

Online Course Syllabus

Section 1

Instructor, Course Information & Objectives

Financial Economics
440.640.81
Advanced Academic Programs
Zanvyl Kreiger School of Arts and Sciences
Johns Hopkins University

Instructor Information

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| Instructor: | Yongli Zhang |
| Email Address: | ayzhang@jhu.edu |
| Phone: | 011-86-185-0093-5929 (13 hours time difference, by appointment only) |

Course Description

Finance treats the transfer of resources across time and the transfer of risk among economic entities. The aim of this course is to develop the microeconomic theory relevant to these types of transactions. A set of underlying economic principles is applied to the determination of the value of basic financial instruments such as stocks and bonds, as well as to more complicated derivative securities, such as futures and options. Valuation concepts, in turn, allow for the analysis of various issues of interest to policy makers as well as portfolio managers and investors, such as the term structure of interest rates, portfolio theory, the capital structure of the firm, and risk management.
Prerequisites: 440.601 Microeconomic Theory and Policy; 440.606 Econometrics

Course Goals & Learning Objectives

Students will be able to

- Gain a general familiarity with various theories in financial economics.
- Evaluate risky corporate projects and make capital budgeting decisions.
- Grasp the principles of and equivalences between various asset pricing models.
- Think analytically about individual savings and portfolio selection problems.
- Use binomial models to price options and other financial derivatives.
- Learn how to identify corporate risk and use financial derivatives such as forwards and futures to manage the risk.
- Judge the effect of capital structure on the value of a corporation.

Section 2

Course Materials

Textbooks

Recommended:

Financial Economics, 2nd ed., by Bodie, Merton, and Cleeton. 0558785751.

Optional:

Asset Pricing, Revised ed., by Cochrane. 978-0691121376.

Corporate Finance, 10th ed., by Ross, Westerfield, and Jaffe. 978-0078034770.

Note: The relevant chapters of the last two books can be found in EReserves.

Other Readings

All other readings are available through JHU's library electronic reserves, from various websites noted in lessons, or from materials provided directly by the instructor.

Specific Technology Requirements for this Course

This course requires the use of a computer with a strong internet connection, for access to course content and online materials, such as multimedia files.

All written work for this course is required to be submitted in MS Word and Excel format. It is recommended that all students have Microsoft Office, and Adobe PDF Reader.

Course Structure

The first half of the course is structured in a way that benefits the students with little finance background. The basic concepts of present values, permanent income, and capital budgeting are introduced in the first three weeks, followed by the valuation of bonds and stock. These topics are likely to be included in undergraduate level finance classes. However, students with some or extensive finance background can still find the topics interesting as we generalize asset pricing theory in Week 6 and 7. In these two weeks, we present a unified framework that can be applied to the pricing of any financial asset, including financial derivatives such as options and futures.

The second half of the course mainly focuses on investment theory and corporate finance. An in-depth introduction of portfolio theory and the Capital Asset Pricing Model are presented in Week 8 and 9, along with the idea of efficient markets. All are widely used in practice. The next three weeks cover options and futures, including concepts, pricing formulas, and applications in pricing corporate securities and managing corporate risk. It is shown that the CAPM and the pricing of options and futures are all special cases of the general asset pricing theory introduced in the first half of the course. The last two weeks cover corporate structure and corporate governance. Both topics help students deeply understand how a corporation works.

Section 3

Assessments and Grading Policy

Assessments

You are supposed to post and comment in a discussion forum on Week 1, 3, 5, 6, 8, 10, 12, and 13. In addition, you need to complete six assignments. The information of each gradable item is as follows:

| Assessment Name | Title/Task | Grading |
|---------------------------------------|---|--------------|
| Weekly discussion forums for 8 weeks. | Post to answer the weekly guiding question of each week and comment on at least two other persons' posts. | 16%(2% each) |
| Assignment 1 | Calculating present values and solving an individual savings/investment problem using Excel. | 8% |
| Assignment 2 | Analyzing an investment project and valuing fixed income securities. | 8% |
| Midterm Exam | Covering all the topics up to Week 7 (included). There are four or five essay questions. The exam is not timed but has to be submitted by the due date. | 24% |
| Assignment 3 | Answering essay questions on portfolio theory, the CAPM, and efficient markets. | 8% |
| Assignment 4 | Using option pricing theory to calculate option prices and price corporate securities. | 8% |
| Final Exam | Covering all the topics, with emphases on the topics in Week 8 –14. | 28% |
| | | Total: 100% |

How to submit your work

All written work for this course is required to be submitted in MS Word or Excel format. All files should follow a consistent naming convention as follows. For assignments, save the file with the name "A#_FirstName_LastName.xlsx" or (.xls, .docx, .doc). For example, a student with the name Jesse Jackson should name the Excel file for Assignment #1 as "A1_Jesse_Jackson.xlsx". For the midterm and the final, save the file as "Midterm_Jesse_Jackson.docx" and "Final_Jesse_Jackson.docx", respectively.

