

UNIVERSITY OF PENNSYLVANIA
The Wharton School

Corporate Valuation
FNCE728

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Office Hours: Tuesday 2:00 pm – 5:00 pm, and by appointment

The TAs and their office hours for this course will be announced.

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I will answer email that can be answered with a simple reply (for example, "yes" or "no" or a few sentences). I will not answer emails that require long explanations. In those cases, I will ask you to call me or see me in my office. I generally answer emails at least once per day.

1. Course Objectives.

The objective of this course is to learn firm, debt and equity valuation methods from both a conceptual and practical framework. The approach combines both accounting and finance into a practical framework for valuing firms, debt and equity. While there is some new finance theory introduced in this course, the emphasis is on the practical application and integration of finance and accounting concepts to valuing companies. We will discuss standalone valuation, valuation in an M&A setting, LBOs and multinational valuation.

The course utilizes extensive and detailed readings, exercises, multiple valuation cases (some use sanitized data and others use real data), a midterm exam and a final exam. Students interested in broader topical coverage and a less detailed examination of valuation techniques should consider Advanced Corporate Finance (the corporate finance case course).

This course is designed for students with little or no practical work experience in valuing companies. I do not believe that the "value added" from this course for students who have extensive job related valuation experience is as high as for those with no relevant prior experience, but former students with prior work experience disagree with me on this issue. My goal in this course is to give you a through grounding in the theory and practice of valuation.

2. Minimal Prerequisites.

- A. Introductory Financial Accounting
- B. Introductory Corporate Finance
- C. Introductory Statistics or Econometrics

D. A basic knowledge of EXCEL

Note, some prior students have indicated that they thought intermediate accounting (ACCTG 201 and/or ACCTG 202 OR ACCTG 742) was the real prerequisite. However, many students have succeeded in this course without accounting training beyond introductory financial accounting. Stronger accounting skills will, of course, make some of the material easier to understand.

3. Course Texts.

A. Required Texts.

Richard Brealey, Stewart Myers and Franklin Allen, Principles of Corporate Finance, Tenth Edition, McGraw Hill, 2010. This is a text virtually all of you should own having taken Corporate Finance. Another useful book is Berk and DeMarzo (BD), *Corporate Finance*, 2nd ed.

B. Bulkpack

The bulkpack is currently available from Wharton Reprographics in two bound volumes. The bulkpack material comprises all of the required reading for the class. The bulkpack is material that Mark Zmijewski at the University of Chicago and Robert Holthausen at Wharton are developing for a textbook called *Corporate Valuation: Theory, Practice and Evidence*. *NOTE: This bulkpack is not available from Study.Net.* The book is under contract and the publisher does not want it released through Study.Net. The book is revised relative to last year so students should not use last year's bulkpack (make sure you get the bulkpack that is copyrighted in 2012 and 2011, not just 2011). Unless otherwise specified, students will be held responsible for all material in the bulkpack, whether covered in class or not.

In addition, students may be billed for class handouts. I anticipate approximately 200 pages of additional handouts, though there may be more depending on the material developed during the semester and whether material is handed out in class or is distributed electronically. Extra handouts will be on file in the filing cabinet outside my office door if you miss class. Once those extra copies are gone, students will be responsible for borrowing the relevant material from another student in order to make a copy. Your bursar bill will reflect the actual cost of the handouts at the end of the semester at Wharton Reprographics standard per page rate.

C. Web Café

Material for problems and cases will be made available for student access via Web Café. The available material for the problems and cases is the underlying data and the problem and case write-ups.

In addition, there will be copies of the PowerPoint slides I will use during lectures available via Web Café as well. These will not be distributed in hard copy, so students who would like to have them prior to class will need to print them out. The final version of these will be available by at least 8:00AM on the day of class. If you are registered for the class, you can gain access to the web Café room for this course via mySPIKE (<http://myspike.wharton.upenn.edu>) or on the Web Café home page (<http://webcafe.wharton.upenn.edu>).

