FIN 394 17 Advanced Valuation and Financial Modeling
Monday & Wednesday 2:00 – 3:30 UTC 1.146

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Office Hours: Tuesday and Thursday 5:00 – 6:30 pm and by appointment

Description
This is a course about financial modeling and it covers a range of topics in the field of financial economics. Each topic was chosen because it lends itself to financial modeling but there are modeling lessons that can be applied to other financial and non-financial areas of interest.

Likely topics covered:

- Loan Amortization Schedules
- Style Analysis
- Optimal Portfolio Selection
- "Waterfall", tranches, capital tables
- Fixed income derivatives
- Equity derivatives
- Visual Basic / automation of tasks
- Student topics of interest.

This is a "hands-on" course that requires students to analyze data and participate in class discussions. Course work is based on case studies, academic research, and practitioner research.

Modeling
This course is about financial modeling. The goal is to make financial models that produce useful answers to economic questions. The assignments are designed to be similar to assignments students will encounter in their future jobs. Students may use any software they choose, however only Microsoft Excel is required. All assignments can be completed with Excel. Please see the section on *Software* below.

Pre-Reqs
Students must have a basic knowledge of Excel before starting the course. You should know the difference between absolute and relative references; be able to use common functions such as NPV, IRR, AVERAGE, STDEV, etc., and be able to plot data using Excels functionality. For those who feel they do not have sufficient Excel experience I strongly recommend completing the Excel tutorials **before** the first class. In terms of subject matter, students should be comfortable with discounting, portfolio math, financial statement analysis, free cash flow projections, and cost of capital calculations such as WACC.

Readings
This course utilizes case studies, journal articles and handouts. All of the material is posted to course website on Canvas. Some journal articles are a bit advanced and should be read (skimmed) for their main ideas rather than for details; I will make it clear when this type of article is assigned.

Software
I will work exclusively in Excel – this includes in-class lecture and posted solutions – and will expect you to do so as well.

Grades
Class grades are based on five areas:

Class Participation	10%
Homework Assignments	55%
Internal Group Evaluation	5%
Individual Assignment*	**15%**
In class Exam	15%

As a strict rule there are no "make-up" exams or make-up assignments

* ***Each student will select one assignment from a list of approved assignments and submit that assignment by themselves. Each group member can choose a different assignment but let me stress that these are to be done individually. The grader will carefully compare work across the group.***

You are responsible for all material covered in class, including assigned readings and exercises. When preparing for the exams, students should concentrate on the class notes and group projects.

Assignments
Approximately every other week, students will prepare an assignment before class. During the first meeting the class will divided into groups of approximately four students. During the remaining classes, each group is responsible for bringing a working Excel model capable of answering questions associated with the exercise. The model should be designed to answer any assigned questions, but also *flexible* and capable answering a host of questions such as : "What if the tax rate changes to 38%?" "What if the loan term is shortened to 10 years?". A modest amount of group work helps ensure students are effective team members and leaders.

Each group should submit one model/assignment.

Each week one or more groups will be chosen at random and their financial model will be uploaded to the instructor's computer. The group will be responsible for presenting answers to the assignment questions. All members of the group will receive the same grade for the presented work. The presentation requirement helps ensure students effectively communicate ideas. If you are selected to present one assignment it will reduce the probability of being selected in the future, but not reduce the probability to 0.

Solutions
In the past, students have asked for handouts of the "correct" case analysis after a class discussion of the case. I, like other professors at top business schools, will not provide such answers for two reasons. First, the best cases are deliberately written to be ambiguous. While there are no right answers there are good and bad arguments. Handing out my analysis would reduce the ambiguity in the cases and partially defeat the purpose of doing the case in the first place. Second, when case analyses are handed out, these answers will eventually reach future students with probability one. This seriously impedes an open and rewarding case discussion and imposes huge negative externalities both on myself and others teaching these cases in the future. I will go over each assignment in detail *in class*.

Attendance

We expect students to attend each and every class meeting. A considerable amount of the material is covered in class and not in textbooks. Therefore, consistent attendance is a crucial element in maximizing learning. That said, we also recognize that myriad issues can arise during a semester that lead to absences. An excessive number of unexcused absences will be interpreted as a sign of neglect and lack of preparation, and can lead to a student being dropped from the course.

