ECON 3115-001: Money & Banking

UNC Charlotte, Department of Economics, Fall 2018 \footnote{The instructor keeps to change the syllabus slightly, not dramatically.}

1 Contact Information

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Course Website: Canvas

2 Important Dates & Times

<table>
<thead>
<tr>
<th>Meetings</th>
<th>Day</th>
<th>Time</th>
<th>Room</th>
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<tbody>
<tr>
<td>Class Meetings:</td>
<td>MW</td>
<td>4:00 - 5:15 pm</td>
<td>Friday 141</td>
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<td>Exams</td>
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<tr>
<td>Midterm 1:</td>
<td>Monday, September 17, 2018</td>
<td>in class</td>
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<td>Midterm 2:</td>
<td>Monday, October 22, 2018</td>
<td>in class</td>
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<td>Midterm 3:</td>
<td>Monday, December 3, 2018</td>
<td>in class</td>
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<td>Final Exam:</td>
<td>Wednesday, December 12, 2018</td>
<td>5:00 pm – 7:30 pm</td>
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3 General Information

Course Description: This course is an introduction to the economics of financial markets, money, credit, and banking. It is impossible to cover all important aspects of this broad topic in one semester so, naturally, the course is selective. However, while the set of topics explicitly covered is selective, we will utilize a general conceptual framework, which is the core of virtually all modern economic analyses of financial markets, irrespective of the particular topic at hand. This general framework is mostly based on standard economic concepts, such as consumer choice (both under certainty and uncertainty), “opportunity cost”, and “no-arbitrage” arguments.

The course consists of three parts: After briefly overview the financial system and the meaning of money, in parts I and II we will discuss basic economic tools to understand financial markets in general, as well as the role of financial intermediaries and central banks within these markets. In the end of the part II, we will then apply these tools to discuss and understand the mechanisms and
events that led to the financial crisis of 2007/2008. Finally, we go over central banks and money supply process in part III.

I. We will start with discussing why lending markets exist, before focusing on bond pricing, the term structure of interest rates and some key asset markets. Then we will turn our attention to banks as commercial enterprises and examine the measurement and management of bank risk.

II. We will discuss theoretical models of banks, which highlight the role of uncertainty and asymmetric information in the lending process. Furthermore, we will also study the economics of insurance markets, since banks provide liquidity insurance, and since particular types of insurance contracts were among the key forces that made the financial crisis of 2007/2008 so detrimental to the US and the entire world economy.

III. The final part focuses on central banks, monetary policy, and the most recent financial crisis. In particular, we will discuss the course of events before and during the financial crisis, modern tools of monetary policy, and how some of them were applied in multiple attempts to ward off the detrimental effects of the unfolding financial crisis.

Course Objectives: There are three fundamental goals we will set for ourselves:

1. The most basic objective of this course is to introduce the students to some important aspects in the theory and practice of financial markets, money, credit, and banking. Furthermore, we will then use fairly general economic concepts and tools to thoroughly discuss the buildup and unfolding of the financial crisis of 2007/2008.

2. Another central objective is to illustrate how general economic concepts, such as the optimal consumption/saving decision of an individual, can be employed to study financial markets and evaluate the soundness of economic policy that affects these markets. For example, we will use simple “no-arbitrage” and “opportunity cost” arguments to derive the “market price” for a variety of popular types of assets. While some of you may have seen the pricing formula for some of these assets before (or know where to look it up), the important part here is not the formula for the price, but how we came up with the formula. The key is to understand the general economic concept behind the formula, which can be applied to many more assets than we will explicitly study in class (including ones that haven’t yet been invented).

3. Finally, an absolutely necessary condition to be a successful economist (and college graduate in general) is effective communication skills, both written and spoken. It is never too early to begin (or continue) developing such skills. Therefore, all exams and quiz assignments consist of free response, short answer questions only. I expect you to answer these questions in complete English sentences, just as if you were writing a memo to your boss, or a letter to a client.

Course Format: Your learning experience in this class will consist of three elements:

1. Class: I will discuss all relevant topics in class. Everything I discuss or talk about in class may show up on exams.

2. Quizzes: At the end of each chapter, you will do a quiz online using MyLab of Pearson. Some quizzes may consist of couple of chapters depending on their materials.
Textbook: Economics of Money, Banking and Financial Markets, 12th Edition by Frederic S. Mishkin, Columbia University. The course does not require the hard copy of the textbook. Though, the course does require the code for MyLab of the textbook. All relevant resources will be presented in class, discussion sections, and/or made available on the class website (Canvas).