All calculated answers in an Excel file should contain the formulas that are used to obtain them. Answers that are directly typed in without any explanations or formulas will not be given credits.

All written assignments (except for quizzes and discussion posts) should be submitted by uploading them to the Blackboard Assignment tool. This tool can be accessed through the link "Assignments Guidelines" on the course portal.

Late Policy

Late submissions are *strongly discouraged*. All late work will be deducted by 40% based on the total scores earned. For example, if someone scored 100 points for a late assignment, he/she would receive only 60 points.

Grading Policy

Discussion forum posts and comments will be graded based on whether a post or comment is relevant, adds new perspectives, broadens the scope of a discussion by appropriately citing and commenting on online resources, and increases the depth of a discussion by logical analysis. A high quality post is succinct and clear. Please refer to the following rubric for weekly discussions. Students are also required to comment on at least two classmates' posts, using the same criteria listed above.

Assignments and tests usually contain several essay questions, some of which require computing for numerical answers. They are graded on whether the relevant theory and formulas are utilized, how intuitively the answers are explained, and how close the numerical results are to the correct answers. Partial credits will be given to incorrect answers that show the thought process.

Discussion Forum Rubric

Discussion forum posts are graded based on whether they are relevant to the weekly topic(s), add new concepts, broaden the scope, deepen the analysis, and provide further information. In addition, students are expected to respond to many other learners in a way that advances their thinking about content and pedagogy, makes connections, and builds on others' ideas.

The following is a detailed rubric for weekly discussion forums. The full points for each week's discussion post and comments are 10.

| Criteria | Unsatisfactory (0-3pts) | Adequate (4-6pts) | Proficient (7-8pts) | Exemplary (9-10pts) |
|---|---|---|--|--|
| Responding to Assigned Questions Weight 50.00% | Student misses the main idea of the discussion or does not respond. | Student responds to the posted question in a way that does not clearly indicate deep thought or original ideas or opinions. | Student responds to the posted question with thoughtful ideas and clearly communicates his or her ideas or opinions. | Student responds to the posted question with thoughtful ideas, clearly communicates his or her ideas or opinions, and poses additional questions that deepen the |

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| | | | | discussion. |
| Responding to Other Students Weight 25.00% | Student misses the main idea of the discussion or does not respond. | Student responds to other learners in a way that does not clearly indicate careful thinking or advance the thinking of others. | Student responds to two other learners in a way that advances their thinking about content and pedagogy. | Student responds to many other learners in a way that advances their thinking about content and pedagogy, makes connections, and builds on others' ideas. |
| Risk Taking Weight 25.00% | Student responds to other ideas only when he or she has the "right" answers or does not respond. | Student takes a few risks in the online discussions, but is not consistently involved. | Student takes risks by sharing what he or she does not know, in addition to ideas and opinions. | Student takes risks by sharing what he or she does not know, in addition to ideas and opinions. Learner asks questions, responds to suggestions, and actively supports the other learners. |

Section 4

Course Communication Policy

Contacting the Instructor

You are welcome to contact me via email, and I will respond within 24 hours. If you would like to speak directly with me, please come to meet me during my office hours on each Sunday. If you prefer a different time, please send me an email to schedule an appointment via Adobe Connect or over the phone.

For meeting during the office hour, please log on to <http://connect.johnshopkins.edu/ayzhang>. The online meeting room will be opened 5 minutes prior to the office hour. The format will be text chats.

All email messages will be sent to you via your JHU email account, so you should be in the habit of checking that account every day or you should ensure that your JHU email account forwards messages to another account of your choice.

For general course-related discussions and queries, please use the Blackboard Discussions forum, so that your classmates can benefit from your questions and my responses.

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Getting Help

You have a variety of methods to get help on Blackboard. Please consult the help listed in the "Technical Help" link for important information. **If you encounter technical difficulty in completing or submitting any online assessment, please immediately contact the designated help desk listed on the [AAP online support page](#).** Also, contact your instructor at the email address listed atop this syllabus.