D. Other Interesting but not Required Texts and Material

Lawrence Revsine, Daniel Collins, W. Bruce Johnson and H. Fred Mittelstaedt, Financial Reporting and Analysis Fourth Edition, Prentice-Hall, 2009. This is a useful book to aid in understanding how accounting records various transactions, understanding the cash flow statement and how to analyze accounting statements. The course does not rely explicitly on this text so you should only purchase it if the book is a useful addition to your library. It is a good reference book which you might want to own if your intended career will require you to read and comprehend financial statements (e.g., equity analyst, valuation work, etc), or if you need help with the accounting aspects of the course. If you already own another book with the same topical coverage, it is not worth buying this one. Other accounting texts that you may already own may help you with the accounting aspects of the course as well.

McKinsey & Co., Tim Koller, Marc Goedhart and David Wessels, Valuation: Measuring and Managing the Value of Companies, Fifth Edition, John Wiley & Sons, 2010. This is a valuation book written largely from a practitioner's perspective.

For those who would like to learn useful Excel shortcuts and how to build standard investment banking models, you might want to purchase Knowledge Base Level I or Knowledge Base Level II from FactSet. Knowledge Base Level I teaches Excel shortcuts and how to build a standard IBANK model. Knowledge Base Level II discusses LBO and M&A transactions and how to build an LBO model and an accretion/dilution analysis for an M&A deal. To purchase or learn more about either of these products, go to

<http://store02.prostores.com/servlet/factsetdealravenorders/StoreFront>

4. Grading.

Grading in the course will be based on the following criteria:

Judson Green	5%
Valuation Project – Part I	10%
Valuation Project – Part II	15%
Valuation Project – Part III	15%
Midterm Examination	25%
Final Examination	30%
Total	100%

I anticipate giving an overall GPA of 3.25 for all my students. I anticipate that students will be graded on the same curve.

A. Class and Participation and Attendance

Some classes require you to be prepared for class discussion (discussion of assigned cases or problems), while other classes will be more lecture format. During lectures, I encourage you to ask questions and I will ask you questions about the material. Voluntary class participation is expected, however, I will cold call on individuals in class

from time to time. Participation will affect student's grades who wind up near a grade boundary; potentially moving them up or down.

The education experience for everyone suffers if participation or attendance for the class becomes a problem. If attendance or participation lags, I reserve the right to change the grading criteria in the middle of the semester to weigh class participation and attendance in the grading scheme (retroactively).

B. Name Cards

In order to get to know your names, I would like students to display name cards in class at all times. Please write your name in large, dark letters on the name card.

C. Examinations.

The midterm examination will be administered on **Wednesday, February 22, 2012**. The midterm exam will be "open book". You may bring the H&Z book, class notes, one accounting book, and the Brealey, Myers and Allen textbook to the exam (or a substitute introductory Corporate Finance text). No other material is allowed. The midterm exam covers Chapters 1-8, 10 and Appendix A.

The final examination will be administered during the final exam period. This exam will also be "open book". You may bring the H&Z book, class notes, one accounting book and the Brealey, Myers and Allen textbook (or substitute) to the exam. No other material is allowed. The final examination is cumulative and covers all material covered in the course.

Copies of exams and suggested solutions from the last two years will be made available on WebCafé.

Please note the scheduling of the two exams. You are responsible for ensuring that you are available and on campus to take the exams. I will not FAX exams to remote locations. I will not permit anyone to take the exams at another time unless you are gravely ill, face a significant emergency or have an exam or class conflict. If your travel plans conflict with the date of an exam, you should change your travel plans now, or drop the course. You must ensure that you are available for both examinations. Please advise potential employers that you cannot schedule interviews that conflict with your exam schedule.

D. Chapter Exercises and Valuation Cases

Students will hand in the Judson Green Case and the three parts of their valuation project. Late assignments will not be accepted. Students must turn in their assignments prior to the start of class. You should bring an extra copy of the Judson Green case with you since we will be discussing it in class on the day it is due. Some parts of the valuation project require electronic submission and the valuation project write-up will alert you to that requirement.

