

Financial Economics

Course Syllabus

Graduate School of Economics

De La Salle University

Course Title: Financial Economics (ECO703M)

Pre-requisite: None

Pre-requisite to: ECO703W

Faculty: Justin Raymond S. Eloriaga

Term/Time/Room: Term 1 A.Y. 2020 - 2021 / 18:00 - 21:15 (G01) Friday (F) / Full Online

1 Course Description

This course is a rigorous introduction to the fundamentals of the economics of financial markets. In particular this course aims to introduce students to the main theoretical models used by financial economists and their applications to investment and financing decisions and basic security analysis and investment management. It will focus on risk attitudes, financial portfolio theory, and static equilibrium in capital markets. The course is a blend of theory and technique. The material in this course is arranged to commence at the utility theoretic foundations of individual financial decisions under conditions of certainty and uncertainty and proceed to the theories of asset pricing and issues of capital market equilibrium. The course will also tackle the macrofinancial constructs such as macroprudential policy, vulnerabilities, and systemic risk.

The course relies heavily on concepts that have been introduced in the intermediate microeconomics course such as utility maximization, individual demand, and perfectly competitive market equilibrium. In addition, the course will utilize mathematics and mathematical statistics in building the conceptual models of the financial markets. Therefore, students enrolled in this course are also expected to review the materials from their calculus, statistics, and econometrics courses. Also, knowledge of elementary concepts of probability theory would be very helpful for understanding some of the ideas developed in this course. Excellent resources to review these prerequisite knowledge are Copeland, Weston, and Shastri (2005), Buchanan (2006), and Rachev, Hochstotter, Fabozzi, and Kao (2010).

2 Course Objectives

This course is intended to

1. Familiarize students with the primary function of financial markets in an economy and the tasks facing participants in financial markets such as the stock and bond markets
2. Introduce students to the use of microeconomic theory and probability theory in modeling an individual's financial decisions such as consumption and savings decisions, investment and financing decisions, and risk management decisions under conditions of uncertainty
3. Introduce students to the theoretical framework underlying an individual's financial asset portfolio choices.
4. Introduce students to competing views of how financial assets are valued when all financial markets are in equilibrium (general equilibrium).
5. Enhance students' problem-solving, critical thinking, and analytical skills by using verbal reasoning, graphs, statistics, and mathematics to evaluate economic problems and issues.

3 Course Learning Outcomes

School of Economics Expected Lasallian Graduate Attributes (ELGAs)	Learning Outcomes
Intellectually Inquisitive	<p>LO1: Identify and describe the primary function of financial markets in an economy and their role in an individual's financial decisions.</p> <p>LO2: Describe and compare financial decision making under conditions of certainty and uncertainty.</p> <p>LO3: Describe risk and return and their relationship.</p> <p>LO4: Explain standard equilibrium asset pricing models, their underlying assumptions, their predictions, and their usefulness in financial decision making.</p> <p>LO5: Apply utility theory to describe and analyze financial decisions under conditions of certainty and uncertainty.</p>
Technically Proficient	<p>LO6: Apply mathematics and probability theory to construct measures of reward and risk that are related to investing in financial assets.</p> <p>LO7: Apply the principles that lead to the formation of efficient portfolios of stocks.</p> <p>LO8: Develop and justify a financial economics related argument in both oral and written form.</p>
Agent of Positive Social Change	<p>LO9: Identify and analyze ethical issues in financial markets.</p>
Globally Competitive	<p>L10: Explain in non-technical terms the fundamental economic intuition associated with the standard and intermediate models used in financial economic and econometric analysis.</p>

4 Assessment and Evaluation

Below are the requirements for the course and their corresponding weights

Student Assessment Items	Due Date	Weighting	Learning Outcomes
Problem Set 1	Week 8	15%	LO1, LO2, LO5, LO7, LO9, LO10
Problem Set 2	Week 14	15%	LO1, LO2, LO5, LO6, LO7, LO9, LO10
Summative Examination	Week 14	30%	LO1, LO2, LO5, LO6, LO10
Term Paper	Week 14	40%	LO1, LO2, LO3, LO7, LO8, LO9, LO10

