

Financial Services FNCE 4306

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| Professor: | Paul Gilson |
| Office: | Room 440 (but unlikely I will be there) – I will be available virtually however AND I will try to use an outside venue while weather is good |
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| Office Hours: | Tuesday and Wednesdays 3 – 5 and by appointment |

COURSE OBJECTIVE

The objective of this course is to understand the role played by financial intermediaries / institutions (FIs) in the global financial system. I will focus on aspects of risk measurement and risk management. We will also study the role of financial services companies in the money and capital markets, funds acquisitions, investment and credit extension.

LEARNING OBJECTIVE

1. Students will demonstrate their understanding of the terminology used in the study of financial institutions and primarily demonstrate their understanding in the final exam.
2. Students will investigate the history of financial institutions and the role they play in our economy and demonstrate their knowledge during homework and the final exam.
3. Given the various risks facing financial institutions, students should be able to both measure the exposure to this risk and in many cases, suggest methods to reduce or remove the exposure to the risk. Students will demonstrate these techniques through homework, or for more data intensive risks, demonstrate these techniques during in-class group projects.

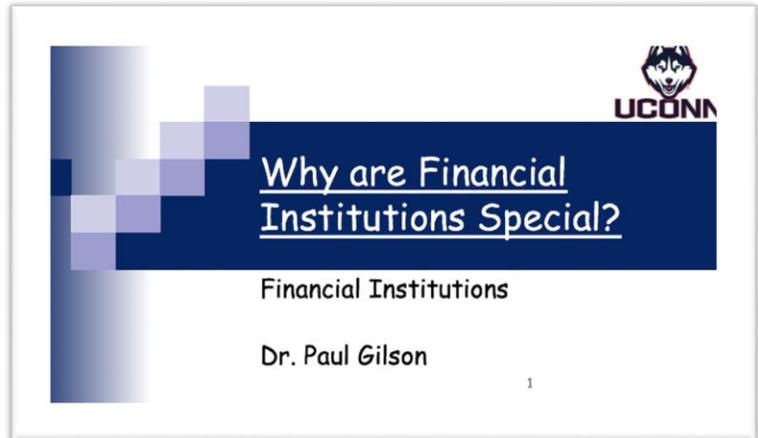
COMMUNICATION

I will communicate grades using Blackboard. All other items will be given to you through shared folders. I will also use Microsoft Teams to communicate extensively with the group.

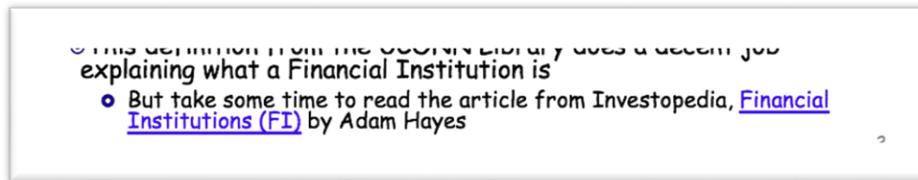
TEXTBOOK AND OTHER MATERIALS

There is no required textbook for this course. The optional textbook is Risk Management and Financial Institutions, Hull, Fourth Edition. IF YOU WANT to own, buy the cheapest way possible; any reasonable edition would work – I only cover about 25% of its content.

The main document for each (sub) topic will be a “Topic PowerPoint” I will create and post. You should use these decks as your main source of information on a topic. It is unlikely I will cover an entire slide deck in class time – much information is background and easily understood by the diligent student. Rather, I will spend class time covering difficult or challenging topics or demonstrating worked examples. Often, I will create a slide deck for that particular class – I will post these decks before class, but it is not necessary to READ these decks before the particular class. The capture above is for the first sub-topic – the title slide of the Topic PowerPoint.



In these slide decks you will find various readings, often from Investopedia – you are expected to read those readings! Not wanting to offend senior students from UCONN, but please, when you read articles



I reference, make sure you don't simply read. ALWAYS create a key takeaways list for any article you read. NOTE – most Investopedia articles have a “Key Takeaways”

section; this is certainly a good start. But when reading an article I reference, make sure you understand the context – why am I asking you to read this article given the concepts I was discussing in the slide deck?

MAKE SURE, you read the notes in notes view – I will often include additional contents in the notes of each slide.



I will tell the class which Topic PowerPoints to read before each week, and if you checkout the course outline below, you will see details of what to read and when!

Depending on the topic, I will also include PDFs or in some cases, Excel spreadsheets. This content, plus any other content I will share using One Drive.