Note that the problems and cases are marked on the outline as either D, S or D & S. If marked D, it means you must be prepared to discuss the problem in class though it will

not be submitted. If marked D & S, you must be prepared to discuss the case and you must submit it at the beginning of the class. If marked S, you must submit a hard copy in class (and there may have also been a requirement to submit that project electronically).

You may work individually or in teams of up to four individuals on the cases that are submitted. If you work as a team, all members of the team will receive the same grade on submitted work. No team can have more than four members (more on teams later).

The first page of a submitted valuation case should indicate the case name, the names of the individuals participating in the grade and the section number of each student.

Work must be legibly and accurately portrayed to receive credit.

Using solutions to cases handed out in prior years or using the work of prior or current students who are not members of your group on submitted work is considered a violation of the codes of academic honesty. Moreover, it is likely your exam performance will suffer as these valuation cases are intended to help you prepare for exams.

More Details on the Valuation Project

As part of the course requirements, you will pick a company of your own choosing and value it. There will be a separate write-up of the valuation project available in about a week and the project will be completed in three parts. In the interim, you should consider what company you want to value. There are several criteria that you should keep in mind in choosing a company to value:

1. This has to be a company that you and your teammates have not done any valuation work on in a prior course or in a job or internship or in any other capacity. In other words, you may not value a company where some of the valuation work has already been completed by you or any of your teammates.
2. The company you pick should be publicly traded and there should be at least three years of historical data available for this company.
3. I strongly urge you to pick a company that is in a single line of business as valuing diversified companies like General Electric is challenging from just publicly available data.
4. There should be at least three (but preferably more) publicly traded competitors who are in the same business. It is best if these are “pure-plays” (e.g. only in the business of the firm being valued).
5. You have to pick a purely domestic company (valuing companies that are truly multinational in nature is also potentially challenging from just publicly available data, and we do not discuss the intricacies of multinational valuation until the end of the course).
6. You should pick a company where you believe you have some ability to create reasonable forecasts. In other words, picking a technology company where the technology is unproven and the demand for the technology is highly uncertain is

going to create special challenges in forecasting.

7. Restaurant chains, retail chains and hotel chains often make good candidates as they are often in a single line of business, often have many publicly traded competitors, often have interesting ways in which to model revenue growth and are often primarily domestic. There is no requirement however to pick a company in one of these industries. You should pick a company that you find interesting, as this will be something you work on throughout the semester.

You and your team should begin to think about what company you want to value. Additional information about this project will be available in a week or two. You need to inform me no later than **February 1** what company you are valuing. It would be wise however, to pick your company well in advance of that date as Part I of the project is due **February 15**.

5. Attendance and Class Etiquette

Students should attend the section of the class for which they are registered. Students are expected to attend class throughout the semester. Students are expected to arrive on time for class. Once in class, students should remain until the class is completed. Arrivals and departures during class time interfere with the educational process and are not fair to the other students or myself. If you choose to schedule an interview on-campus during class, do not come to class for part of the period, come to another section and notify me in advance.

6. Workload

The subject matter of this course is quite technical and difficult.

7. Relation to Advanced Corporate Finance (the corporate finance case course)

The Corporate Valuation course concentrates on valuation issues only and looks at valuation issues in detail. This means we will discuss topics like how to analyze a company's historical data, estimating free cash flows, building a financial model, estimating the cost of capital, leveraging and unlevering, market multiples, LBOs and valuation for M&A transactions. The Corporate Finance Case course generally examines a variety of issues such as working capital management, optimal capital structure, dividend signaling, capital budgeting and valuation. Thus, while the corporate finance case course deals with valuation issues, it does not look at them in as much detail and generally uses cases whose data has been sanitized. However, the corporate finance case course has broader topical coverage.

