

UNIVERSITY OF PENNSYLVANIA
The Wharton School

Corporate Valuation
FNCE207

Robert W. Holthausen
Autumn, 2015

DETAILED COURSE OUTLINE

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Office Hours: Monday: 3:30 pm - 4:50 pm
Wednesday: 2:30 pm - 3:50 pm (except 10/14 and 11/25)

Additional Hours by appointment.

The TAs and their office hours for this course will be announced in the next week.

EMAIL: holthausen@wharton.upenn.edu

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.

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. We do not specifically discuss the valuation of financial institutions.

Students with weak accounting and finance backgrounds will be at a disadvantage in this course. Working knowledge of EXCEL is also important. ***Students who hoped to never see a financial statement again should not take this course.***

The course utilizes extensive and detailed readings, exercises, a valuation project in three parts (some assignments use sanitized data and others use real data), two quizzes and a final exam. Prior students indicate that the workload for this course is demanding, as such, it is only recommended for those students who are interested in learning valuation techniques in depth. 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. From time-to-time I will discuss common errors that practitioners make and I will discuss some issues that practitioners often ignore. My view is that you need to fully understand the potential consequences of potential shortcuts you might make in valuing a company. In some cases, those shortcuts are justified because they will have little to no impact on the valuation and would not be worth the time required. In

other cases, taking those shortcuts could lead to more serious errors. I will also discuss areas where there is uncertainty about how best to do certain tasks in a valuation. In these situations, I will indicate what is typically done or what is typically ignored and discuss relevant research in the area, so you at least have an appreciation of the issue and the alternative views on the matter.

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 some accounting beyond ACCT 101 (ACCTG 201 and/or ACCTG 202 and/or ACCTG 242) 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 and help you interpret a company's financial statements.

3. Course Texts.

- A. Required Text.

The required text is *Corporate Valuation: Theory, Evidence and Practice* by Robert Holthausen and Mark Zmijewski published by Cambridge Business Publishers, 2014. The book is substantially revised relative to the softbound two volume pre-publication versions used several years ago so students should not use those versions. The book is available through the bookstore or at this link: <https://store.collegiatelearning.com/product/corporate-valuation-1st-ed/> (note if you decide to order it through Amazon, make sure you get the hard copy version with the 2014 copyright date – Amazon is carrying some incorrect versions of the book (there should be a picture of a skyscraper on the front cover) and Amazon is sometimes pricier than the link provided above.

PLEASE NOTE: Exams and quizzes are open book. If you buy an electronic version of the book, you will not be able to use a computer or tablet to access the book during the exam. I have six additional books I can lend to students on a first-come first-served basis but I cannot guarantee that will be enough copies of the book during exam periods.

Students should read the relevant material before class. Unless otherwise specified, students will be held responsible for all material in the text, whether covered in class or not.

Note that the Appendix to the book and the Supplement to Chapter 3 will be available on the course website.

- B. Other Material

Students may be billed for class handouts. I anticipate approximately 100 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 (Steinberg-Dietrich Hall 1332) 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 using Wharton reprographics standard policies.

C. Course Website (Canvas)

Through the course website, students will be given access to certain materials. There will be hard valued excel files provided for the problems in the book, solutions to the end-of-chapter problems, a few spreadsheets that perform certain calculations discussed in the book, the Judson Green case and the valuation project write-ups.

In addition, there will be copies of the PowerPoint slides I will use during lectures available on the course website as well. These will not be distributed in hard copy, so students wishing to have them prior to class, can print them out. The final version of these will be available by at least 9:30AM on the day of class. There will generally be three copies of the PowerPoint slides (2, 4 and 6 slides per page). In some cases I may create slides that are just one per page because of small print in tables and graphs. If you are registered for the class, you can gain access to class website for this course via mySPIKE (<http://myspike.wharton.upenn.edu>).

Mark Zmijewski and I would appreciate it if you would report typos, errors and comments. There is a place on the course website where you can report typos, errors and passages that confused you. This area will be organized by chapter number and will be visible to everyone so you can see whether a typo has already been noted and whether I responded to some issue needing clarification. I will comment on any item that requires clarification. Your feedback will help us rewrite our material for the next edition. When you post a question or comment, please indicate the page number of the book.

D. Other Potentially Useful but not Required Texts.

Any current intermediate accounting book could be useful, such as Intermediate Accounting by Donald Kieso, Jerry Weygandt and Terry Warfield (John Wiley and Sons) which is used in ACCT 201. Similar coverage is available in Financial Reporting and Analysis by Lawrence Revsine, Daniel Collins, W. Bruce Johnson and H. Fred Mittelstaedt, Fifth Edition, McGraw-Hill, 2012. These are good reference books 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 either of these. 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.