Section 5

University Policies

General

This course adheres to all University policies described in the academic catalog. Please pay close attention to the following policies:

Students with Disabilities

Johns Hopkins University is committed to providing reasonable and appropriate accommodations to students with disabilities. Students with documented disabilities should contact the coordinator listed on the [Disability Accommodations](#) page. Further information and a link to the Student Request for Accommodation form can also be found on the [Disability Accommodations](#) page.

Ethics & Plagiarism

JHU Ethics Statement: The strength of the university depends on academic and personal integrity. In this course, you must be honest and truthful. Ethical violations include cheating on exams, plagiarism, reuse of assignments, improper use of the Internet and electronic devices, unauthorized collaboration, alteration of graded assignments, forgery and falsification, lying, facilitating academic dishonesty, and unfair competition. Report any violations you witness to the instructor.

Read and adhere to JHU's [Notice on Plagiarism](#).

Dropping the Course

You are responsible for understanding the university's policies and procedures regarding withdrawing from courses found in the current catalog. You should be aware of the current deadlines according to the [Academic Calendar](#).

Copyright Policy

All course material are the property of JHU and are to be used for the student's individual academic purpose only. Any dissemination, copying, reproducing, modification, displaying, or transmitting of any course material content for any other purpose is prohibited, will be considered misconduct under the [JHU Copyright Compliance Policy](#), and may be cause for disciplinary action. In addition, encouraging academic dishonesty or cheating by distributing information about course materials or assignments which would give an unfair advantage to others may violate AAP's [Code of Conduct](#) and the University's [Student Conduct Code](#). Specifically, recordings, course materials, and lecture notes may not be exchanged or distributed for commercial purposes, for compensation, or for any purpose other than use by students enrolled in the class. Other distributions of such materials by students may be deemed to violate the above University policies and be subject to disciplinary action.

Section 6

Course Topics, Activities & Schedule**Tentative Course Schedule**

Important Note: Refer to the course calendar for specific dates and times. Activity and assignment details will be explained in detail within each week's corresponding learning module.

| Week | Dates | Topics | Activities | Assessments & Due Dates |
|------------------------------------|-------------|--|-------------------|--|
| 1 | 08/28-09/03 | Introduction | Discussion forum. | Discussion posts and comments due on 09/02, and 09/03. |
| Holiday: 09/04 Labor Day | | | | |
| 2 | 09/05-09/10 | Household saving & investment | Assignment 1. | Assignment due 09/10. |
| 3 | 09/11-09/17 | Firm investment project analysis | Discussion forum. | Discussion posts and comments due 09/16 and 09/17. |
| 4 | 09/18-09/24 | Valuation of fixed income securities | Assignment 2. | Assignment due 09/24. |
| 5 | 09/25-10/01 | Valuation of stock | Discussion forum. | Discussion posts and comments due 09/30 and 10/01. |
| 6 | 10/02-10/08 | Principles of market valuation I | Discussion forum. | Discussion posts and comments due 10/07 and 10/08. |
| 7 | 10/09-10/15 | Principles of market valuation II | Midterm exam. | Midterm exam due 10/15. |
| 8 | 10/16-10/22 | Portfolio theory | Discussion forum. | Discussion posts and comments due 10/21 and 10/22. |
| 9 | 10/23-10/29 | The Capital Asset Pricing Model and efficient markets. | Assignment 3. | Assignment due 10/29. |
| 10 | 10/30-11/05 | Options I | Discussion forum. | Discussion posts and comments due 11/04 and 11/05. |
| 11 | 11/06-11/12 | Options II | Assignment 4. | Assignment due 11/12. |
| 12 | 11/13-11/22 | Forwards, futures and corporate risk management | Discussion forum. | Discussion posts and comments due 11/21 and 11/22. |
| Holidays: 11/23-11/26 Thanksgiving | | | | |

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| 13 | 11/27-12/03 | Capital structure I | Discussion forum. | Discussion posts and comments due 12/02 and 12/03. |
| 14 | 12/04-12/10 | Capital structure II | Final exam. | Final exam due 12/10. |

All activities and assignments are due by 11:59pm, Eastern Daylight Time on the dates posted in the checklist.

The schedule is subject to change. Announcements will be made on Blackboard if a change occurs. If you have any questions, please contact your instructor.