

FIN 394 17 Advanced Valuation and Financial Modeling (03705)

Tuesday & Thursday 2:00 – 3:30 RRH 4.408

Dr. John C. Butler

butlerjc@mcombs.utexas.edu

CBA 2.244, 232-6821

Office Hours: Tuesday 3:30pm – 5:00pm, Wednesday 10:00am – 11:30 am, 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 Excel's 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 four areas:

Class Participation	10%
Homework Assignments	60%
Internal Group Evaluation	5%
Individual Assignment*	25%

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

During the first meeting the class will be 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 of 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?”. Guidance will be given as to which assignments are the most amenable to “extra effort” to make the model more flexible.

Each group should submit one model/assignment.

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 to keep the answers from circulating. I will go over each assignment in detail *in class* and if requested during office hours.

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	22-Jan	Cover Syllabus, Modeling, Excel Introduction	
2	24-Jan	Review Material Needed for Assignment #1, Introduce Loan Assignment	
3	29-Jan	Review Notes on Bonds, Discounting, etc.	
4	31-Jan	Loan Review & Examples	Comparable Worksheet
5	5-Feb	Loan Review / Forward Rates	
6	7-Feb	Arbitrage Free Forward Rates	
7	12-Feb	Yield curves and forward curves	Loan Amortization*
8	14-Feb	Fixed income derivatives	
9	19-Feb	Fixed income derivatives	
10	21-Feb	Waterfall Models	
11	26-Feb	Waterfall Models	Fixed Income Derivatives*
12	28-Feb	Waterfall Models	
13	5-Mar	Waterfall Models	
14	7-Mar	Visual Basic / Student Topic	Waterfall Models*
		Spring Break	
15	26-Mar	Style Analysis (http://www.stanford.edu/~wfsharpe/art/sa/sa.htm)	
16	28-Mar	Regressions in Excel (Data Analysis, LINEST, Solver)	
17	2-Apr	Style Analysis	
18	4-Apr	Style Analysis	
19	9-Apr	Global Portfolios, Mean Variance Optimzation, Matrix Math	Style Analysis*
20	11-Apr	Using the Solver w/ Macros	
21	16-Apr	Intro to Black Litterman Model (http://corporate.morningstar.com/ib/documents/Methodology)	Portfolio Optimization
22	18-Apr	Black Litterman Model	
23	23-Apr	Black Litterman Model	
24	25-Apr	Black Litterman Model	
25	30-Apr	Equity Derivatives	Black Litterman*
26	2-May	Equity Derivatives	
27	7-May	Equity Derivatives	
28	9-May	Visual Basic / Student Topic	Equity Derivatives*