 11.0" sheet of paper with anything you wish written on it (e.g., formulas from the class), but the exams will otherwise be closed book. You are also allowed to bring a calculator that has logarithm and exponential functions and can raise a number to a power. Wristwatch calculators are considered very stylish in the finance world, especially if they have many scientific functions, so feel free to bring yours. On the other hand, do not bring your portable computer or PDA, even if it does fit

on your arm, as they are not allowed to be used during exams. The final exam will be cumulative with an emphasis on the concepts covered after the midterm.

My grading policy allows for re-grades on all assignments. However, the re-grade request

- must be accompanied by a clear and persuasive explanation for your request
- must be submitted to me within one week of your having received the assignment or test back
- will result in your exam or assignment being *completely* re-graded.

I want to be explicit about this last point. If you ask me to re-grade an exam, for example, I will re-grade ***all*** questions on the exam in addition to the answer(s) in question so that it is actually possible for you to receive a lower score after the re-grade than before. In fact, assuming grading errors are symmetric, the expected value of the change in points from a re-grade is zero! This policy is designed to ensure that the mean class score will not be increased artificially by corrections only of mistakes in students' favor. Also, the TA's may be responsible for first-stage re-grades, however, I will view every one myself.

Note: If you experience an emergency or illness that will interfere with any course requirement, you must contact me with the appropriate explanation before the due date. For example, if you are ill on the day of an exam, you must bring a doctor's note to me *before* the time at which you are scheduled to take the exam. Interviews and job-related absences are not considered to be emergencies or illnesses, as per the school's official policy (and common sense).

Finally, I expect you to adhere closely to the school's code of academic conduct. I will treat any violation of this code such as cheating in any form with severity. I also photocopy a significant portion of the assignments that are turned in (including homework and tests). I will likely catch any regrade-related cheating as a result. In addition, I expect classroom conduct to be on a high level. For example, do not expect to leave the class to get coffee in the middle of a lecture and be ignored upon your return. More importantly, I will not tolerate harassment of any type in my classroom.

Homework, Software and Computer Work

Since taking the theory as well as the operational aspects of investment management to the data requires the use of computers to perform statistical analysis and optimization, this course relies on significant amounts of computer work with actual data. For example, several homework projects will require you to perform statistical analysis using a program like Microsoft Excel®, Minitab, SAS or Matlab.

Homework should be completed by students in groups of *no more than 5* and *no fewer than 2* (your teammates may be enrolled in other sections of the course). Each group should submit only one homework answer report, and all group members will

receive the same grade, regardless of who contributed most to the final result. The names of every team member must be written clearly on the report's cover page. The report itself should be appropriately self-contained, succinct and written using clear and lucid language. Excessive or unnecessary computer output will be penalized. The homework and computer projects will be graded on a 10-point scale. ***You should email me your group info by the end of the second week of class.***

Speakers

Typically, 3-4 well-known speakers from the world of investment management agree to speak specifically to my FNCE 205/720 class each year. In the past, this has included pension plan portfolio managers, mutual fund managers, quantitative systems traders, and hedge fund managers. I will alert you to this year's schedule when it is finalized.

Teaching Assistants and Review Sessions

The teaching assistants (TA's) for the three sections of this course are Shane Underwood (an advanced Ph.D. student) and two others to be announced. Shane will be holding review sessions and grading exams and problem sets, and the other TA's will be holding office hours and grading exams and problem sets.

Teaching Assistant	Activity	Date, Time and Location
Shane Underwood	Course Reviews	TBA (See Course Web Page)
TBA	Office Hours	TBA (See Course Web Page)
TBA	Office Hours	TBA (See Course Web Page)

You may contact your section TA using the following information.

Teaching Assistant	Contact Information
Shane Underwood	Office: 2362 SH-DH, Office Tel: 215-898-2543 Email: shaneu@wharton.upenn.edu
TBA	Office: TBA SH-DH, Office Tel: Email: @wharton.upenn.edu
TBA	Office: TBA SH-DH, Office Tel: Email: @wharton.upenn.edu

Note: Email is the best way to get in touch with course TA's.

My Office Hours

My office hours are on Mondays from approximately 3:00-4:30 p.m. in my office, 2254 SH-DH. My remaining contact information is:

Email: Geczy@wharton.upenn.edu

Phone: 215-898-1698

Fax: 215-898-6200

By far the best method of contacting me is via email.

Web Page

I have set up a web page for each section of this course accessible at the following URL: <http://finance.wharton.upenn.edu/~geczi/>. This web site will contain most class material I hand out that you may download using standard web browsers. I will give you the username and password during class.

Credit

This course benefits from explicit and implicit input and examples from Yacine Ait-Sahalia, Rob Stambaugh, Kent Daniel, Campbell Harvey, and especially Don Keim.

Special Note

This syllabus should be viewed as describing how the course has been run in the past and how I intend to run it in the current semester. However, you should be aware that anything herein or elsewhere might change without notice, reason or explanation. This includes but is not limited to evaluation methods, texts, materials and scheduling. If you are not comfortable with this uncertainty, then please do not take the course.