COURSES REQUIREMENTS AND GRADING

Your grade for the course will be assessed based on a final exam, homework and projects. I have no requirements for attendance. Although I am always happy to see you in class it is entirely up to you as to whether or not you attend classes in-person, virtually, or asynchronously.

I envisage that your grade will be based 30-40% on a final exam, and 60-70% on homework and projects. I expect there to be 6-7 of these, thus each will be worth approx., 10% of your final grade. The difference between homework and projects is the following. For projects, I will assign teams of 4 to 5 students; teams will change each project. The team will hand in a single submission, and each team member will receive the same score. For projects, if possible, I will cover a similar problem in class; the student team will then work on a similar problem for the project.

For homework, students must submit a virtual report. Note: Although homework must be completed individually, it is acceptable (and encouraged) for you to discuss homework problems with fellow classmates if this helps you to learn the material. If you do so, you only need to submit one homework per team.

The final exam will be virtual, and likely time controlled – but I am open to student input. The exam will be MC, TF and short calculations.

There are no extra credit opportunities in this class.

Grades will be available through Blackboard.

At the end of the semester, I will assign a letter grade for each student base on the following rubric.

Grade Evaluation

- A Superior Performance
- B Above Satisfactory Performance
- C Satisfactory Performance
- D Very Poor Performance
- F Failure

It is your responsibility to make every effort to ensure you are present for the examination. Unexcused absences will result in a grade of 0%. If you have an excused absence (e.g. medically excused absence), please notify me as far in advance as possible and email me an electronic document as proof. Notifications received the day before or day of the exam will only be accepted in extreme cases.

If you have an excused absence for the day of the exam, my general policy is to have you complete a makeup examination. In such an event, I will provide an alternate time when the exam can be taken.

Cheating of any sort will not be tolerated and will result in a failure of the exam or assignment, deduction in the class participation grading component, and potential failure of the course.

A student who knowingly assists another student in committing an act of academic misconduct shall be equally accountable for the violation, and shall be subject to the sanctions and other remedies described in The Student Code. For details refer to http://www.dos.uconn.edu/student_code.html Appendix A

section B.- Conduct Rules and Regulation item 1 - Violation of the Academic Integrity in Undergraduate Education and Research.

On February 2, 2009, the University Senate passed a motion on about religious observances which stipulated that “Students anticipating such a conflict should inform their instructor in writing within the first three weeks of the semester, and prior to the anticipated absence, and should take the initiative to work out with the instructor a schedule for making up missed work.” For conflicts with final examinations, students should, as usual, contact the Office of Student Services and Advocacy (formerly the Dean of Students Office).

There are several policies that I consider important across all my classes. The policies governing the following topics can be found at the following links:

[Absences from Final Examinations](#)

[People with Disabilities, Policy Statement](#)

[Policy Against Discrimination, Harassment, and Related Interpersonal Violence](#)

[The Student Code](#)

| Week | Topic | Materials and Comments | Class Topics |
|------|---|---|--|
| 1 | <p>1. INTRODUCTION AND THE ROLE OF FINANCIAL INTERMEDIATION</p> <p>Why are Financial Institutions Special.pptx (1)</p> | <p>In this topic we introduce what FIs are and why they exist. This will be an introduction to financial services. We will discuss the dynamics of the markets, the various types of firms involved, the role financial services play in the economy, and how the environment has changed over the years.</p> <p>Please read PPT (1) before our second class. (Of course, this includes the readings therein – THIS IS THE FIRST AND LAST TIME I will say this – it is true for ALL PPTs below.)</p> | <p>Class 1: I will do the basic class introductions and logistics.</p> <p>Logistics FNCE 4306.pptx</p> <p>Class 2: I will discuss some of the more challenging aspects of the first slide deck. I will cover the basics of why FIs exist.</p> |
| 2 | <p>2. TYPES OF FINANCIAL INSTITUTIONS</p> <p>Types of Financial Institutions.pptx (2)</p> | <p>In this section, we will study different types of financial service firms in greater depth. We will consider type of business, how they raise capital, and any other significant characteristics.</p> <p>We will study two types of FI in detail in week three. For the many others, I will discuss this week. Please read:</p> <p>ET-what? A primer on exchange-traded products.pdf (1) - A good explanation of ETFs.</p> <p>Buttonwood Taking toll.pdf (2) – An excellent discussion of fees.</p> <p>Please read PPT (2) and PDFs (1) and (2) before our only class of this second week.</p> | <p>Class 3: Labor Day</p> <p>Class 4: The slide deck, Types of FI is self-contained. In this class, I will review the financial services sector from an investor’s point of view.</p> |
| 3 | <p>2. TYPES OF FINANCIAL INSTITUTIONS, CONT.</p> <p>Depository Institutions.pptx (3)</p> <p>Alternative Investments – Hedge Funds.pptx (4)</p> | <p>We will study two types of FIs in detail, Depository Institutions, and Hedge Funds. As you can see, these have their own devoted slide decks.</p> <p>If you want to read a nice “pithy” article on Hedge Funds, checkout: Hedge Funds Go Retail.pdf (3) – read this article before second class of week.</p> | <p>Class 5: I will demonstrate different aspects of Dis by explaining the operations of People’s United Bank. The slide deck for class is Peoples Bank Example.pptx</p> <p>Class 6: The second topic on Hedge Funds is easily</p> |