Other Policies

(1) Academic Dishonesty: Academic dishonesty, as defined by the Policy Statement on Scholastic Dishonesty for the McCombs School of Business, is not tolerated. We request all students to act as if bound by this policy. In particular, we expect that every individual assignment or examination consists entirely of your own work.

The McCombs School of Business has no tolerance for acts of scholastic dishonesty. The responsibilities of both students and faculty with regard to scholastic dishonesty are described in detail in the Policy Statement on Scholastic Dishonesty for the McCombs School of Business.

Professors agree to adhere to the responsibilities described in the policy statement. By enrolling in this class, students agree to observe all student responsibilities described in that document. If the application of the policy statement to this class and its assignments is unclear in any way, it is students' responsibility to ask for clarification. One can refer to the Student Judicial Services website at http://deanofstudents.utexas.edu/sjs/ or the General Information Catalog to access the official university policies and procedures on scholastic dishonesty as well as further elaboration on what constitutes scholastic dishonesty.

(2) Students with Disabilities:

Upon request, the University of Texas at Austin provides appropriate academic accommodations for qualified students with disabilities. Services for Students with Disabilities (SSD) is housed in the Office of the Dean of Students, located on the fourth floor of the Student Services Building. Information on how to register, downloadable forms, including guidelines for documentation, accommodation request letters, and releases of information are available online at http://deanofstudents.utexas.edu/ssd/index.php. Please do not hesitate to contact SSD at (512) 471-6259, VP: (512) 232-2937 or via e-mail if you have any questions.

You must notify the instructor that you will be taking advantage of an opportunity for extra time at least 14 days prior to the exam so that space in the testing center can be scheduled. All extra-time exams *must* be taken in the McCombs Testing Center; no exceptions.

(3) Religious Holidays:

By University policy you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you miss the due date for an assignment due to your observance of a holy day you will be given an opportunity to complete the missed work within a reasonable time after the absence.

Tentative Schedule and Class Topics

All Assignments are Due by the Start of Class on the Day Indicated (I will give you at least one week's notice if I have to move an assignment)

Assignments marked with an "" are eligible to be used for the Individual Assignment. You can only choose 1 so be careful. When you submit an assignment as the your "individual" assignment then you should only list your name as a group member.*

		Lecture / Reading Topic	*Assignment Due*
1	17-Jan	Cover Syllabus, Modeling, Excel Introduction	
2	19-Jan	Review Material Needed for Assignment #1, Introduce Loan Assignment	
3	24-Jan	Review Notes on Bonds, Discounting, etc.	Comparable Worksheet
4	26-Jan	Loan Review & Examples	
5	31-Jan	Loan Review / Forward Rates	
6	2-Feb	Arbitrage Free Forward Rates	Loan Amortization*
7	7-Feb	Yield curves and forward curves	
8	9-Feb	Fixed income derivatives	
9	14-Feb	Fixed income derivatives	
10	16-Feb	Waterfall Models	
11	21-Feb	Waterfall Models	Fixed Income Derivatives*
12	23-Feb	Waterfall Models	
13	28-Feb	Waterfall Models	
14	2-Mar	Visual Basic / Student Topic	Waterfall Models*
		Spring Break	
15	21-Mar	Style Analysis (http://www.stanford.edu/~wfsharpe/art/sa/sa.htm)	
16	23-Mar	Regressions in Excel (Data Analysis, LINEST, Solver)	
17	28-Mar	Style Analysis	
18	30-Mar	Style Analysis	
19	4-Apr	Global Portfolios, Mean Variance Optimzation, Matrix Math	Style Analysis*
20	6-Apr	Using the Solver w/ Macros	
21	11-Apr	Intro to Black Litterman Model (http://corporate.morningstar.com/ib/documents/Methodology)	Portfolio Optimization
22	13-Apr	Black Litterman Model	
23	18-Apr	Black Litterman Model	
24	20-Apr	Equity Derivatives	Black Litterman*
25	25-Apr	Equity Derivatives	
26	27-Apr	Equity Derivatives	
27	2-May	Review	Equity Derivatives*
28	4-May	*In Class Exam*	