

Spring 2017  
UNIVERSITY OF NOTRE DAME  
Department of Economics

**ECON 40356: ASSET PRICING THEORY**

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Office hours: Monday and Wednesday 2:30-3:30 or by appointment (effective Feb 13<sup>th</sup> due to department recruiting activities. Before that date, you are welcome to stop by anytime as long as I am in my office.)

1. **Course description.** This course introduces modern asset pricing theories and their applications in a more formal manner than does a principles financial economics course. Topics include the capital asset pricing model, stochastic discount factor, arbitrage pricing theory, the efficient market hypothesis, bond pricing and option pricing, etc.

2. **Prerequisites.** Econ 40354 Financial Economics. In addition to calculus, knowledge of statistics is also required. Some of the course content can be highly quantitative. Students unsure of their mathematical preparedness should discuss the matter with the instructor.

3. **Textbook.**

*The Economics of Financial Markets*

R.E. Bailey, Cambridge University Press

Lectures will largely follow the structure of this book for most chapters, although more in-depth lectures will be given for certain topics. I will assign readings from this book at times. You are required to complete the reading assignments before class.

4. **Honor code.** Notre Dame students are expected to abide by the Academic Code of Honor Pledge. "As a member of the Notre Dame community, I will not participate in or tolerate academic dishonesty."

5. **Evaluation.** Your final score will be a weighted average of the following:

|   |     |
|---|-----|
| Class participation and in-class worksheet completion | 15% |
| Homework assignments                                  | 15% |
| In-class group presentation                           | 10% |
| Midterm examination                                   | 20% |
| Final examination                                     | 40% |

Your final letter grade will depend on how your final score ranks relative to other students in this class.

Class participation: you are expected to come to class, take notes, and actively participate by contributing to discussions and asking and answering questions. If you are absent from a class for whatever reason, it is your responsibility to get notes from a classmate on what you missed, including important announcements as well as the lecture material. Of course, feel free to come to office hours for clarification on specifics in your notes.

Worksheet completion: During most lectures, I will hand out worksheets with questions that are related to the content of the lecture. You must complete the worksheets and turn them in at the end of the lecture (specific instructions for turning in worksheets are provided later in the syllabus). They will not be graded for correctness, but you must demonstrate sufficient effort in completing the worksheets.

Homework: homework must be turned in individually at the beginning of class on the due date. There will be 4 homework assignments, but *the one on which you score the lowest will be dropped* so 3 will count toward your final grade, each for 5%. You are free to work in groups but must turn in your homework individually. The solution will be posted on Sakai after each homework is due. Late homework will not be accepted. If you must be absent on the day homework is due, you need to plan ahead and either turn in the homework early or ask a classmate to bring it to class for you.

In-class presentation: In a team of 3-4 members, you are to present the latest research in a topic related to course content. I will provide you with the list of topics to choose from and the suggested sources from which you should gather information for your presentation. The presentation should be 20-25 minutes depending on the number of members in the team. The presentations will be scheduled towards the end of the semester. More details will be given around the mid-semester break.

Midterm and final: the midterm will count for 20% and the final for 40% of your final grade. I will provide sample exams and their solutions before each exam date for your practice. The final will be cumulative, with a slight emphasis on the materials taught after the midterm. Exams are closed-book. Except for a calculator, all electronics, including phones and laptops, etc., will not be allowed in exams. (When in doubt, check with the instructor prior to the exam.)

6. **Grading policy.** On homework and exams, it is your responsibility to communicate in such a way that is easy for the grader to understand. Points can be deducted for writing that impedes communication such as illegibility and poor organization. Partial credit is always given for incomplete but partially correct answers. However, you will earn no credit if you leave a question blank, if what you write is completely incorrect or if it is just a re-statement of the question. The inclusion of incorrect statements, formulas and/or calculations will lose you points, even if your answer contains the correct solution. Therefore, be accurate and concise.

Answer your question mathematically whenever you can. Show your calculation. You are unlikely to receive high scores if you only argue verbally when the question is asking you to “find” or “compute” certain numbers and “derive/show” certain results.

You are allowed a one-time request for a re-grade on the midterms if you think a grading error has been made. To submit such a request, you must hand the exam back and email the instructor describing the grading error no later than 5 days after the answer key is

posted on Sakai. Note, however, that your entire exam will be subject to the re-grade, which means you could get points deducted if other grading errors made in your favor were found. There is no appeal for the re-grade.

7. **Absences.** Following university policy, absences from classes because of personal illness, death or serious illness of a family member, or a conflicting university-approved activity may be excused. A doctor's note is required in the event of a personal illness. If you must be absent from a class, you need to inform me before noon on the day of your absence, and you must complete any worksheets you miss as a result of your absence as soon as your condition allows.

There will be no makeup for the midterm. If you miss the midterm for any of the excusable reasons listed above, the weight of your midterm will be added to your final.

The final exam is scheduled for **May 8<sup>th</sup>, 4:15-6:15pm**. The university's final exam schedule can be found at <http://registrar.nd.edu/pdf/FESpring.pdf>. It is your responsibility to check as early as possible whether you have a conflicting final with another class. In the case of an exam conflict or if you have a personal illness or other emergency situation that prevents you from taking the final exam at the designated time, you must present your case to the Office for Undergraduate Studies. I must hear directly from the Office for Undergraduate Studies before rescheduling your final exam. Personal requests to take the final exam at a different time will NOT be granted. The university has a designated time, May 12<sup>th</sup> 4:15-6:15pm, for makeup exams necessitated by conflicting finals. Rescheduling for illness and other reasons approved by the Office for Undergraduate Studies will be determined on an individual basis.

8. **Course webpage (Sakai) and Email Account.** All course materials, including worksheets, homework, practice exams, and solutions will be posted on the course webpage on Sakai. Please check Sakai (and your email) frequently for various updates, for example homework due dates and specific exam instructions, as due dates and the scope of coverage may change as the course develops.

A class email account is created to facilitate the collection of worksheets and in-class activities: [ndassetpricing@gmail.com](mailto:ndassetpricing@gmail.com).

By the end of each class, unless the instructor specifies otherwise, you are expected to email an image of your worksheet to this address. Failure to do so within 15 minutes after the class is over will result in the worksheet counted as missing. Therefore, please remember to

- (1) bring to class an electronic device of your choice that can take and email images (for example a smartphone or tablet). Note, however, that the use of electronic devices during lecture is otherwise not allowed without the instructor's permission.
- (2) set your email account such that your full name appears as the sender. You do not need to write anything on the subject line or in the content of the email.
- (3) choose a large enough size for the image so your work will be sufficiently clear to the grader. For example, if you use an iPhone, send the image as a "large" attachment.
- (4) use the same email account to send the worksheet every time.

## CLASS SCHEDULE

(Tentative, subject to change)

0. Introduction

Bailey chapters 1-2.

1. Bond pricing

Bailey chapters 12-13.

2. Consumption-based Pricing Models

Bailey chapter 4, 11.

3. Mean-variance model and CAPM

Bailey chapters 5-6.

Midterm review

**Midterm Exam (March 8, Wednesday, in-class)**

4. Arbitrage Pricing Theory (APT).

Bailey chapters 7-8.

5. Empirical testing.

Bailey chapter 9

In-class presentations

6. Pricing financial derivatives

Bailey chapters 14-20.

Final review

**Final Exam (May 8, 4:15-6:15)**