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| | | <p>Also checkout Buttonwood Impaired Visisbilty.pdf (4) – short and sweet article from the Economist discussing the performance of Private Equity</p> <p>Please read PPT (3) before our first class of this week and PPT (4) and PDF (3) before the second class of the week.</p> | <p>understandable from the slide deck. In class, I will cover the more difficult concepts. In particular, I will discuss measurement of returns for investments. In my experience, this will run over until first class of the following week.</p> <p>The slide deck for class is Performance Measurement.pptx and Performance Mesurement.xlsx is the accompanying spreadsheet.</p> |
| 4 | <p>3. THE FED AND MONETARY POLICY</p> <p>The Fed and Treasury.pptx (5)</p> <p>Interest Rates.pptx (6)</p> | <p>In your prior studies you will likely have covered the topic of the Federal Reserve and monetary policy. In this section, we will look at the actions of the Fed in more detail, and understand the role it plays in the market, and the mechanisms it uses to achieve its goals. PUNCHLINE – the Fed relies on FIs to implement monetary policy.</p> <p>We will then study the broad idea of interest rates.</p> <p>To understand the Fed and its role, we must first understand inflation and unemployment. Checkout this Economist article on the Phillips Curve:</p> <p>A Flattened Curve - The Economist.pdf (5)</p> <p>The following articles from The Economist discusses an event that occurred in the Repo markets back in September 2019 (years ago!). These articles pull together many ideas we discuss in this section, so please read – you understand the terms and concepts here, then you are on target...</p> | <p>Class 7: As I noted in last week, Measuring Performance, will extend into this week.</p> <p>After, I will discuss the operations of the Fed. I will demonstrate the effect of reserve requirements on the creation of credit</p> <p>Class Material – The Fed.pptx</p> <p>Class 8: We will study recent trends in interest rates and their implications for the economy, but more specifically, financial institutions.</p> |

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| | | <p>Making the World Go Round - The Economist.pdf (6)</p> <p>Hitting the Ceiling - The Economist.pdf (7)</p> <p>In this topic, we do not study quantitative easing (QE) in any depth – please read this article to understand what happened back in 2012 - QE, or not QE, Quantitative easing.pdf (8). As of writing, the Fed has changed its job description. Please read New Job Description.pdf (9) – this article from the Economist hits the high points.</p> <p>Please read PPT (5) and PDFs (5), (6), (7), (8) and (9) before our first class of this week and PPT (6) before the second class.</p> <p>AT END of the fourth week, the first homework “Measuring Investment Returns” goes LIVE. This is due by 5pm Friday of week 5.</p> <p>AT END of fourth week, the first report “Report on Shadow Banking” goes also LIVE. This is due by 5pm Friday of week 5. You will find details of the project and Teams in the file “Report – Shadow Banking”.</p> | |
| 5 | <p>4. RISKS OF FINANCIAL INTERMEDIATION</p> <p>The Risks of Financial Intermediation.pptx (7)</p> <p>Managing Risk – The Front Office.pptx (8)</p> | <p>This topic will be an overview of the topics to come. We will set out all of the risks faced by Financial Institutions.</p> <p>Please read PPTs (7) and (8) before our first class of this week.</p> <p>AT END of fifth week, the first homework “Measuring Investment Returns” is due by 5pm Friday of week 5 – this week.</p> <p>AT END of fifth week, the first report “Report on Shadow Banking” is due by 5pm Friday of week 5 – this week.</p> | <p>Class 9 and 10: The topic is a simple summary of the risks – a kind of summary of all types of risks with examples. The Topic PowerPoint does an excellent job covering the material – I will use class time to give real world examples and discuss the trickier concepts.</p> |