Non-Mandatory Prerequisites: There are two prerequisites for this class:

1. I expect students to have a sound understanding of basic calculus, basic statistics, as well as basic algebra. In particular, students will need to be able to independently master at least the following operations: Take first and second derivatives of (simple) functions in one unknown, maximize/minimize functions in one unknown, “solve” equations for a particular variable, solve systems of up to 2 equations in 2 unknowns, and work with (or manipulate) expectations, variances, and covariances of simple random variables. (Review material will be provided on the class website (Canvas).)

2. I expect students to have a sound understanding of basic economic concepts, such as budget constraints, preferences, indifference curves, as well as standard economic arguments such as “marginal benefit = marginal cost”, “supply = demand”, “market equilibrium”, “equilibrium/market price”, “equilibrium/market quantity”, etc.

Students who do not have the above prerequisites are still welcome to the class, but are expected to put in the necessary extra effort to self study these prerequisites.

4 Course Evaluation & Grading

Your overall grade for this course has the following components:

Best Ten of Eleven Quiz Assignments (2.5% each) 25%

Best Three of Four Exams (25% each) 75%
Midterm 1, Monday, September 17, 2018
Midterm 2, Monday, October 22, 2018
Midterm 3, Monday, December 3, 2018
Final, December 12, 2018 5-7:30 pm³ (cumulative)

4.1 Quiz Assignments

There will be eleven online quiz assignments. The best ten count toward your grade. To be eligible to take a quiz, first you have to take a test and your grade should be at least 60%. This test will prepare you for the quiz and also make you to provide you an application what we learn in class. There is no time limit to do a test and no limit of attempts. However, you can do quiz only one time and there will be a limit of time. The limit will be based on the easiness of the quiz and you will be informed before taking it. Note that there is a due date for both tests and quizzes. The following instruction is very important: Please make sure that your computer has a good WiFi signal and works well before you take the quiz. You may not take the quiz

again if your laptop battery dies out and/or your internet breaks.\textsuperscript{4} I will notify you if there is any problem on the Pearson side. Yet, I expect you to do your quizzes and tests. I also encourage you to take tests and quizzes definitely before the due dates. Last minute emails about the potential problems will not help you to re-take any of them since you will have enough time (around a week).

I can increase the number of quizzes for your sake. For example, I can increase the number of online quizzes to thirteen or I can do some quizzes in class (which can cover any of your missing online quizzes). However, you will definitely receive eleven online quizzes.

4.2 Exams

There will be four 50 minute exams (three midterms and one final). The best three of your four exams will count toward your class grade with equal weight (23.3\% each). There will be NO MAKEUP EXAMS! If you miss an exam (for any reason) you will receive zero credit on that exam. DO NOT PLAN TO INTENTIONALLY SKIP ANY MIDTERM! I only count 3 out of 4 exams in case you need to miss an exam due to an unforeseen emergency. You have exactly one chance to miss an exam for any reason. Any further exam that you miss (even if it is because of an emergency) will count with a score of zero toward your grade.\textsuperscript{5}

Study Cards: You may bring one handwritten study card to each of the exams. The card’s dimensions must not exceed 8.5 × 5.5 inches (1/2 of a US Letter page) and you may write on both sides of the card. The study card must be handwritten (no exceptions). Also, you should write your card on your own. We will take away study cards that are photo copied or printed. If we (I or the proctor or both) catch you with a printed or photo copied study card, you also lose the right to bring study cards to any further exams. Also, you need to write your name on the your card and submit it with your exam if you will use any.

Exam Grading Policy: The maximum score on each exam will be 100\%. All questions will be free response questions. Exam questions will be similar to those on the quiz assignments. Your answers will be graded in detail. You will receive partial credit for partially correct answers.

Generally speaking, the most important parts of your answer are your detailed derivations and written arguments. Simply writing one number (or mathematical expression) as the final answer will give you almost no credit (even if the number or expression is correct). A logically correct argument and derivation, with an eventual wrong outcome, will in most cases result in more partial credit than the correct number without any argument.

4.3 Class Grade & Curve

Your overall class score will be “graded on the curve”. That is, after the final exam, I will compute your overall class score, with the weights described above. Your class letter grade will then be based on the percentiles of the class score distribution, approximately as follows:

\textsuperscript{4}Simply, you can think that reset your router and/or computer to make sure everything is fresh. Also, make sure internet is fast enough to complete the test.

\textsuperscript{5}Only in the very unlikely event that you have to miss two exams because you encounter two severe unexpected emergencies that happen to coincide with exam dates and are verified in writing by the Dean of students’ office am I willing to discuss putting all the weight on the two exams you actually take.
A curve like this ensures that the best students (in the highest percentiles) will receive an A, regardless of the score numbers. For example, if the highest score in the class happens to be 65, then the student with a 65 will for sure receive a grade of A. If the top score in the class is 100, then a score of 65 will most likely not suffice for an A.