The course does not rely explicitly on these texts so you should only purchase them if they are a useful addition to your library.

4. Grading.

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

Judson Green Case	5%
Valuation Project – Part I	10%
Valuation Project – Part II	20%
Valuation Project – Part III	15%
Quiz # 1	10%
Quiz # 2	10%
Final Examination	30%
Total	100%

I anticipate giving an overall GPA of approximately 3.25 across all my students but that may be adjusted up or down depending on class performance. All students are pooled together for grading.

The deadline for dropping from a finance course is different from the University drop deadline for undergraduates. If an undergraduate student drops after that date, a "W" will appear on his or her transcript. Make sure you know that date if you are an undergraduate.

A. Class 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 students' 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. **Failure to display a name card will ensure that I call on you.**

C. Quizzes and Final Examination.

In class quizzes will be administered on **Monday, September 21, 2015** and Monday, **November 2, 2015**. The quizzes will be "open book" meaning you can bring the H&Z book, one accounting book and one 8 ½" X 11" page of personal notes (you may write on both sides). The first quiz covers Chapters 1-3 and the Supplement to Chapter 3 and the Appendix. The second quiz covers Chapters 4 to 10. Students are not permitted to leave the classroom prior to the end of class if they complete the quiz early.

The final examination will be administered **Thursday, December 17, 2015**, from **6:00 pm - 8:00 pm**. The final exam will be "open book". You may bring the H&Z book, one accounting book and three 8 ½" X 11" pages of personal notes (you may write on both sides). **No other material is allowed.** The final examination is cumulative and covers all material covered in the course.

Please see the note on page 2 of the course outline regarding the use of electronic versions of the H&Z book during quizzes and exams.

Copies of quizzes and final exams and suggested solutions from the last two years will be made available on the class website.

Please note the scheduling of the two quizzes and the final exam. You must ensure that you are available and on campus for both quizzes (September 21 and November 2) and the final exam on December 17. I will not permit anyone to take the quizzes or exams at another time unless you are gravely ill, face a significant emergency or have a

final exam conflict. If your travel plans conflict with the date of an exam or quiz, you should change your travel plans now, or drop the course.

Please advise potential employers that you cannot schedule interviews that conflict with your quiz and exam schedule.

You are responsible for letting me know by September 21 of any conflict with the final examination. There can be no conflicts with the quizzes since they are given in class.

D. Chapter Exercises, Cases and Valuation Projects

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 a hard copy of 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. The Judson Green case and all parts of the valuation project require electronic submission and the write-ups will alert you to that requirement.

Note that the problems, cases and the valuation project 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 a hard copy at the beginning of the class and submit it electronically. If marked S, you must submit a hard copy at the beginning of class (and these assignments also require you to submit the assignment electronically).

You may work individually or in teams of up to **four individuals** on the Judson Green case and the valuation projects 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 case or project should indicate the name, the names of the individuals participating in the grade, the section number of each student **and the team number.**

Work must be legibly and accurately portrayed to receive credit.

Using solutions to exercises and cases handed out in prior years or using any work of prior or current students (including valuation projects) who are not members of your group on any submitted assignment is considered a violation of the codes of academic honesty. Moreover, it is likely your exam performance will suffer as these valuation exercises, cases and projections 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 or related

analysis has already been performed by you or any of your teammates.

2. The company you pick should be publicly traded and there should be **at least** three years (preferably more) of historical data available for this company (financial statements and stock returns).
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 do not have to pick a purely domestic company, but valuing companies that are truly multinational in nature is challenging from just publicly available data. In addition, we do not discuss the intricacies of multinational valuation until the end of the course, thus you won't have the requisite understanding for this issue at the time the project is completed.
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, typically have many publicly traded competitors, generally have interesting ways in which to model revenue growth and CAPEX, and are often primarily domestic. There is no requirement however to pick a company in one of these industries. Prior students have clearly selected companies outside these industries such as railroads, utilities, service businesses and more. While I suggest you pick a company that is primarily domestic, that doesn't mean it has to be a U.S. company, but be aware that getting data on the company and competitors may be more difficult for companies outside the U.S.. 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. You need to have registered as a team and you must inform me no later than September 9 regarding the name of the 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 September 30. You may switch companies after September 10 if you run into issues that make the analysis difficult. Switching companies after Part I is submitted is allowed, but will increase your workload.