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| 6 | <p>5. INTEREST RATE RISK Interest Rate Risk.pptx (9) Repricing Model (10)</p> | <p>All FIs face interest rate risk. We will study the different measures of interest rate risk. To aid in this study, I will upload two chapters from textbooks to illustrate some of the ideas and concepts.</p> <p>The material will cover two weeks. There are four PowerPoints that accompany this topic. We end this week analyzing the effect of changing interest rates on the INCOME STATEMENT and profits of FIs with the repricing model.</p> <p>Please read PPTs (9) and (10) before our first class of this week.</p> <p>I have found in prior semesters that students can find this material challenging. To that end, I have included two textbook chapters in the Readings Folder for this topic:</p> <p>Interest Rates - Mayo.pdf (10) A good, high level review of interest rates, and</p> <p>Interest Rate Risk - Madura.pdf (11) (3rd to 13th page) A good overview of Gap analysis</p> <p>I would read both of these articles during week 6.</p> <p>AT END of the sixth week, the second homework on Interest Rates goes live: "Interest Rates Part 1" is due by 5pm Friday of week 7 – next week.</p> | <p>Class 11: I will demonstrate what could happen to People's United Bank if interest rates change. I consider both BALANCE SHEET and INCOME STATEMENT effects.</p> <p>Class 12: The repricing model is best explained with an example – I will prepare a repricing report for a hypothetical bank.</p> |
| 7 | <p>5. INTEREST RATE RISK, CONT. Fixed Income Refresher.pptx (11) Price Elasticity and Duration (12)</p> | <p>In the second week of interest rate risk, we will consider the pain felt on the balance sheet. Before we can do this, we need a quick refresher on fixed income securities.</p> <p>For a refresher on bonds, of course, refer to your previous studies. But failing that, I find the following article for PIMCO is an excellent summary:</p> | <p>Class 13: We use the modified duration relationship to measure change in assets and liabilities of FIs. I use the first class to consider single assets and liabilities and review duration.</p> |

| Week | Topic | Materials and Comments | Class Topics |
|------|--|--|---|
| | | <p>Everything you need to know about bonds.pdf (12)</p> <p>This article is a nice gentle overview of duration:</p> <p>Duration Basics.pdf (13)</p> <p>Please read PPTs (11) and (12) and PDF (12) before our first class of this week. The second PDF (13) should be read before the end of the current week.</p> <p>The second homework on Interest Rates is due by 5pm Friday of week 7 – this week: “Interest Rates Part 1”.</p> <p>AT END of the seventh week, the third homework on Interest Rates goes live: “Interest Rates Part 2” is due by 5pm Friday of week 8 – next week.</p> | <p>Class 14: We extend these ideas to portfolios – in this class we will consider People’s United Bank’s Balance Sheet, and how it changes when rates change.</p> |
| 8 | <p>6. MARKET RISK</p> <p>Review of Analytical Techniques.pptx (13)</p> | <p>As non-traditional FIs have taken over a larger and larger share of business, traditional FIs rely more on <i>trading</i> to make up for lost profits. In this section, we will discover how to measure market risk.</p> <p>Before we can investigate market risk, we need a quick refresher on statistics and financial data.</p> <p>Please read PPT (13) before our first class of this week.</p> <p>AT END of week eight, the third homework on Interest Rates is due by 5pm Friday of week 8 – this week: “Interest Rates Part 2”.</p> | <p>Classes 15 and 16: I will demonstrate the various statistical techniques we need to apply measurements such as VaR and ES.</p> <p>In addition, the project for next week requires considerable Excel skills – I will use this week and this topic to illustrate those skills.</p> <p>During the actual classes, we will measure the performance of various assets and asset classes – it is important to get your hands dirty.</p> |