The grading scheme that will be followed is

96 – 100.0	4.0	72 – 77.99	2.0
90 – 95.99	3.5	66 – 71.99	1.5
84 – 89.99	3.0	60 – 65.99	1.0
78 – 83.99	2.5	Below 60	0.0

4.1 Problem Sets

Students will be given problem sets that tackle the application of the concepts and techniques that are currently being discussed in class or to be discussed soon. Students are expected to have read the appropriate references before tackling each problem set.

These assignments are a group effort (maximum of 2 students per group) and thus there should only be one set of solutions per group. You are not allowed to consult with nor be consulted by your classmates from other groups. A grade of 0.0 will be given for reports that are suspected to be copies (in full or in part) of each other. Be sure to show the theoretical justification or basis for your answer to each question in this assignment. You should start each answer with a brief discussion of the basis for your answer. The basis is usually an economic concept, a definition, or a set of conditions that provides the framework for your answer. Do not just turn in mathematical expressions and numbers! No explanation and basis, No credit.

Your answers should be word processed (MSWord or Pages or L^AT_EX). You can generate equations using the application MathType or the built in Equation Editors if you are using MSWord or Pages. It is the most convenient way to work in Word or Pages with mathematical expressions that have many. Greek letters and may be useful for your homework answers. Google Docs is not recommended.

You need to submit electronically (justin.eloriaga@dlsu.edu.ph) a pdf version of your word-processed assignment. PLEASE NAME the pdf file WITH THE FAMILY NAME(S) OF THE GROUP MEMBER(S), THE COURSE TITLE "ECO703M", AND THE PROBLEM SET NUMBER. The deadline for electronic submission of the pdf copy is midnight of the day before the due date. A hard copy of your assignment should be also submitted in class on the due date. This will be collected at the beginning of the class.

4.2 Summative Examination

Students must answer a final summative assessment.

You are allowed to open a single, two-sided, size A4 handwritten formula sheet during any exam. The formula sheet should only contain FORMULAS and there should be no labels (words), graphs, or any other information. The formula sheet should be submitted together with the exam booklet to the Class President one week before any scheduled exam.

All questions will be of a problem-solving nature much like those in the assignments and the practice sets and will emphasize your problem solving and communication skills. Therefore, an excellent preparation for the examinations is to solve the relevant Practice Sets.

Practice Sets: Students will be provided with five topical Practice Problem Sets to supplement the lecture on the topics up for discussion. Learning-By-Doing is an important part of the learning the materials in this course. The crucial test of your understanding is solving problems. Because you will only develop a firm grasp of the subject matter by doing problems, you should do as many problems as you can. Some of the problems are relatively easy, while others will require considerable thought. Do not get discouraged if you get stuck on a problem. This is to be expected. Problems will become easier if you stick at it. Consult the relevant part of the required textbooks or your lecture notes. You will see if you read the material properly, how to solve most of the problems you meet. Although it is not required that the solutions to these problems be submitted, students are expected to have answered them prior to the relevant lectures as they will form the basis of professor-student interaction during the lectures. Solving these problem sets will improve your comprehension of the lecture material and performance on the exams and ensure success in the course. Do not just focus on the mathematical solution when answering each question in the problem sets. Your overall solution must include a brief discussion of the economic basis and the basic steps associated with arriving at the solution. The more problems you do the easier you will find the exams. This does not mean, however, that you should memorize answers.

Obviously, it is not a good idea to wait until a few days before the exam; rather you should begin working on the solutions to the relevant problem sets so that you can effectively prepare for the examinations. Be sure to show the theoretical justification or basis for your answer to each question in any examination. You should start each answer with the basis for your answer. The basis is usually an economic concept, a definition, or a set of conditions that provides the framework for your answer. Do not just turn in mathematical expressions and numbers. No explanation and basis, no credit. A make-up for any missed exam will be given provided that the student submits documentation indicating that his/her absence is officially approved by the University.