All your scores will be visible to you at any time on the class website (Canvas). While the class is curved at the very end, I will provide you with a “preliminary curve”, after each exam. This will give you a rough idea of “where you stand” in the class. That is, I will let you know what grade you would receive, if the class ended that day.

5 General Rules

Attendance: Classroom attendance is strongly recommended. We will be covering a substantial amount of material in this course, and you will probably find that the easiest way to keep up (and find out what I think is important) will be to attend class and discussion sections. I expect you to be in class on time and stay for the duration. If you do not plan to attend the entire lecture, please see me in advance or refrain from coming to class.

Communication: Communication with those outside of class while class is in progress is not acceptable. (In other words, turn off all communication devices prior to the start of class.) Students are expected to check their UNC Charlotte e-mail (username@uncc.edu) as well as the class website (Canvas) regularly for correspondence and updates regarding the course.

Accomodation Policy: UNC Charlotte is committed to access to education. If you have a disability and need academic accommodations, please provide a letter of accommodation from Disability Services early in the semester. For more information on accommodations, contact the Office of Disability Services at 704-687-0040 or visit their office in Fretwell 230.

Exam Bathroom Policy: All exams will be 50 minute exams. Please use the bathroom before the start of the exam as it is disruptive for other students if somebody leaves the room in the middle of the exam. Anybody who needs to leave the room during exams (e.g. to go to the bathroom) must leave his/her exam with me (or the person proctoring the exam) and must also leave any electronic devices that he/she carries in his/her pockets (e.g. cell phone, iPod, iPad, Kindle, etc.) with me (or the person proctoring the exam) before leaving the room.

Regrading Policy: If you would like your exam re-graded, you must submit a written re-grade request within one week of receiving your graded exam. Your request should point out the question(s) where you think you deserve additional credit, along with an explanation. Please note that your entire exam will be reviewed, and your overall exam score may go up or down.
**Email Policy:** Make sure to start the subject with the course id. For example, you will ask for a setup meeting. The subject should be “Econ 3115 - Meeting”. This way you are guaranteed to be replied within 2 business days. This way, I will understand that a student of my class is writing me and s/he is prioritized in the email list.

**No Screen:** While in class, I expect you to follow my “no screen” policy. I do not want to see any cell phones. Leave them in your backpack/purse/pocket (with the sound turned off) during class. Laptops/Tablets are strongly discouraged. They will not be very helpful for note taking, as much of the class will require writing equations, graphs, etc. If you absolutely must use one, please talk to me about it in person.

**Academic Integrity:** Please note that academic misconduct (cheating) will NOT be tolerated. In addition, students have the responsibility to know and observe the requirements of University Policy 407: The Code of Student Academic Integrity (http://legal.uncc.edu/policies/up-407). This code forbids cheating, fabrication or falsification of information, multiple submissions of academic work, plagiarism, abuse of academic materials, and complicity in academic dishonesty. Academic evaluations in this course include a judgment that the student’s work is free from academic dishonesty of any type; and grades in this course therefore should be and will be adversely affected by academic dishonesty. Students who violate the code can be expelled from UNC Charlotte. The normal penalty for a first offense is zero credit on the work involving dishonesty and further substantial reduction of the course grade. In almost all cases, the course grade is reduced to U. Copies of the code can be obtained from the Dean of Students Office. Standards of academic integrity will be enforced in this course. Students are expected to report cases of academic dishonesty to the course instructor.

**Statement on Diversity:** The Belk College of Business strives to create an inclusive academic climate in which the dignity of all individuals is respected and maintained. Therefore, we celebrate diversity that includes, but is not limited to ability/disability, age, culture, ethnicity, gender, language, race, religion, sexual orientation, and socio-economic status.

### 6 Tentative Course Schedule

Below is a tentative schedule of the topics I plan to cover. However, there is no guarantee that we follow this schedule precisely. We may deviate from this schedule as the course progresses depending on time and student interest. It is your responsibility to keep up with adjustments made throughout the course.
Introduction: Financial System & Money
Weeks 1-2: Chapter 1-3

Part I: Financial Markets
Weeks 3-4: Chapter 4-5

Week 5: Midterm 1
Weeks 5-6: Chapter 6-7

Part II: Financial Institutions
Weeks 7-8: Chapter 8-10

Week 9: Midterm 2
Weeks 9-11: Chapter 11-13

Part III: Central Banking and the Conduct Monetary Policy
Weeks 12-15: Chapter 14-16

Week 15: Midterm 3