8. Academic Integrity

Students are expected to follow the rules of academic honesty in this class. This means that examinations are to be the work of the individual student using only the material permitted during the examination. Regarding submitted valuation cases, the work should be the work of *only the team members* reported on the front of the case. Students should not in any way rely on solutions to cases distributed in prior years or on the work of prior students or current students that are not members of their team. This prohibition extends to prior homework, cases or projects that are directly relevant to the assignment being completed. When a valuation case requires you to produce a forecasting or valuation model, the use of a forecasting or valuation model not created

exclusively by the student team for this course is a violation of the codes of academic integrity. In other words, for all submitted cases, you must start with an excel spreadsheet which is at most populated with some raw data. If you have questions concerning this policy, please see me for a clarification before you use any questionable material. Please note that if you violate this policy, failing the class will constitute the minimum penalty, regardless of the degree of your violation.

9. Teams

The valuation cases can be worked on individually or in teams of up to four students. I encourage you to work in teams to maximize the learning experience. Teams may change composition during the course of the semester. If a set of teammates decides they can no longer work together, they are free to separate. If any member of the team cannot find another suitable team to join, he or she will have no choice but to hand in the rest of the valuation cases individually. In choosing teammates, consider the skills your team will want to possess: accounting, finance and excel modeling expertise. Also make sure that your teammates' expectations for their performance in this course are consistent with your expectations for yourself. Finally, if you have a particular industry from which you want to pick a company to value, make sure your teammates are on board with that choice.

Please sign up for a team no later than Wednesday February 1.

**COURSE CALENDAR
CORPORATE VALUATION
FNCE728**

**H. Mehran
SPRING 2012**

NOTE: ASSIGNMENTS AND DATES ARE SUBJECT TO CHANGE

Brealey, Myers HZ & Allen BD Assignment			
January 11, 2012	Introduction to Course and Valuation	1 & App. A	2-6 17
January 18, 2012	Creating and Measuring Value & Analyzing Financial Statements	2 Skim 3&4	28
January 23, 2012	Free Cash Flow Basics and the SCF	5	7 D - Jake and Phil
January 25, 2012	Creating a Financial Model.	6	10
January 30, 2012	Additional Forecasting and Free Cash Flow Measurement Issues (skip 7.7 & 7.8)	7	D - NOL & Effective Tax Reconciliation
February 1, 2012	Additional Forecasting and Free Cash Flow Measurement Issues (skip 7.7 & 7.8)	7	D - Deferred Taxes and Interest Complication S - Company Name Required for Valuation Project
February 6, 2012	The APV and WACC DCF Valuation Methods	8	19 D - APV Perpetuity Company
February 8, 2012	Excess Earnings Valuation Models	10	D - One Shot T-Shirt Company
February 13, 2012	COMPREHENSIVE CASE -- Judson Green		D & S -- Judson Green Case
February 15, 2012	Catch Up / Review		S - Part I of the Valuation Project
February 22, 2012	MIDTERM EXAM -- CHAPTERS 1-8, 10 & App. A		
February 27, 2012	Measuring Continuing Value	9	D - Ed Kaplan
February 29, 2012	Cost of Equity Capital	11	7-9 12
March 12, 2012	Cost of Equity Capital	11 & 12	
March 14, 2012	Cost of Debt	13	23-24
March 19, 2012	Cost of Debt	13	23-24
March 21, 2012	Levering and Unlevering	14	9, 17
March 26, 2012	Levering and Unlevering	14	D -- Levering & Valuation, Levering w/wo Zero Bet
March 28, 2012	Catch Up / Review		S - Part II of the Valuation Project
April 2, 2012	WACC and Special Issues	15	18-19 18
April 4, 2012	Market Multiples	16	
April 9, 2012	Market Multiples	16 & 17	
April 11, 2012	Leveraged Buyout Transactions	18	32, 33
April 16, 2012	Mergers and Acquisitions	19	
April 18, 2012	Multinational Valuation	No Reading	27
April 23, 2012	Catch Up / Review		S - Part III of the Valuation Project
TBD	Final Exam		