4.3 Term Paper

Students are to submit a final empirical term paper which concerns any empirical study which is an application of lessons or concepts learned in class. It is highly recommended that students pursue pertinent topics of primary importance to current financial economics issues (i.e. increasing corporate leverage, forecasting stock market peaks and troughs, etc.). Students may opt to make the term paper individually, in pairs, or in groups of three.

Students are to submit a concept paper on Week 10 of the term which contains the following:

1. Brief Background of the Study
2. Research Objectives
3. Methodology

At the end of the term, students are to submit a final term paper which contains everything in the concept paper in addition to the following.

1. Brief Review of Related Literature
2. Theoretical Framework
3. Results and Discussion
4. Conclusion

Students are expected to submit just a soft copy of the paper to justin.eloriaga@dlsu.edu.ph in addition to any codes used to generate the results and an excel file of the data used. The paper must be submitted in .pdf form. The deadline will be on the 14th week at a schedule announced by the professor. The rubric for the said term paper is laid out below

Learning Outcome/Criteria	Excellent (90-100)	Very Satisfactory (80-89)	Satisfactory (60-79)	Needs Improvement (0-59)
Technical sophistication and coherence of literature review	The review adequately covers all technical aspects needed to carry out the empirical methodology of the paper.	The review satisfactorily covers some technical aspects that are critically needed to carry out the empirical methodology of the paper.	The review provides a minimal (many of the technical aspects are ignored) yet acceptable coverage of the technical aspects needed to carry out the empirical methodology of the paper.	The review is not helpful and totally irrelevant for carrying out the methodological objectives of the empirical paper.
Replicability	The authors did submit and fully documented data and provided log and other relevant files. No problems were encountered in replicating the results.	The authors did submit and fully documented data and provided log and other relevant files but some problems are encountered in replicating the results	The authors did submit and fully documented data and provided log and other relevant files but there are a lot of problems in replicating the results.	The authors did not submit the dataset or failed to provide log files and other relevant files.
Clarity and degree of testability of hypotheses	The paper's hypotheses are testable and the objective is clear	The paper's hypotheses are testable but the objective is only somewhat clear	The paper's hypotheses are non – testable and the objective is only somewhat clear	The hypotheses are in no way related to the paper's objective.
Application of Financial Economic and Econometric Theories	The paper adequately covers all technical aspects and is able to apply necessary foundations to the full extent.	The paper satisfactorily covers some technical aspects that are critically needed to carry out the empirical methodology of the paper.	The paper provides a minimal (many of the technical aspects are ignored) yet acceptable coverage of the technical aspects needed to carry out the empirical methodology of the paper.	The paper is not helpful and totally irrelevant for carrying out the methodological objectives of the empirical paper.

5 Workload Allocation

Below is the expected workload allocation for the term

Time Spent in Class (Synchronous and Asynchronous)	3 hours per week x 13 weeks	39 hours
Time Allocated for Course Readings and Personal Study	3 hours per week x 13 weeks	39 hours
Time allocated preparing for the Term Paper	1 hour per week x 13 weeks	13 hours
Time allocated preparing for the summative assessment	1 hour per week x 8 weeks	8 hours
Time allocated answering problem sets and other exercises	1.5 hours per topic x 12 divisions of the course	18 hours
Total hours for the course	~117 hours	

6 References and Learning Resources

All course materials including my lecture notes, reference materials, problem sets, assignments, and the syllabus can be accessed through your DLSU Google Drive account and are posted in AnimoSpace.