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. In the case of a **rare conflict**, students can attend another of my sections. I teach the same class at 10:30 and noon in JMHH 245 on Mondays and Wednesdays. If you attend a different section of the class, do not take a seat from a student registered for that class. You should notify me by 9:30 AM by email if you are planning to attend a different section and you should come up to me prior to the start of the class you will attend.

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 must schedule an interview on-campus during class, do not come to class for part of the period. Instead, please attend another section.

6. Workload

The subject matter of this course is quite technical and difficult. Students in past years have indicated that the workload for this course is heavy. Because of the technical nature of this course, the course does not appeal to all students. I believe in communicating the complexity of the issues one faces in valuation. I will rarely gloss over something even if it is 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 and simplified (something that never happens in the real world). 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. Students may form teams across the two sections. Teams of five or more are not allowed (no exceptions). I encourage you to work in teams to maximize the learning experience. I will not become involved in any group problems. 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, September 9.** Details on the team signup will be contained in the write-up of the valuation project.

**COURSE CALENDAR
FNCE 207 - CORPORATE VALUATION**

**R. HOLTHAUSEN
AUTUMN, 2015**

NOTE: ASSIGNMENTS AND DATES ARE SUBJECT TO CHANGE

Class #	Date	Topic	H&Z Corporate Valuation Chapter	Assignment (Problem Numbers from H&Z Book)
1	August 26, 2015	Introduction to Course and Valuation	1 & App. (on Canvas)	
2	August 31, 2015	Financial Statement Analysis		2
3	September 2, 2015	Measuring Free Cash Flows		3 D - 3.2
4	September 9, 2015	Additional Free Cash Flow Measurement Issues	3 - Supp (on Canvas)	D - 3.9 S - Company Name Required for Valuation Project
5	September 14, 2015	Additional Free Cash Flow Measurement Issues	3 - Supp (on Canvas)	D - 3.6, 3.7
6	September 16, 2015	Creating a Financial Model.		4 D - 4.6 (Year 1 only)
7	September 21, 2015	In class Quiz # 1 - Chapters 1-3. Supp-3 & App. A (10% of grade)		
8	September 23, 2015	The APV and WACC DCF Valuation Methods	5	D - 5.4
9	September 28, 2015	Excess Earnings Valuation Method	7	D - 7.1
10	September 30, 2015	Catch Up		S - Part I of the Valuation Project (10% of grade)
11	October 5, 2015	Measuring Continuing Value Using the Cash Flow Perpetuity Model	6	D - 6.7
12	October 7, 2015	Estimating the Cost of Equity Capital	8	D - 8.6
13	October 12, 2015	Estimating the Cost of Equity Capital	8	D - 8.5, 8.6
14	October 14, 2015	COMPREHENSIVE CASE -- Judson Green		D & S -- Judson Green (5% of grade)
15	October 19, 2015	Measuring the Cost of Capital for Debt and Preferred Securities	9	D - 9.1, 9.2, 9.4
16	October 21, 2015	The Effects of Financial Leverage on the Cost of Capital	10	D - 10.1
17	October 26, 2015	The Effects of Financial Leverage on the Cost of Capital	10	D - 10.7
18	October 28, 2015	Measuring the Weighted Average Cost of Capital and Other Issues	11	D - 11.2
19	November 2, 2015	In class Quiz # 2 - Chapters 4 - 10 (10% of grade)		
20	November 4, 2015	Option Pricing Model Applications to Valuation Issues	12	D - 12.5
21	November 9, 2015	Introduction to Market Multiple Valuation Methods	13	D - 13.1
22	November 11, 2015	Market Multiple Measurement and Implementation	14	D - 14.1, 14.2
23	November 16, 2015	Catch Up		S - Part II of the Valuation Project (20% of grade)
24	November 18, 2015	Leveraged Buyout Transactions	15	
25	November 23, 2015	Leveraged Buyout Transactions	15	D - 15.1, 15.2
	THANKSGIVING BREAK (Note that Monday/Wednesday classes do not meet on Wednesday, November 25)			
26	November 30, 2015	Mergers and Acquisitions	16	16.9, 16.3
27	December 2, 2015	Valuing Businesses Across Borders	17	
28	December 7, 2015	Catch Up		S - Part III of the Valuation Project (15% of grade)
	December 17, 2015	FINAL EXAM - CUMULATIVE from 6:00 to 8:00 PM (30% of grade)		