| Week | Topic | Materials and Comments | Class Topics |
|------|---|--|---|
| 9 | 6. MARKET RISK, CONT. <small>MARKET RISK CONT.</small> Managing Risk – The Front Office.pptx (14) VaR and ES.pptx (15) | <p>In the second week of market risk, investigate the measurement of VaR and ES – this is Excel and Stats intensive.</p> <p>Please read PPTs (14) and (15) before our first class of this week.</p> <p>AT END of the ninth week, the first project “Market Risk” goes LIVE. This is due by 5pm Friday of week ten, next week.</p> | <p>Class 17: In the first class, we will measure VaR using various techniques. The class format will be me solving straightforward VaR and ES problems.</p> <p>Class 18: The project for this Topic can be challenging due to the Excel skills needed: In the second class of this week, I will tackle and almost identical problem as the project.</p> |
| 10 | 7. CREDIT RISK <small>CREDIT RISK</small> Managing Credit Risk – Margin, OTC Markets, and CCPs.pptx (16) Estimating Default Probabilities.pptx (17) | <p>This three-week topic breaks quite nicely into three parts. In this first week, we will consider credit risk in a theoretical sense. We will then get very hands on and practical, and study various methods of estimating default probabilities.</p> <p>Please read PPTs (16) and (17) before our first class of this week.</p> <p>AT END of week eight, the first project on Market Risk is due by 5pm Friday of week 10 – this week.</p> | <p>Class 19 and 20: I will spend time in class tackling the practical aspects of this section. We will use market data to estimate default probabilities using various techniques.</p> <p>I will try to cover every type of question I could ask in a project or homework.</p> |
| 11 | 7. CREDIT RISK, CONT. <small>CREDIT RISK CONT.</small> Estimating Default Probabilities.pptx (17), cont. Credit Value at Risk – Single Assets.pptx (18) | <p>If you check this week you will notice I have included PPT (17) this week and last week. I imagine that I will require more time than a single week to cover the topics in class. Thus, if we don't finish PPT (17) in week 10, we can continue this week.</p> <p>We will then measure potential loss from credit events of single assets. Thus, we will consider as an example, potential loss on a bond, IF the issuers credit rating falls.</p> <p>Please read PPT (18) before our first class of this week.</p> | <p>Class 21 and 22: We will continue the theme of practical applications and in this section, we will be estimating loss exposure from credit risk for a single security – a bond. We will see that estimating potential losses can be very conceptual and also can be very empirical.</p> |

| Week | Topic | Materials and Comments | Class Topics |
|------|--|--|---|
| | | <p>The work in Credit Risk will be tested through two sets of homework (and of course, the final exam).</p> <p>The two sets of homework reflects the breadth of this topic. AT END of the 11th week – this week, the fourth homework “Credit Risk Part 1” goes LIVE. This is due by 5pm Friday of week 12, next week.</p> | |
| 12 | <p>7. CREDIT RISK, CONT.</p> <p>Credit Value at Risk – Portfolios.pptx (19)</p> <p>Credit Derivatives.pptx (20)</p> | <p>In the last week of three we will measure loss exposure from credit risk for portfolios of securities. As you would suspect, correlation and diversification is key. With single assets, standard deviation of returns is important, with portfolios, it is correlation.</p> <p>We will then close this topic by studying Credit Derivatives – all good finance students should understand credit derivatives! For this purpose, I use a guide produced by Lehman Brothers Guide to Credit Derivatives.pdf (14) – REALLY GOOD reference – I steal from this in my Topic PowerPoint.</p> <p>Please read PPTs (19) and (20) before our first class of this week.</p> <p>I have included a PDF, Estimating Loan Loss Exposure.pdf (15) – BUT NOTE – it’s rather technical, the Actuarial Finance students should enjoy it! NOT REQUIRED!</p> <p>As noted above, the work in Credit Risk will be tested through two sets of homework (and of course, the final exam).</p> <p>AT END of the 12th week – this week, the fifth homework “Credit Risk Part 2” goes LIVE. This is due by 5pm Friday of week 14, the week after Thanksgiving.</p> <p>Also, the fourth homework “Credit Risk Part 1” is due by 5pm Friday of week 12 – this week.</p> | <p>Class 23: As with single assets, we will estimate Credit Risk for portfolios of securities using the various methods used in practice.</p> <p>Class 24: As credit derivatives can be very new to some students, I will spend this class, discussing the more common derivatives.</p> |

| Week | Topic | Materials and Comments | Class Topics |
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| 13 | THANKSGIVING WEEK THANKSGIVING WEEK | YYYYYAAAAYYYYYYY | None |
| 14 | 8. TBD. 8. TBD. TBD.pptx (21) | <p>I have left this week, and the following week open. We can go two different ways. We could:</p> <ol style="list-style-type: none"> 1) Explore an additional risk, likely Liquidity Risk; OR 2) Study the various methods FIs use to hedge Interest Rate Risk and Market Risk <p>I am tempted to go with the first choice, BUT we can decide when we get to that date.</p> <p>In either case, this work will be examined in the final exam.</p> | Class 25 and 26: TBD |
| 15 | OPEN OPEN | Open | Single class 27: Open. |

The final exam will cover all material and is during the regularly scheduled time during exam week.