- Copeland, T., Weston, J., and K. Shastri, Financial Theory and Corporate Policy 4th Edition, Addison-Wesley Publishing Company, Inc., 2005 (Main Text)
- Danthine, J-P. and J. Donaldson, Intermediate Financial Theory 3rd Edition, London: Elsevier Academic Press, 2015
- Elton, E., M. Gruber, S. Brown, and W. Goetzmann. Modern Portfolio Theory and Investment Analysis 9th Edition, New Jersey: John Wiley & Sons, Inc., 2014.
- Martin, J., S. Cox, and R. MacMinn, The Theory of Finance: Evidence and Applications, New York: The Dryden Press, 1988
- Unite, A. Lecture Notes in Financial Economics

7 Course Flow

The course flow is detailed by the expected lessons to be discussed each week. We may go ahead or behind the schedule but we are sure to cover all said topics for the course.

Week	Topic	Learning Activities
1	Course Introduction · Introduction to the Role of Financial Markets and Institutions · Review on the Axioms of Consumer Preferences under Certainty	Class Discussion, Recitation
2	Financial Decision Making Under Certainty · Intertemporal Utility Function · Intertemporal Budget Constraint	Class Discussion, Recitation Problem Set 1
3	Deeper Dive on Financial Decision Making Under Certainty · Consumption/Saving Decision in Perfect Capital Markets	Class Discussion, Recitation Problem Set 1
4	Financial Decision Making under Uncertainty · Review of Random Variable, Probability, and Statistics · Axioms of Rational Choice Under Uncertainty	Class Discussion, Recitation Problem Set 1
5	Deeper Dive on Financial Decision Making Under Uncertainty · The Expected Utility Theorem (von Neumann-Morgenstern Theorem) · Risk, Risk Aversion, and the Cost of Risk · Risk Aversion and Insurance · Jensen's Inequality	Class Discussion, Recitation Problem Set 1
6	The Expected Utility Approach · Risk Aversion and Investment Decisions using the Expected Utility Approach Deeper Dive on The Expected Utility Approach	Class Discussion, Recitation Problem Set 2 Class Discussion, Recitation Problem Set 2
7	· Optimal Portfolio Composition, Risk Aversion, and Wealth · Risk Aversion, and Optimal Portfolio Choice	Class Discussion, Recitation Problem Set 2
8	Risk Aversion and Investment Decisions using the Modern Portfolio Theory (MPT) · Risk and Return for a Single Asset: Realized versus Expected Return	Class Discussion, Recitation Problem Set 2 Summative Assessment Class Discussion, Recitation Problem Set 2
9	Deeper Dive on the Modern Portfolio Theory · Portfolio Risk, Return, and Diversification · Optimal Portfolio Choice: Investment Opportunity Set and Efficient Frontier with Two Risky Assets · Optimal Portfolio Choice: Efficient Frontier of Two Risky Assets and One Risk Free Asset	Summative Assessment
10	Capital Asset Pricing Model (CAPM) · Fundamentals of CAPM · Uses of CAPM	Class Discussion, Recitation Problem Set 2 Summative Assessment Term Paper
11	Arbitrage Pricing Theory · Fundamentals of APT · Uses of APT	Class Discussion, Recitation Problem Set 2 Summative Assessment Term Paper
12	Macrofinancial Issues in Financial Economics · The Rise of eMoney · The Prospect of a Central Bank Digital Currency · Systemic Risk Management	Class Discussion, Recitation Problem Set 2 Summative Assessment Term Paper
13	Review for Summative Assessment	Class Discussion, Recitation Problem Set 2 Summative Assessment Term Paper
14	Summative Assessment and Deadline for Empirical Project	

8 Contact and Consultation Hours

My consultation hours are from 18:00 - 19:00 (Thursday) over Zoom. Please set an appointment at least 24 hours in advance. Consultation is strictly by appointment only. All contact may be made through justin.eloriaga@dlsu.edu.ph or through 09260321823. Alternatively, students may fill up the contact form in justineloriaga.com

Syllabus prepared by:

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Noted by:

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